A Case for Humour-Centred Design: Malentanglement, and (Mis)Understanding Humour and Laughter as Responses to Design and Design Innovation.

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This research was undertaken under the auspices of Cardiff Metropolitan University.

September, 2024.

Declaration

DECLARATION

This Work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed.....(candidate)

Date 28th January 2025

STATEMENT 1

This thesis is the result of my own investigations, except where otherwise stated.Where correction services have been used, the extent and nature of the correction is clearly marked in a footnote(s).

Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

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Abstract

This thesis contributes to an under-explored contemporary discourse of *humorous design* and an emerging field of *humour-centred* design. Of particular concern are occasions when design outcomes (and by extension designers) are laughed *at*, because such laughter has been perceived to challenge the authority of design: its creations, processes, ideologies, and professionalism. Proceeding from the position that design has sought to take itself *seriously* as a profession, and critiquing *problem-solving* models that underpin design's attempts to control humour, some instances of humour and laughter are presented as perturbations: moments of professional anxiety when design's control over humour has been lost. The research identifies a cause of this discomposure to be a shortcoming in designerly understandings of humour — humour being conventionally placed outside of design analysis. This theoretical study, grounded in case analysis, draws from discourses of design theory, humour theory, and entanglement theory, and is replete with examples of *gelastic design* (funny design). A concept of *malentanglement* is formulated to describe design audience's interpretation of the entanglement/fittingness of design as somehow incongruous, explaining that this is particularly the case with design innovation. Thereby, the thesis provides new designerly understandings of humour and laughter by reconceiving the problem as the solution: humour and laughter, herein understood from a more *entangled* perspective, become welcome indicators of genuine design innovation, rather than expressions of derision. By opening up the scope for finding new methodological approaches to design, design strategies can be developed that are sufficiently subtle and coherent in their terms to engage with humour and laughter as both welcome indicators of design innovation, and as tools of design in themselves.

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I wish to offer my profound thanks to my supervisory team for all of their attentive support: my director of studies, Dr. Stephen Thompson for years of sage advice and ceaseless encouragement (decades actually!), and for every text message containing a funny thing that he has randomly encountered and then thought of me and my research; Prof. Dr. Michael Punt for so generously sharing his unfathomable knowledge and experience, so kindly nurturing and so consistently challenging my ideas; and Prof. Robert Pepperell for inspiring me to look differently at a world that so many will tell you should only be understood in their way. I have been blessed with a supervisory dream-team that had already taught me so much before they even took up that mantle.

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I am forever thankful for the support of my dear wife Vanetta 'Ben' Spence: replete with the GSoH that I fell in love with, and with whom laughter continues to be such an important expression of our love for one another — sorry for leaving books all over the house and for that time I was thinking about my PhD when I gave the impression that I was listening to you. And that other time… And those other times… :)

Thanks too, to my equally beloved children, Emmanuel and Elvie, of whom I am so proud, with whom I laugh constantly, and in whom I have observed the very formation and development of a sense of humour from the *tabular rasa* at birth to a deeply sophisticated and fiercely quick dimension of their individual personalities: a fascinating journey that has at times confirmed, and at other times thoroughly refuted, the humour theory that I have read.

Heartfelt thanks are due to my parents, Mary and Tudor, for every experience that I have ever had, and will ever have, humorous or otherwise. Thanks also to my brothers, Dylan and Max, my extended family, my dear friends, and even my casual acquaintances: all of whom have provided years of laughter and good humour — a lengthy period of immersive and experiential auto-ethnographic fieldwork that has provided me with a lifetime of insight into, experience of, and practice at, humour.

Finally, I offer thanks to all of the humour creators, by whatever means and media they have employed to give the gift of laughter to myself and others. I recognise a rarity that I have enjoyed in conducting this research: how many PhD candidates get to spend countless hours laughing at the their research material? Whilst others might be mining dry statistical data or reading dull interview transcripts, I could be found watching stand up comedy routines or reading jokes. Whilst others could be found trudging through hordes of effective-but-insipid design artefacts, I could be found amongst a menagerie of funny things — chuckling contentedly.

What a genuine privilege.

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-1). Preamble.

Funny Things — How and Why?

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-1.1). A Laughing Designer and a Gelastic Practice.

I can't help myself — I'm compelled to make things that people find funny[1]. Sometimes I make things specifically to generate humour and laughter, especially in design terms. At other times I've smuggled ironic humour into functional design outcomes, like the jokes scattered throughout this thesis, but for which this was not a project priority. I've tried to take things more seriously — but not very hard.

The function of this preamble is to provide insight into my designerly perspective as a designer, researcher, and author of this thesis; an 'origin story' for the research questions; and a brief illustration of my design practice. Due to this personal dimension, and some other factors outlined in the introduction (Section 0.5.6), this short section is written informally, conversationally, and in the first person.

-1.1.1). A Note on *Design*.

This thesis contributes to design discourse. The word 'design' is used in various forms herein: as a noun, a verb, an adverb, and an adjective. As a designer, the semantic mutability of this commonplace word — the shifting nature of what it is actually intended to mean in any one moment — is barely noticed. The meaning of *design* slips and slides

[1] And by people, I mean starting with me.

around: here it represents having a thought or an idea; there it refers to a process or method; here to a professional practice; there to a schematic; here it denotes a physical thing; there it doesn't — and yet it is also used to encompass *all* of these things. As a designer, this does not present a pressing problem. Through repeat exposure, we (designers) are well accustomed to the contingency and fluidity of the meanings, permutations, and uses of *design* — and rapidly switching between them, often in the same sentence. As the design writer John Heskett has stated, in a funny-looking but grammatically correct expression: "design is to design a design to produce a design" (Heskett, 2005, pp.3).

For an author of doctoral research, the word design is considerably more problematic than it is for a practicing designer. When a doctoral eye is brought to bear upon the word design, it demands definition and, given the numerous ways that *design* is used, clarifications can quickly become lengthy and swamp other considerations. In light of this, and in reflection of the varied meanings of the word design that are employed in this preamble and the text that follows it, I will very briefly make some uses of the word design more clear (understandings of *design* are considered in more detail in Chapter 1).

To interrogate Heskett's grammatically correct but funny-looking sentence[2]: 'design (a) is to design (b) a design (c) to 'produce' a design (d)'. In this case:

a). is design in a *holistic* sense, a general term for the aggregated 'field' that design is: people doing (b) according to (c), the outcomes (d), but also the agglomeration of designers engaged in such things ('design' doing *this* or *that*), and its histories.

[2] Funny odd, *and* funny haha.

b). is design as an *activity*, a universal expression of human agency: design as a process that is being 'done'. Everyone has the capacity to do this, but some people (who self-identify as designers) do it in varied and varying professional capacities.

c). is design as a *proposal*. This design may be just an idea, or may be formalised (and materialised) as a schematic, a blueprint, a set of guidelines, instructions, and/or requirements — often by a designer.

d). is design as a category of things, the *outcome(s)* arising from doing (b), according to (c). Outcomes that are typically brought to mind are material things, things made from designed components (such things as many design books are filled with), but this is not always the case: it could apply to a decorative pattern or other two-dimensional artefact; or to something immaterial such as a story, a strategy, or even a joke; to something rather temporal such as a piece of music or sound; or something that synthesises many of these things, as do film and video.

Heskett has in mind industrial design, so I take his use of the word *produce* here to refer to the production of fungible artefacts by means of industrial mass-manufacture. However, this is not always the case with design production: for example, in the fields of graphic/advertising design, a digital image may be produced individually and then distributed through software networks to millions of screens. Also, discursive/critical design often involves the production of single design outcomes for exhibition — documented and disseminated by representational images rather than actual artefacts.

Design is analysed and theorised, and such theory and analysis contributes to design discourse(s). Design theory is taught, but much design skill is acquired experientially — by self-identifying designers *doing* it. Having been trained as a designer, I repeatedly switch between meanings of *design* throughout the thesis (such meanings being considered in more detail in Chapter 1).

I often use the term *designerly*[3] in this text, as do Nigel Cross (1999, 2001, 2007a, 2010, 2018a, 2019, 2023), and others (e.g. Archer, 1979). It is employed here as a word to reference the mindset and approach of designers as individuals, design as an autonomous professional culture, and design artefacts as the embodiment of human ideas and ideals: i.e. to allude to the multiplicity of design understandings that have been mentioned above.

-1.1.2). A Gelastic Practice — Then and Now.

This is not doctoral research by practice, but my creative practice has continued throughout this research. As a designer, I understand research practice as a flowing matrix of different modes of acquiring information and generating knowledge: sometimes reading texts about design, designing, and the histories of these things; sometimes designing things myself, testing them in the world, and reflecting upon their reception; sometimes analysing other designer's artefacts, including those from other disciplines to my own; sometimes talking to other designers and those who contribute to design discourses; sometimes looking beyond design to other fields: art, humour, and so on. In conducting the research for this thesis, I do not make hierarchical differentiations between these varying modes:

[3] The word *designerly* should not be confused with the word *designedly* (meaning to do something deliberately in order to produce a specific effect). Both build upon the word design, but incorporate different suffixes: they are intimately related, but markedly different.

slipping between them as the word design (for the designer) slips between different meanings. I recognise that there are differences, especially materially, but I wilfully conceive of these modes in a non-hierarchical manner.

I have been trained and educated as a designer, having accrued some years of academic and commercial experience in various disciplines of design. I present myself as a designer, but my practice plays at the periphery of design, where it nudges up against a perceived boundary with art, and where such a boundary between the two becomes rather indistinct and traversable. During my nascent undergraduate days, a desire to be 'taken seriously' was palpable amongst my peers, and I continue to recognise it in the undergraduate and postgraduate students that I teach now. Unsurprisingly, there is a pervasive ambition for one's designs to be effective and efficient in their production and subsequent use, and that this functional efficacy should be synchronised with certain stylistic characteristics of form: i.e. product design should 'look like' product design, graphic design should 'look like' graphic design, architecture should 'look like' architecture, and so on. These *conditions* (arguably *constraints*) have been positively encouraged by many of the textbooks and lecturers that have informed emerging designers in their training (a quintessential contemporary example being Peter Dabbs' 'Product Design Styling', 2021). By contrast, we[4] weren't overly concerned with what our design looked like[5] — being far more focussed upon novel ideas, interaction, and experiences-of-use, than we ever were in aesthetics, and, unlike my peers: I *wanted* my design to be laughed at. I say 'at' but of course I mean 'with'. I've always welcomed a certain type of

[4] I say we, rather than I, because I worked collaboratively and intensively on my undergraduate projects, and many later ventures including a commercial design consultancy, as part of a formative and fruitful design partnership with then fellow student, and still dear friend, John Anthony Evans.

[5] Unless for some specific reason, such as fidelity. For example, great pains have been taken to produce toy-like objects for my SARS Wars project that look like *actual* toys because this is an affective quality of the parody. Low-fidelity would likely undermine the humour (and the seriousness) of this project in this case.

humorous response: I didn't want my work to be the target of derisory laughter, I wanted to *share* in amusement with the audience of my designs — conveyed through the design itself. As my creative practice has matured, I have intuitively[6] and increasingly made funny things and have measured the success of much of my practice by the metaphorical yardstick of the laughter that it has conjured. This *seeking out* of laughter was intentional, but, upon reflection, comparatively rare. The things that I have made — some more critical and conceptual, others quite practical — are not just amusement-generators though, they are serious design artefacts and the creations of a design practice that I take very seriously[7]. In this seriousness, I have employed humour as a strategy for engaging audiences and often as a way to disarm people — guided by the principles that 'many a true word is said in jest'[8].

As undergraduates, at the turn of the millennium, we first encountered the term *critical design* (Dunne, 1999; Dunne & Raby, 2001, 2024; Malpass, 2012, 2017a), and that continues to be how I describe much of my work, then and now. Our early artefacts included a steel box that looked like it might be a telephone, but actually took photos of users *thinking* it was a telephone (experimenting with design affordances[9]); electronic lights that used ice in the manner that candles employ wax — to give them form as well as fuel — when the ice melted they fell apart and *became* off; and the 'Hodderdodder' an

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[6] I have made some attempts to understand this designerly intuition, that have broadly informed this research, through the work of Atkinson & Claxton, 2000; Davis-Floyd & Arvidson, 1997; Hodgkinson, Lagan-Fox & Sadler-Smith, 2008; Klein, 2004; and Noddings & Shore, 1984.

[7] To paraphrase the poet Robert Frost, and others who have expressed similar sentiments, 'I am never more serious than when I am joking' (Katz, 1991, pp.24).

[8] This phrase is considered in more detail in the contexts of 'chindōgu' and 'critical design' in Chapter 3).

[9] Affordances, in the context of design and entanglement, are explored later in this thesis (Chapter 5).

elaborate Heath-Robinson-esque machine for navigating video by way of a noisy and oversized crank-handle[10] (see Figure -1.i).

Figure -1.i. (Top left) The Camrophone; (top right) an ice-light; (bottom left) the Hodderdodder; and (bottom right) the Hodderdodder being operated[11] (Humphries & Evans, 2001-2002).

In characterising my practice, I have previously stated that "I have a predisposition for hacking, modding, and *upsetting* that drives provocative interventions into material, aesthetic, ideological and theoretical systems. My work is irreverent and parasitic: corroding, bending, parodying, and sometimes breaking the rules and traditions of design

[10] Inspired by Edie Izzard's onomatopoeic description of a mechanical brush (Izzard, 1997), this device was named after the similar noise that it made. The speed and direction of the video playback was directly linked to the speed and direction of the turning of the crank. It was both exhausting to watch, and *exhausting to watch*.

[11] By Dr. Stephen Thompson, Director of Studies for this thesis.

and — in doing so — drawing attention to both their nature, and their possible futures" (Humphries, 2014). I have previously self-aggrandised, albeit with metaphorical tongue-in-cheek, that "If design does the set-ups, I do the punchlines" (Humphries, 2014). Examples of such punchlines might be found in my subversive textile practice: 'Crapestry[12]', or my ongoing 'SARS Wars Toys' critical design project. In the last two decades, as Crapestry[13], I have taken about one hundred widely available cross-stitch kits (usually from a prolific Belgian company named Vervaco), modified the designs, and then stitched and framed them (see Figure -1.ii). I have exhibited these 'Crapestries' internationally[14] and they have featured in a number of publications[15].

[12] A portmanteau of the words 'crap' and 'tapestry'.

[13] https://crapestry.com/ and *@crapestry* on Instagram

[14] See section 0.7). Intended Audience.

[15] See section 0.7). Intended Audience.

Figure -1.ii. (Top left) An original cross-stitch-kit design of a bucolic church in winter snow, from Vervaco; (top right) ‘Crash’ from the ‘Guerrillas in the Misc.’ collection, the idyllic scene disrupted by a terrible car accident (Crapestry, 2012); (bottom left) ‘Kat’ from the ‘Unfamiliars’ collection, (Crapestry, 2019); and (bottom right) the original design from Vervaco.

‘SARS Wars’ was one of my more creative responses to the 2020 global pandemic caused by the virus known as Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-

CoV-2). The project involved taking the original Star Wars toys produced by Kenner Products in the 1970s and 1980s and remaking them in the context of the emerging Covid crisis (see Figure -1.iii). I have described them as intended…

"…to be humorous, but they may also be perceived as tragic, troubling, or even upsetting. Their perception will likely depend upon the viewer's 'proximity' to the negative impacts of the Pandemic. It has been difficult for everyone, but this difficulty has not been very evenly distributed: inconvenient for some, disastrous for others. […] The intention is not to trivialise the widespread fear and harm caused by the virus. Nor is there a tendentious political message here. Rather, these objects are intended to act as reflections of the time in which they have been brought into existence — they simply would not have existed before the events of the early 2020s.
They are, therefore, not so much action figures as *reaction figures*."

(Humphries, 2020)

Figure -1.iii. Two SARS Wars figures[16]: (left) 'Lockdown Carehome Resident' (Humphries, 2020), and (right) 'Vaccination Time Playset' (Humphries, 2022).

[16] These are real material things that have been made by me and then photographed. They are not just manipulated images (as people have often asked). I have completed over thirty so far (see sarswarstoys.com).

The Olfactor, another #fundemic[17] lockdown project, was created as a contribution to the Faculty of Minor Disturbances[18]. The project involved the design and creation of an apparatus, made entirely from typical household materials[19], that would enable people eating plain and uninteresting food to enhance their sensorial experiences by smelling the contents of two small plastic bags. Initial experiments with spices and other foodstuffs quickly afforded more unusual olfactory adventures (see Figure -1.iv.).

Figure -1.iv. Using the Olfactor: the author eating plain boiled white rice whilst smelling an earthworm[20], some moist topsoil, and some freshly-cut dewey grass[21] whilst imaging being a foraging badger — an homage to the intriguing work of *anthrozoologists* such as

[17] A hashtag popularised during the pandemic to refer to positive, sometimes creative, experiences had during the 'lock-downs' of the early 2020s when people were variously restricted in their day-to-day activities, especially in terms of free movement and social interactions.

[18] An informal-but-international research group of which I am a member.

[19] A cardboard egg box, some paper straws, rubber bands, plastic tape, plastic bags, etc.

[20] A fake worm: no animals were harmed during the production of this image.

[21] That's real grass and soil though, and genuine British dew.

Charles Foster, author of 'Being a Beast: Adventures Across the Species Divide' (Foster, 2016) who "lived life as a badger for six weeks, sleeping in a dirt hole and eating earthworms" (Foster, 2016), and Thomas Thwaites, author of 'Goatman: How I Took a Holiday from Being Human', who spent considerable time living as an emulation of a mountain goat in the Swiss Alps (Thwaites, 2016).

-1.1.3). A Laughing Designer.

Democritus, of fifth-century BCE Abdera, is known as 'the laughing philosopher[22]' (Beard, 2014, pp.92; Halliwel, 2008, pp.351). Inspired by this, I like to think of myself as a laughing designer: being principally concerned with understanding funny things through my research; creating funny things through my practice (as illustrated above); and exploring serious ideas, through humour, in the things that I write and say, for example:

"A problem laughed, is a problem halved[23]"

(Humphries, 2024).

A lyrically playful reference to the idea that laughing at something reduces it's perceived agency and threat. This can be thought of as a coping mechanism, in the manner of so-called gallows humour: deriding a threat in order to disempower it[24].

[22] Although Halliwell makes a convincing case that Democritus' sobriquet has been somewhat embellished over the last two and a half millennia (Halliwell, 2018, pp.351-358).

[23] Surprising to me, no one has ever said this before, at least not in a public Googleable way. It's a parody of the adage that 'a problem shared is a problem halved', which dates from 1930s England (Martin, 2024). It came to me in a moment of inspiration when thinking about humour as a response to adversity.

[24] Something especially relevant to this thesis in terms of the ways in which derisory humour effects design and in terms its case studies, especially 'Ballmer and the iPhone' (Chapter 2, Section 2.2.2).

“Thanks to James Dyson, we now know what Optimus Prime's prostate looks like[25].”

(Humphries, 2015)

(See Figure -1.v)

Figure -1.v. (Left) The Dyson ‘Small Ball Upright Multi-Floor Vacuum Cleaner’ and (right) the character, ‘Optimus Prime’, as realised for the 2011 film ‘Transformers: Dark of the Moon’ (Paramount, 2011).

[25] The serious point made here is a critique of the Dyson vacuum-cleaner aesthetic, which is both aggressively vulgar and simultaneously rather phoney. Vulgar in the fact that the design aesthetic is wildly at odds with prevailing contemporary Western tastes in interior design (or historical tastes for that matter): as a *thing,* it’s impossible to ignore — the antithesis of Rams’ principles for unassuming and sophisticated design (Rams, 1989, 2016, 2017), although I’ll conceded that I’m speaking to the visual identity and not to the vacuum engineering (which I don’t feel qualified to assess). It’s *phoney* in that much of the casing design detail appears to be nothing more than a shallow reference to powerful combustion engines and industrial plant machinery. Do all of those vents, fins, seams, vehicular profiles, and theatrically sculpted 'chambers’ enhance the function of the device, or are they merely visual styling that seems entirely at odds with commonplace trends in contemporary domestic interior design? It’s so overstimulating for a consumer device: nauseatingly so. Optimus Prime is a shape-shifting robot from Hasbro's 1980's ‘Transformers’ franchise who has been visually ‘over-engineered’ in a run of seven Paramount films, the first five being directed by Michael Bay. And the prostate is a human gland that contributes to the production of seminal fluid, is part of the human hormonal system, and is crucial for ejaculation (National Library of Medicine, 2022). I chose this gland for its Rabelaisian qualities: it’s sexual and scatological connotations — anything to do with penises, of course, has a long history of being found funny (Herring, 2004).

“The most beautiful piece of design is not as beautiful as the world’s ugliest fish[26].”

(Humphries, 2017)

(See Figure -1.vi)

Figure -1.vi. (Left) Pierre Jeanneret’s ‘Kangourou’ lounge chair from Chandigarh, 1955, one of the most beautiful chairs in the World, according to designers Stefan Sagmeister and Jessica Walsh who have written a book on "the essence of beauty and the transformative power of beautiful design” (Sagmeister & Walsh, 2018, pp.189), and (right) a blobfish, *psychrolutes marcidus*, recently voted the world’s ugliest animal in a poll by the ‘Ugly Animal Preservation Society’ (Watt, 2024).

[26] The serious point made here is one of ecological sustainability. In constructing their ivory towers, literal and metaphorical, history demonstrates that human beings have tended to exploit and/or neglect non-human beings and their ecological environment (Papanek, 2019). Designers have played a pivot role in this history, of course (Fry, Dilnot, Stewart, 2015). In constructing their ‘designed world' (Buchanan, Doordan, & Margolin, 2010), people have fixated upon the qualities of this ‘artificial’ world (Simon, 1996; Margolin, 2018) and overlooked many others. From the gargantuan to the infinitesimal, there is something more precious and wondrous about every living being and ‘natural’ thing, than any crude orchestrations of materials by the human actions know as design. Photographs, such as the image in Figure -1.f, are an inaccurate portrayal of the appearance of the blobfish. They are deep-sea creatures, living their entire lives at “a depth of 600 to 1,200m” below sea-level (Watt, 2014, pp.84), where they look very different. When taken out of this deep water, they die, decompress, and their tissues rupture. Images of out-of-water blobfish thereby provide a rather fitting metaphor for human misunderstanding and misrepresentation of the non-human world, and the value judgements that they make upon it.

-1.2). Why Investigate Funny Design?

In 2009, as Crapestry, I completed a piece of textile work that presented a tragic scene: the original design featured two penguin parents caring for their chick. In my version the chick is dead (see Figure -1.vii).

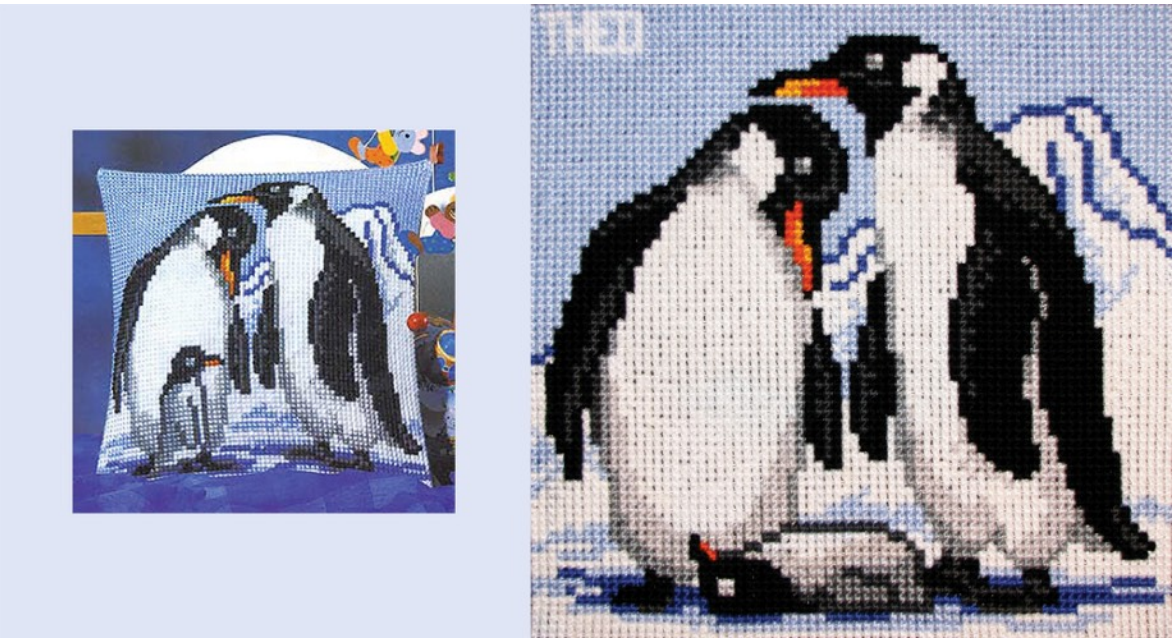

Figure -1.vii. (Left) the original 'Penguins' cross-stitch kit from Vervaco and (right) the Crapestry version — 'Penguins', from the 'Polar' collection, 2009.

It's objectively a very bleak image, yet when I hung this work (with a selection of others) in a corridor exhibition in Cardiff School of Art & Design in 2013, a senior-colleague noticed it and immediately burst out laughing — a real belly-laugh. This was, of course, the response that I was seeking. Having conceived of and painstakingly executed this work of purposely bad taste, I was delighted to see this honest and instantaneous involuntary reaction. I dwelt upon this moment for some time afterwards. The subject matter was deeply troubling: such a scene *should* have evoked feelings of sorrow, not joy. The penguin mother looks down at her child: frozen and still. The penguin father gazes into the distance, seemingly overwhelmed and unable to process the enormity of what has

happened. Neither touch each other. I asked myself why a warm, friendly, highly-intelligent, and otherwise mentally-stable person would laugh at this scene — and so instantly, and so hard? Would the response have been the same if this were a photograph or video of *real* penguins and not a piece of low-resolution pixel-art rendered in 'chunky[27]' cross-stitch? What was it about the medium that evoked the laughter? This was a pivotal moment in the inception of this research: humour and laughter clearly appearing to be rather complex, quite peculiar, and bafflingly counterintuitive characteristics of being human. This doctoral research began from an uncomplicated urge to want to understand more about why people find *things* funny, and what exactly funny *is*? As it turned out, the answers to both of these questions are complicated, long-contested, and still unresolved.

As this research matured, questions began to emerge that were more productive for design: why would it be useful for designers to understand humour? Are there moments in design history when humour has been problematic for design? If so, when, how and why? And what might/should be done to address such issues in the future? Through my investigation of these questions, and related others, a hypothesis began to emerge: that designers have historically misunderstood humour and laughter as responses to design, and design innovation. These considerations culminated in the development of a concept of *malentanglement* which became important in addressing the research questions. To briefly explain: borne out of a synthesis of humour, design, and entanglement theory, *malentanglement* describes design audience's interpretation of entanglement/fittingness as somehow incongruous. Take, for example, the jewellery design presented in Figure -1.viii.

[27] Vervaco's term for many of their cross-stitch kits.

Fig -1.viii. Facial jewellery from Pauline Müller's 'Doux Leurre[28]' collection, (Müller, 2020).

Müller's design is highly unusual[29], to Western eyes at least, and it might well evoke humour and laughter as a response. This thesis asserts that this is not necessarily derisive laughter, as the so-called *aggression* theories of humour would argue, nor merely the laughter of surprise-without-threat, as the later *incongruity* theorists would have it. Instead, this humour and laughter arise from an audience perception of things as incongruously entangled (*mal*entangled) — their fittingness[30] appearing incongruous — this being a problematically misunderstood response *to* design, *by* design(ers), and especially to design innovation (see Chapter 6, Section 6.1.3, for a more in depth discussion of the concept of malentanglement).

[28] 'Soft Lure' in French.

[29] Notwithstanding its brilliance — its troubling beauty, accomplished technical craftsmanship, and fascinating concept. This is remarkable avant-garde work.

[30] Ian Hodder's term for 'affordance plus coherence' (Hodder, 2012).

0). Introduction.

Malentanglement, and (Mis)Understanding Humour and Laughter as Responses to Design and Design Innovation.

0.1). Perturbations in Design Professionalism: An Introduction by Song.

Figure 0.i. Ginger Rogers singing 'They All Laughed' in the 1937 film 'Shall We Dance' (Sandrich, 1937).

"They all laughed at Christopher Columbus,
When he said the world was round.
They all laughed when Edison recorded sound.
They all laughed at Wilbur and his brother
When they said that man could fly.
They told Marconi,
Wireless was a phoney,
It's the same old cry.

They laughed at me, wanting you,
Said I was reaching for the moon,
But oh, you came through,
Now they'll have to change their tune.
They all said we never could be happy,
They laughed at us and how!
But ho, ho, ho!
Who's got the last laugh now?

They all laughed at Rockefeller Centre,
Now they're fighting to get in.
They all laughed at Whitney and his cotton gin.
They all laughed at Fulton and his steamboat,
Hershey and his chocolate bar.
Ford and his Lizzie,
Kept the laughers busy,
That's how people are.

They laughed at me wanting you,
Said it would be, "Hello, Goodbye".
And oh, you came through,
Now they're eating humble pie.
They all said we'd never get together,
Darling, let's take a bow,
For ho, ho, ho!
Who's got the last laugh?
Hee, hee, hee!
Let's at the past laugh,
Ha, ha, ha!
Who's got the last laugh now?"

(Gershwin, 1937)

It is, one imagines, comparatively rare for the lyrics of romance songs to base their premise upon the history of design innovation. It is rarer still for such songs to consistently reference the humour that sometimes accompanies innovation in design. However, this was the strategy of Ira Gershwin's famous ditty 'They All Laughed', written for the film 'Shall We Dance' (sic) (1937). During this particular number, Gershwin presents a history of technological innovations: Thomas Edison's phonograph; Orville and Wilbur Wright's first powered aircraft; Guglielmo Marconi's wireless telegraphy; Eli Whitney's 'Cotton Gin' (Cotton Engine); Robert Fulton's 'North River Steamboat'; Henry Ford's 'Tin Lizzy' (Model T) automobile; and others. Gershwin's song claims that all of these design innovations were subject to derisory humour at their inception, but proved to eventually be of high value to the capitalist industrial complex within which they became established. The romantic dimension of the song emerges through an allegorical comparison between

people's response to newly emerging design and people's response to an amorous relationship that develops between two apocryphal lovers: being subject to a similarly sceptical humour in its nascence, but vindicated over time. This song is, of course, a work of lyrical art, and not an overly reliable account of events in design history. However, in recognising humour as a factor in the history of design innovation, Gershwin rather delightfully draws popular attention to the idea that people sometimes laugh at design, especially innovative design, and that (importantly for this research) many such design innovations go on to become the design status quo. Despite Gershwin's insight, and the persistent popularity of this song over the last nine decades, the phenomenon of laughter — as a direct response to design innovation — appears to have remained largely unexplained within design discourses.

This research addresses issues of humour and laughter in the context of design, asserting that design's historical misunderstanding of humour has been problematic for design innovation. The contribution to knowledge being in an explanation of humour and laughter as responses to design and design innovation. Humour can appear to be a problem for design, especially when designers feel that the authority of their professional practice is challenged through derisory laughter. Such moments of laughter are conceived of herein as perturbations: moments of professional anxiety when design's control over humour is lost. This thesis proclaims that it is not the laughter itself that is the problem, rather it is *interpretation* of such laughter that is problematic: being symptomatic of designerly misunderstandings of humour that have been long-underpinned by rational positivism and a deeply entrenched and pervasive 'problem solving' model within design logic, training, and discourses. Drawing from discourses of design theory, humour theory, and entanglement theory, this thesis declares that problematic humour and laughter (when more

fully understood from a psychologically, physiologically, historically, and socio-culturally 'entangled' standpoint) can be reframed as things to be welcomed as indicators of genuine design innovation.

0.2). Research Territory and Knowledge Gaps.

The literature review and design survey, conducted as part of this research, revealed that designers clearly demonstrate understandings of humour, but that these understandings tend to be rather narrowly focussed. By this, it is meant that these understandings are concerned with the materialisation of jokes for mere commercial gains (or rather, for reasons of *volitional entanglement* to be explored in Chapter 6) rather than borne from a realisation that humour is an important and influential phenomena of human being that affects design, and designers, in subtle and complex ways — ways that will be explored throughout this thesis. Design's historical distancing from humour, in order to strengthen its position as a 'serious subject', has (ironically) left it susceptible to derisory humour: the further the gap that design puts between itself and humour, the less design is(/designers are) able to cope when humour unexpectedly closes that gap (i.e. design is laughed at).

Humour.

Over the last two millennia, much has been written about humour and laughter, and not just by peripheral scholars. Many widely-known thinkers have 'had a go' at the problem of understanding humour and laughter: Plato, Aristotle, Cicero, Seneca, Quintilian, Descartes, Spinosa, Hobbes, Kant, Schopenhauer, Kierkegaard, Wittgenstein, Freud, Darwin, Bergson, and others. In the last half-century there has been a comparative explosion of writing in the various fields of humour study that has resulted in the fact that,

according to historian Mary Beard, “The range of modern writing on laughter is truly daunting […]. There is far too much written — and still being written — on the subject of laughter for any one person to master”[31] (Beard, pp.36-37). This more recent writing has, for the most part, not been undertaken in the field of philosophy — as was the historical tendency of the thinkers above — rather, this recent writing can be found in many other fields including psychology, biology, literature and linguistics, marketing, and a many other fields, including design. Alongside widely available books, humour discourses now play out through international academic journals such as 'Humor[32], the International Journal of Humor Research’ (Humor, 2024) and ‘The European Journal of Humour Research’ (EJHR, 2024). There are now academic conferences that are focussed upon humour, and the subject of humour finds its way into other books, journals, and conferences too (for more detail, see Chapter 4). Despite the volume of material that contributes to discourses concerning humour, and the amount of consideration that humour and laughter have been given over the last two millennia, the only robust consensus between scholars of humour and laughter is that there is little consensus over what humour and laughter are, how they work, and why they even exist. What consensus there is is fluid, contingent, fragile, and divided unequally amongst various and varied affiliations between theoretical models. The literature review for this research revealed that there are clearly gaps in the general understanding of humour and laughter, that underpin both this lack of consensus, and the fact that “no one unified theory of humour and laughter exists” (Clarke, 2008). A significant problem with engaging with humour theory is not what is missing

[31] And that’s just the specific subject of laughter. This research also considers humour, which, as later demonstrated, is a rather different, but intimately related, thing (see Chapter 4).

[32] Whilst the vast majority of research considered here has been written in ‘English’, the spelling *humour* is the recommended convention in British English (OED, 2023), but the spelling *humor* is the recommended convention in American English (Merriam-Webster, 2024). Written in the United Kingdom, this thesis uses the British *humour,* but, for purposes of accuracy and authenticity, uses *humor* when referencing media titles or quoting from source material that has been written in American English. As this is a fairly regular occurrence, and in the interests of ‘de-cluttering’ this text, the conventional ‘[sic]’ identifier will not be used for the word *humor,* however, it may still be used for other words, as appropriate.

(although that is a problem), but meaningfully identifying, understanding, navigating, and categorising the considerable amount of humour theory that is available. A number of scholars have made admirable attempts to account for histories of key humour theory, for example Salvatore Attardo's exceptional 'Encyclopaedia of Humour Studies' (Attardo, 2015), which has been invaluable in the researching of this thesis, as have the efforts of John Morreall (1983, 1986, 2009); Victor Raskin (2008); Jan Bremmer and Herman Roodenburg (1997); Willibald Ruch (1998); Rod Martin and Thomas Ford (2018); Terry Eagleton (Eagleton, 2019); and others. Whilst some authors have written about humour and laughter in theoretical and analytical terms, for example, Alistair Clarke (Clarke, 2008, 2010); Charles Gruner (Gruner, 1978, 1999); Robert Provine (Provine, 2000); Igor Krichtafovitch, 2006 (Krichtafovitch, 2006), others have written more practically about how to create humour and how to evoke laughter (see, for example, Aaker & Bagdonas, 2020; Holloway, 2010; Vorhaus, 1994; Mishon, 2003; Wright, 2007). Ultimately though, humour appears to be so indefinite, so elusive, and so subjective, that no one has been able to convincingly explain, or reliably predict, the phenomena of humour — there is still no such thing as a guaranteed laugh.

Design.

Over the last two and a half centuries, much has been written about design, all against the dramatic backdrop of the Industrial Revolution and the rise of manufacturing and transport infrastructure, the Electrical Revolution and the harnessing of electrical power, and the Digital Revolution in the proliferation of computer technology and the Internet. This thesis references this history of design theory and discourse, being particularly attentive to the want of design to be 'taken seriously' and to be recognised as a legitimate assembly of professional practitioners/practices that are guided by a rational

design logic. Numerous and invaluable publications have informed this research, including a number of design ‘readers’, such as Grace Lees-Maffei and Rebecca Houze’s ‘Design History Reader’ (Lees-Maffei & Houze, 2010); Carma Gorman’s 'Industrial Design Reader’ (Gorman, 2003); Victor Margolin’s ‘The Politics of the Artificial – Essays on Design & Design Studies’ (Margolin, 2002); Hazel Clark and David Brody’s ‘Design Studies: A Reader’ (Clark & Brody, 2009a); Ben Highmore’s ‘Design Culture Reader’ (Highmore, 2008); Jerry Palmer and Mo Dodson’s ‘Design and Aesthetics: A Reader’ (Palmer & Dodson, 1996); and Anne-Marie Willis’s ‘Design Philosophy Reader’ (Willis, 2018) which present rich collections of texts from important authors in design history. These more generalised collections of sources have been countered by more focussed texts in the form of books such as Nigel Cross’s ‘Designerly Ways of Knowing’ (Cross, 2007a) and ‘Design Thinking: Understanding How Designers Think and Work’ (Cross, 2023); Victor Papanek’s ‘Design for the Real World: Human Ecology and Social Change’ (Papanek, 2019); Adrian Forty’s ‘Objects of Desire: Design and Society Since 1750’ (Forty, 1992); John Walker’s ‘Design History and the History of Design’ (Walker, 1990); Reyner Banham’s ‘Theory and Design in the First Machine Age’; Tony Fry, Clive Dilnot, and Susan Stewart’s ‘Design and the Question of History’ (Fry et al, 2015); John Chris Jones’ ‘Designing Designing’ (Jones, 1991); Kjetil Fallan’s ‘Design History: Understanding Theory and Method’ (Fallan, 2010); Daniel Miller’s ‘Stuff’ (Miller, 2009) and ‘Comfort of Things’ (Miller, 2009), Penny Spark’s ‘Genius of Design’ (Spark, 2009); Michael Erlhoff and Timothy Marshall’s ‘Design Dictionary: Perspectives on Design Terminology’ (Erlhoff & Marshall, 2008); and various contributions by Donald Norman (1993, 1999, 2000, 2004, 2010); Ellen Lupton (2005, 2017); and Bill Moggridge (2006). Since the recognised emergence of design studies in the 1970s, a number of journals have emerged to facilitate discourses concerning design: for example, ‘Design Issues’ (2024),

‘The Journal of Design History’ (2024), and ‘The Design Journal’ (2024). These regular publications have provided ready access to the discourses of contemporary and historical design.

Entanglement.

The word entanglement has a well established meaning and has been employed with reference to a number of theoretical models. This thesis draws especially from a form of entanglement that might be best described as Hodderian — in that it has been extensively developed by contemporary archaeologist and scholar Ian Hodder (Hodder, 2011a, 2011b, 2012, 2014, 2018, 2020; Hodder & Mol, 2016; Hodder & Lucas, 2017). Hodder’s model of entanglement is primarily concerned with entangled interdependencies *between* things, including humans (as things), and is extensively explored in his book ‘Entangled: An Archaeology of the Relationships Between Humans and Things’ (Hodder, 2012). Hodder’s model of entanglement has not emerged in isolation, of course: he acknowledges that it has strong ancestral links to post-structuralist ‘Actor Network Theory’ as formulated by Bruno Latour, John Law, and John Hassard (Latour, 2007; Law 1992; Law & Hassard, 1999), and it resonates with various forms of ‘thing theory’, for example the contributions of Bill Brown (Brown, 2004); Bjornar Olsen (Olsen, 2013); Lambros Malafouris (Malafouris, 2013); Tim Ingold (Ingold, 2010); Deyan Sudjic (Sudjic, 2009); Peter-Paul Verbeek, (Verbeek, 2005); Arjun Appadurai (Appadurai, 2011); and Leslie Atzmon and Prasad Boradkar (Atzmon & Boradkar, 2017). Hodder’s model of entanglement, as others, also appears in some ways to be a reaction to the influence that new-materialist philosophy has brought to bear upon contemporary archaeological theory and discourse since its emergence in the 1990s: for example the writings of Karen Barad (Barad, 2007), Jan Bennett (Bennett, 2010), Manuel DeLanda (DeLanda 1997, 2006), and

Diana Coole and Samantha Frost (Coole & Frost, 2010) and new-materialist readings of, for example, the philosophies of Hegel, Heidegger, and Deleuze and Guattari. The key themes of the sources above have been further explored through a number of academic journal papers, for example Antczak and Beaudry's 'Assemblages of Practice: A Conceptual Framework for Exploring Human–Thing Relations in Archaeology' (Antczak and Beaudry, 2019); Govier and Steels's 'Beyond the 'Thingification' of Worlds: Archaeology and the New Materialisms' (Govier & Steel, 2021); Connolly's ''New Materialism' and the Fragility of Things' (Connolly, 2013); Brit Solli's 'Reindeer-hunting, Materiality, Entanglement and Society in Norway' (Solli, 2018); and Berk's 'A Kind of Disassembled and Reassembled, Postmodern Collective and Personal Self: Agency and the Insulin Pump (Berk, 2018).

Field, Theory, and Discourse.

For the most part, humour and design exist in separate realms, with minuscule cross-over compared to their overall metaphorical size. Imagine a Venn diagram that consists of a circle labelled 'design discourse' and a circle labelled 'humour discourse', then the central interpenetrative zone, where the two circles overlap, might be considered where 'humorous design discourse' happens. Within this central zone, both humour and design are discussed in the same conversation. It is within this imagined intersection that this thesis purports to reside (see Figure 0.ii.).

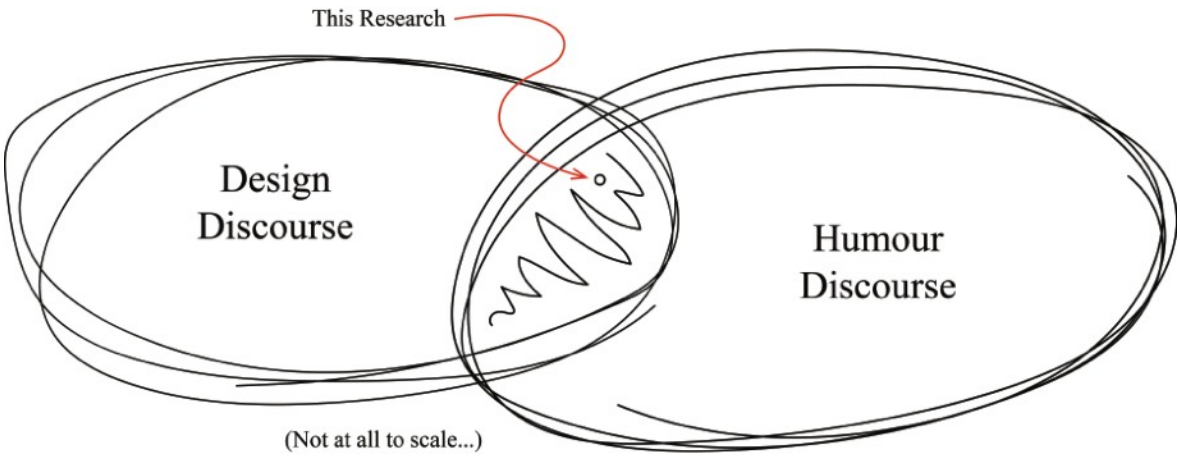

Figure 0.ii. An illustrative imagining of the intersection of design discourse and humour discourse that emphasises humorous design discourse in the overlap — where this research can be found (author's own image, 2024).

Compared to the well-established and distinct fields of humour study and design study, the consideration of humorous design has been largely overlooked by the scholars of both, and comparatively little research has been done that considers humour and design together. The result is that design, in general, is out of step with current thinking concerning humour. That said, the literature review did reveal a collection of sources that do consider humour and design simultaneously, with the vast majority of the sources identified by this research dating from within the last two decades, occasionally three. The fields of graphic design and advertising design dominate the discourse concerning humorous design, with comprehensive works such as Steven Heller and Gail Anderson's 'Graphic Wit: The Art of Humor in Design' (Heller & Anderson, 1991) being widely cited, and complimented by publications such as Heather Bradley's 'Design Funny' (Bradley, 2015) which is pitched more at engaging graphic design students in considering the potentials for humour in design practice (which it does very well). Titles more specifically focused upon advertising include, for example, Frank Beard's 'Humor in the Advertising

business: Theory, Practice, and Wit' (Beard, 2007), and Charles Gulas and Marc Weinberger's 'Humor in Advertising: A Comprehensive Analysis' (Gulas and Weinberger, 2006).

If one puts aside considerations of humorous design that come under the banner of graphic design or advertising design, of the 'little research' that does consider humorous design, 'not much' is left concerning other categories of design: humorous product design, humorous fashion design, humorous interior design, humorous critical design, and so on. Noticeable exceptions include Mark Blythe and Andrew Monk's '*Funology*' books (Blythe & Monk, 2018) which make the case for incorporating humour into both design methodologies and design outcomes, and publications such as Moniek Bucquoye and Dieter Van de Storm's 'Forms with a Smile[33]' (Bucquoye and Van den Storm, 2008) and Karen Bofinger's 'Wicked! Design on the Edge of Bad Taste' (Bofinger, 2011) which present extensive collections of gelastic design artefacts. If one extends their definition of design to include craft artefacts (see Section 0.6), then titles such as Brigitte Martin's 'Humor in Craft' (Martin, 2012) or Alexandre Mitchell's 'Greek Vase-Painting and the Origins of Visual Humour' (Mitchell, 2012) also make valuable contributions. Other published collections of design artefacts do not necessarily assert to be humorous collections but, in their presentation of remarkable, unusual, and unexpected design objects, they regularly stray into the realm of humour. Examples include Victoria Wong's '[Art]ifact: Re-Recognizing the Essentials of Products' (Wong, 2007), Marcus Fairs '21st Century Design: New Design Icons from Mass Market to Avant-Garde' (Fairs, 2011), Carlos Mustienes pair of 'Extraordinary Objects' books (Mustienes, 2003a, 2003b), or

[33] This is a companion volume to Bucquoye and Van den Storm's 'Forms for Pleasure' (2008) that features the author's 'Lapjuicer' project (Humphries & Worthington, 2004).

more focussed collections such as Renny Ramakers ‘Simply Droog’ (Ramekers, 2006) or Gijs Bakker’s ‘Droog Design’ (Bakker, 1998) which are centred upon the history of Dutch company ‘Droog Design’ — recognised for producing sophisticated designs that have a humorous dimension. These publications are supported by designer-authored collections of their humorous practice, for example Jacques Carelman’s ‘Catalogue D’Objets Introuvables[34]’ (Carelman, 1997), Kenji Kawakami’s ‘poppy’[35] assortment of chindōgu[36] books (1995, 1997, 2004a, 2004b), and Kenya Hara’s more refined ‘Ex-Formation’ (Hara, 2015). Designers[37] themselves regularly contribute to design discourses through their practice, or at least provide subject for study and discussion. For example, Sebastian Errazuriz (Errazuriz, 2004), Katerina Kamprani (Kamprani, 2020), Noam Torran (Torran, 2001), Bernat Cuní (Cuní, 2011), Sebastian Burdon (Burdon, 2024), Paul Granjon (Granjon, 2009), and Giuseppe Colarusso (Colarusso, 2022)[38] have all undertaken projects that have been widely considered to be funny. Alongside these publications and practical contributions, a number of researchers have explored humorous design through academic papers in various journals. Some notable examples include Geke Ludden, Hendrik Schifferstein, and Paul Hekkert’s investigations into incongruity, pleasurable surprises, and product design (Ludden et al, 2007, 2008, 2012); Gratiana Pol, C.W. Park, and Martin Reimann’s consideration of humour — as opposed to aesthetics — in longitudinal user/ product relationships (Pol et al, 2012), Mark Blythe, Kristina Andersen, Rachel Clarke, and

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[34] ‘Catalogue of Extraordinary Objects’, in French.

[35] The term ‘poppy’ is employed here to reference two things: firstly, that chindōgu are ‘pop-art-like’, in that the creation of chindōgu involves taking ‘everyday’ artefacts from material culture, redesigning and reconfiguring them, and presenting them back to that culture in order that it might better know itself — as pop art does. Secondly, ‘poppy’ references ‘pop’ in the sense of pop-music and pop-media because chindōgu are typically presented in an approachable and rather low-brow pop-design style.

[36] Chindōgu are explained in Chapter 3, Sections 3.2.2 and 3.3.1.

[37] I acknowledge that some of the creative practitioners that I have listed here have been defined as artists. This issue is addressed in Section 0.6.

[38] These are a small selection of the practitioners alongside whom I humbly make the case to align my practice.

Peter Wright's 'Anti-Solutionist Strategies: Seriously Silly Design Fiction. Problem-Solving or Not?' which explores the benefits of embracing humour in participatory design processes, and the work of Yeonsu Yu and Tek-Jin Nam who have formulated and tested a unique set of design principles intended for specifically creating humorous products (Yu & Nam, 2014, 2017).

The valuable contributions mentioned above are explored in more detail throughout this thesis.

0.3). Research Questions and Aims.

Whilst the title of this thesis is 'A Case for Humour-Centred Design: (Mis)Understanding Humour and Laughter as Responses to Design and Design Innovation', the core research question is:

— *How might humour and laughter, as responses to design and design innovation, be better understood by design?*

With supplemental questions, in the simplest possible terms, being:

— How is design understood? / how has design been understood?

— How is humour understood? / how has humour been understood?

— Why is this important? / How might understandings of humour benefit design?

In order to address these questions, the thesis aims:

a). to reference a history of *design* and design discourse that has given rise to designerly misunderstandings of humour and laughter as a response to design innovation — through a critique of a pervasive 'problem-solving' model of design and design logic.

b). to draw from histories of key *humour* theory and *entanglement* theory that might inform designerly understandings of humour and laughter as a response to design innovation.

c). to present an understanding of humour and laughter, as responses to design and design innovation, that is informed by the theory and discourses of *design*, *humour*, and *entanglement*, that better equips designers to understand, navigate, and respond to the problems that arise when design is subject to humour and laughter that is perceived as derisory.

0.4). Thesis Overview (A Fighter-Jet Passes).

Following its introduction, this thesis addresses the research questions, and research aims, by outlining and defining design — its purpose and categorisation — as a complex and universal human activity; as a dynamic and varied cohort of professional practices; and as a category of human-made things. This is not intended to be an exhaustive account of design, rather an attempt to provide a rich and useful illustration of the design-context within which this research resides. This early contextualising chapter demonstrates that there is a complex thing in the world called design (with a deep history), that design is practiced by self-identifying autonomous designers, and that designers, as professionals, take design seriously — and particularly wants others to take it seriously too. It is argued that the emergence of a design-led 'problem solving' model of design has underpinned a

misunderstanding of humour that has contributed to an interpretation of laughter (as a response to design innovation) that has been problematic for design.

The thesis then moves to present examples of design being laughed *at* (as opposed to *with*[39]), including a number of case studies: the presentation of Victoria Westwood's 'Time Machine' fashion design collection on BBC Television's 'Wogan' programme in 1988; Former Microsoft CEO Steve Ballmer in a televised response to Steve Job's unveiling of the first generation iPhone at MacWorld in 2007; and Ernest L. Ransome's presentation of his new 'cold-twisted iron' method for reinforcing concrete to the 'Technical Society of the Pacific Coast' in 1884. These case studies are purposely collated to illustrate instances in design history when design, especially at moments of innovation, has been met with humour and laughter, and, importantly for this research, when such humour and laughter was interpreted by designers as being derisory in nature — and therefore problematic.

In order to consider humour and laughter as responses to design, from a design perspective, the thesis then draws upon histories of design theory, design criticism, and changes in design practice to analyse how design has previously understood humour — both as threat and opportunity. Particular attention is paid to the difference between design that is 'laughed *with*' and design that is 'laughed *at*' in the tracing of some impacts of humour as an 'actor' within networks of design, designers, users, and design audiences.

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[39] The distinction between *at* and *with* is detailed in the Introduction (specifically Section 0.5.4) and in Chapters 2 and 3. In the meantime: design that is laughed *at* is the victim of the joke (and, by extension, so is the designer), whereas design that is laughed *with* is when designer and audience 'share' a joke together, through the medium of design.

In further analysis of humour and laughter as responses to design, the thesis then shifts from a design perspective to one that is informed by a history of key humour theory. Design that is laughed *with* and design that is laughed *at* are again considered, but this time through an enquiry into the varied historical theorisations of humour as a miscellany of, for example, conceptual, biological, and socio-cultural phenomena.

This research recognises that much humour theory is focussed cerebrally and linguistically, rather than materially. The case is made that this focus has been historically problematic for designerly engagement with the theorisation of humour. In response, the intellectual strategy of this thesis is to bring humour and design together through the agency of the idea of entanglement (emerging from contemporary archaeology, anthropology, and new materialist philosophy). It is argued that this enables designers to better understand humour and laughter (as responses to design and design innovation within material culture) in terms with which they are more familiar — the context of *things*.

A revised analysis of gelastic design that synthesises ideas drawn from design theory, humour theory, and entanglement theory is then presented as a means to better explain humour and laughter as responses to design and design innovation. A shift in conceptualisation from ‘designers as problem-solvers’ to ‘designers as entanglers of things in material culture’ is proposed, together with a proposition that certain design artefacts might be understood as ‘*malentangled*’ by design audiences. Malentanglement is a neologism that will be unpacked later in the thesis (see Chapter 6, Section 6.1.3), but might

be summarised as referring to the *interpretation of entanglement/fittingness*[40] *as somehow incongruous* and being symptomatic of a fracture in the relationship between audience and artefact. The focus of the thesis then returns to the case studies, which are briefly and speculatively 'tested' in light of this revised analysis.

The thesis concludes with a discussion that centres around a claim that people laughing at design is not necessarily problematic, rather that such laughter can be an indicator of the distance between design innovation and design present: being welcomed as symptomatic of genuine design innovation.

The final portion of the thesis explores a humour-centred approach to design that points to a need for the development of new design strategies, and design teaching, that accommodates a shift away from a problem-solving model of design, to one that recognises material culture entanglement as the principal concern of the designer and the role that humour has played in identifying and justifying this potential shift. This in turn challenges design's perceptions of humour and laughter as responses to design and design innovation, and thereby redirects how designers interpret, and strategically respond to, such humour and laughter.

[40] Hodder's term for the 'appropriateness' (for want of a better word) of a design to satisfy its intended use, and also the perception of this appropriateness (Hodder, 2012).

0.5). Finding Funny Things and Finding Things Funny: Research Methods and Writing Methods.

This section is divided into two halves. The first set of subsections (0.5.1. Research Methods; 0.5.2. Literature Review; 0.5.3 Design Survey; and 0.5.4. Gelastic Practice) broadly deal with *research methods* and how the research was conducted. The second set of subsections (0.5.5. Laughing With Versus Laughing At; 0.5.6. Military Metaphors and The Art of War; and 0.5.7. Doing it for the LOLs: Why Can't a PhD be Funny?) broadly deal with *writing methods* and writing strategy, and how the thesis may or should be read.

0.5.1). Research Methods.

In essence, this thesis is a theoretical study grounded in case analysis. Figure 0.iii. presents the research methodology as a diagram.

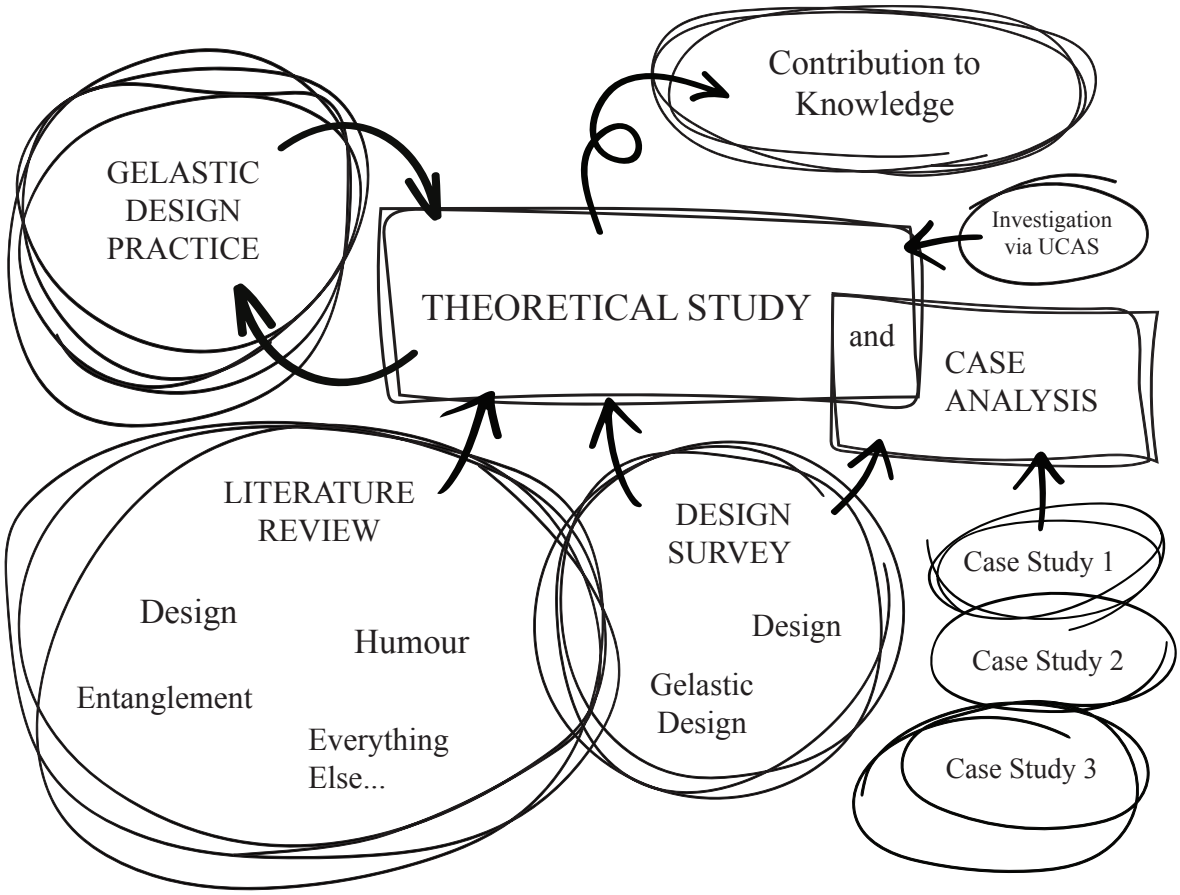

Figure 0.iii. Research methodology, author's diagram.

To explain: the ‘Theoretical Study’ is informed by a ‘Literature Review’ that draws from the key fields of ‘Design’, ‘Humour’, and ‘Entanglement’ discourses, but also extends into many other fields — here labelled ‘Everything Else’ (a direct reflection of the way that considerations of design, humour, and entanglement are made in disparate fields that have been engaged with through this research[41]). The literature review is spread throughout the thesis, but is thematically concentrated in certain chapters and sections (see Section 0.5.2. Literature Review (below) for more detail). The ‘Case Analysis’ centres around three key case studies (see Chapter 2, Section 2.2 — ‘Westwood on Wogan’, 1988; ‘Ballmer and the iPhone’, 2007; and ‘Ransome’s Rebar’, 1884). These case studies are complimented by analysis of a menagerie of other design artefacts, identified through an extensive ‘Design Survey’ of both ‘Design’ (in general terms), and ‘Gelastic design’ (design that has been considered humorous). This survey contributed to the theoretical study by providing illustrative, explicative, and/or exemplar design artefacts for reflection, consideration, and analysis in the form of a varied and substantial *library* of hundreds of gelastic design artefacts (many of which are included in this thesis) that widely expanded the scope of examples detailed in the literature. The ‘Author’s Design Practice’ has continued throughout the research and has been affected and informed by a constant interplay with the theoretical study (in terms of applying and assimilating theory, critique, analysis, and other responses) which has guided the practice, enabled deeper and better informed self-reflection and analysis, and some much valued inspiration. Likewise, the author’s design practice has informed the theoretical study by providing both a platform to test theoretical ideas, and also a suite of designed *things* that compliment those identified through the literature review and design survey, whilst affording more nuanced and

[41] A more bounded and exclusionary approach to the literature would have not been reflective of the universal nature of design, humour, and entanglement, nor their discourses, nor the synthetic approach mentioned in Section 0.5.2, nor the author’s research and design processes described in Chapter 1 (Section 1.2) with reference to Newman’s ‘Design Squiggle’.

bespoke illustrative, explicative, and/or exemplar design artefacts (hence why the arrows are arranged reciprocally: the theory and practice informing, guiding, and critiquing one another). An investigation made to ascertain the pervasiveness of notions of *problem solving* and *entanglement* in design utilised the UK's 'University and College Admissions System' (UCAS) to identify and analyse marketing and curriculum material (and other indicative content) from product design programmes in UK universities (see Chapter 1, Section 1.2, and Appendices 3 and 4 (12.3 and 12.4)[42]. The findings (that *problem solving* is a central and widely pervasive notion for design — and that *entanglement* is not) informed the theoretical study. As previously stated, the research methods outlined above were employed in a purposely non-hierarchical manner (see -1, Preamble, Section -1.1.2 for more detail) and somewhat inspired by a 'synthetic analysis' approach (see Section 0.5.2 for detail). The theoretical study and case analysis have borne metaphorical fruit in the form of the 'Contribution to Knowledge', for example, the concept of *malentanglement,* and an explanation of why some design, and design innovation, might be responded to with humour and laughter (see Chapters 0, Section 0.9 (below); and 9, Conclusion, for more detail). No formal interviews were conducted as part of this research. Instead, the thoughts, ideas, ideology, and opinions of designers (and other relevant parties) have been gleaned through the literature review.

0.5.2). Literature Review.

In its inception, this research sought out theories of humour in order to better understand gelastic design. Later, it inquired how theories of humour might make

[42] This method gave better insight into a national picture than bellwether interviews or other such methods might (see Chapter 1, under the heading 'An Experiment', for a more detailed explanation of these methodological choices).

worthwhile contributions to design discourses. Later still came a realisation that there might be some missing interlocutor between design theory and humour theory: that some metaphorical bridge might be useful in facilitating meaningful connection between these fields. This bridge was found in entanglement theory, drawn from contemporary archeology and anthropology, but somewhat borne out of the influences of post-structuralist and new-materialist philosophies. Therefore, the literature review for this thesis has three foci: the theory and discourses of *design*, *humour*, and *entanglement*. This thesis is a a theoretical study and considerations of researched ideas are made in every chapter. In this way the whole text is a sort of extended literature review, albeit a rather unevenly distributed one, with thematic concentrations 'pooling' in various chapters and sections. For example, the bulk of the design literature being considered is addressed in Chapters 1, 2, and 3, the bulk of the humour literature being considered is addressed in Chapter 4, and the bulk of entanglement literature being considered is addressed in Chapter 5. Once Chapters 1 to 5 have dealt with the key ideas, Chapters 6, 7, and 8 are then more free to discuss and synthesise ideas derived from all three fields.

Emboldened by a designerly intuition for exploration, the approach of the literature review is expansive: regularly and willingly pursuing 'leads' for knowledge into fields beyond those of design, humour and entanglement. These pursuits have been led by the enquiry, being appropriately reflective of the distributed nature of design, humour, and entanglement research. For example, the approach is consistent with Peter Dalsgaard & Christian Dindler's observation that design disciplines have a long history of drawing theory from other fields: for example from psychology and sociology[43] (Dalsgaard &

[43] However, the literature review revealed that this cross-fertilisation seems rather lop-sided, with design drawing from other fields to a much greater extent than other fields draw from design.

Dindler, 2014, pp.1636). Design is such a pervasive factor in so many aspects of human lives that it should be of little surprise that design discourses draw from many other fields too. The author's intuition for pluralism, both in terms of the research methodology and literature review, is reflective of design's "long tradition of appropriating theoretical perspectives and methodological approaches from other disciplines, from the heritage from art history, via the more recent romance with material culture studies to the more eclectic pluralism of today" (Fallan, 2010, pp.104).

In a way similar to design, humour is also a ubiquitous aspect of being human (Ziyaiddinovna, 2022) and the metaphorical tendrils of humour also extend far beyond the field of humour study and into many other fields. Like design, humour is studied in the fields of psychology and sociology, but also philosophy, literature, film/theatre/ performance, linguistics, artificial intelligence/computer science, marketing, education, sport, and law (to name but a few discussed later in this thesis). For these fields humour is cognitive — a mental process — which means that it is also of interest to those who study neurology and the human brain. Thinking biologically, humour is 'resource hungry' so is therefore of interest to those who study evolution (those who ask why did it develop and why does it persist?). Humour has also been employed in both art and politics (sometimes together, as in the case of satire) and studied in these respective fields too. In the pursuit of understandings of humour, the literature review for this thesis therefore extends into many fields and does so knowingly and with an openminded and inquisitive attitude. This may be at odds with comparable theses that are more tightly focused in terms of their purview and the extent of their research territory. The considerations of entanglement that this research has identified and engaged with are drawn from a smaller pool, mainly the fields of archaeology, anthropology, and philosophy.

The approach to the literature review is inspired by methods of *synthetic analysis* which are being increasingly deployed as a means to research emergent and uncertain ideas (see Niu and Kaufman, 2013). This mode of analysis embodies a rather designerly spirit that embraces an intuition to want know a little about a lot, drawing together knowledge from what may be perceived as disparate fields, and a proclivity to be inspired, whether practically or conceptually, by influences from unexpected or unexplored quarters. Whereas the physicist Sunny Auyang has described scientific reductionism as a linear process of refining data by exclusion (Auyang, 1999), she describes synthetic analysis as an "approach to complex systems" that moves in the opposite direction as well – gathering and synthesizing data, not to "reduce the theoretical framework but [to expand] it to accommodate more perspectives, more postulates, and more theoretical tools to filter out irrelevant microscopic details and define novel emergent macroscopic properties" (Auyang, 1999, pp.8-9). What this means for this research is that it gathers a range of ideas from three rather complex and varied fields of study and practice (design, humour, and entanglement) and enfolds them into one argument. Whilst recognising that such additive methods present other problems for research (e.g. in terms of information management), they are reasoned here to be a more effective way to conduct research in a situation where "everything is related to everything, and nothing can be discarded a priori as being unimportant." (Zwicky as cited in Ritchey, 2011, pp.1).

0.5.3). Design Survey.

Accompanying the literature review, and coterminous with it, the design survey for this research focussed upon identifying and analysing examples of design that have been

considered ‘funny’, whether their designer intended them to or not. The survey involved the identification, collation, and cataloguing of examples of humorous design from numerous books, journal, and conference papers (many of which are listed in Section 0.2, above, and detailed in Chapters 1, 2, and 3, below). These literature searches were complemented by extensive trawling of various digital applications and online resources, over a period of several years. The result of these endeavours is a small library of gelastic design. Within this thesis, this library has been used as a pragmatic resource: as a pool from which to draw example artefacts that might be strategically deployed to demonstrate, illustrate, and/or explain theoretical concepts, or to provide examples of archetypes or exceptions in design artefacts. This library has also been useful in conceptual and analytical terms because it has afforded an overview of such objects: enabling the author to recognise something of their aggregated nature in terms of commonalities and differences, and the patterns that define, unite, and separate them.

0.5.4). Gelastic Practice.

As mentioned in the preamble to this thesis, the term gelastic is used here to denote that something is risible, i.e. “capable of provoking laughter” (OED, 2023d). It is a rather rare term, but nonetheless appropriate, and one that the author employs to describe and categorise his own creative practice[44]. Also mentioned in the preamble to this thesis: this research has been authored by a creative practitioner whose practice has typically sat at a fluid intersection between critical design, product design, concept design, and interaction design (with much overlap and a decidedly transdisciplinary mindset (Coles, 2012; Joost et

[44] It is not intended to reference any medical conditions, the context where this word is often found, e.g. ‘gelastic seizures’ which, in certain epilepsy patients, is characterised by sudden and unexpected bursts of laughter and giggling (Lo Barco et al, 2023, pp.269).

al, 2016, Moreno & Villalba, 2018). It is a design practice that has often been interpreted, not as design, but as art, and it is a practice that has oscillated between academic and commercial contexts over the years. Steven Hill, Director of Research at Research England, has recently stated that: "all research involves some form of practice" (Hill, 2021, pp.1). Hill's statement resonates with this research in that the author's practice was not suspended when this doctoral research began, but continued alongside it, *entangled* with it. The author's practice both responded to, and contributed to, the research. At times, the author has *tested* researched ideas of humour theory or design theory against his own design practice[45], at other times *experimenting* with the ideas and methods of researched designers[46], and at other times *responding to* ideas identified in humour theory and discourse, and design theory and discourse, through his practice. In this way, as various readings, design surveys, and theoretical discussions have taken place, so the author's design practice, in both conception and post-hoc analysis, has also changed. Aside from being discussed in the preamble to this thesis (-1), the author's design practice is occasionally featured throughout this text at times when illustrative examples of humorous design are required and when the inclusion the author's practice is appropriate.

0.5.5). Laughing *With* Versus Laughing *At.*

It quickly became apparent, in the researching of this thesis, that 'humorous design' is a categorisation that is not homogenous in nature. The most pressing and apparent

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[45] My 'funny practice' used to be created rather intuitively, and, to be honest, rather self-satisfactorily. However, as this research has progressed, I have, as one might expect, developed an increasingly refined theoretical understanding of humour and laughter that has been productively employed in the understanding, planning, and self-analysis of both my designerly practice and this thesis.

[46] For example, inspired by the designs of Kenji Kawakami (Kawakami, 1997; Kawakami & Fearnley-Wittingstall, 1995, 2004a, 2004b), I set about designing and making my own 'chindōgu', a combined toothbrush and washing machine (so that one can benefit from the added brushing power resulting from the intense vibrations of the spin-cycle). It is presented in Chapter 3.

differentiation, in design terms, seeming to be not between the traditional professions of design (product design, graphic design, fashion design, architecture, and so on) but between design that is intended, by its designer, to be found funny, and design that is not intended, by its designer, to be found to be funny — but is. These subdivisions of humorous design have been referred to throughout this text as design that is laughed *with* and design that is laughed *at.*

Design that is laughed *with* is herein characterised by the fact that the designer intended their design to be found to be humorous and to evoke laughter: the designer set out to make something funny in order to achieve some designerly aim (such aims are detailed in Chapter 3, Section 3.4.1). In such instances, there is some kind of 'joke', even by the loosest possible definition of that term, being *shared* by the designer and user/audience that is conveyed through the medium of the design. For example, designer Bryan Ku's 'Pillow Fight Weapons' (see Figure 0.iii) were initially created in 2011 as a playful design joke and a demonstration of Ku's clever designerly wit, but they quickly "gained Internet traction to become a product sold around the world" (Ku, 2024).

Figure 0.iii. The original ’Pillow Fight’ prototype (Ku, 2011) and the boxed commercial product — later released.

Ku knew that people playfully pretend to fight with pillows, and that the concept of a pillow fight was was known in popular culture. He also knew that deadly hand weapons are used in real conflicts, and have been throughout human history. The joke is in the cross-contextualising of ‘real’ weapons into ‘soft play’ contexts. Ku predicted that the Pillow Fight audience would know these things too, and would ‘get’ his joke — it is

therefore *shared* — although, as he admits, he didn't anticipate how popular his designerly joke would be, and the subsequent market demand that it would generate.

Conversely, design that is laughed *at* is characterised by being the 'butt' of the joke[47] and is markedly different in nature. In such instances, one or more designers have designed something in all seriousness, but it has been later found to be funny by others. The humour associated with such design is typically derisory in nature: the design, designer(s), and/or (mis)users of the design being laughed *at.* Take, for example, the infamous pencil produced in the late 1990s by the 'Bureau for At-Risk Youth' in New York (New York Times, 1998), USA (see Figure 0.iv). The designer(s) appear to have been charged with embellishing a pencil with an anti-drugs slogan, but have evidently not thought through the whole-life of the pencil and the fact that it will be sharpened. At first it displays the text 'Too cool to do drugs', which, after some sharpening, changes to the suggestion that it is 'Cool to do drugs', before delivering the order 'Do drugs' and, finally, just makes the rather nihilistic statement — 'drugs'[48].

[47] The 'butt' being a rather colloquial expression for the target or victim of a joke — from the use of the term 'butt' which has been attributed to an archery target, in English, since at least the 1300s (OED, 2024).

[48] The error was discovered by a 10-year old Ticonderoga Elementary School pupil named Kodi Mosier. The pencils were subject to a product recall and Darlene Clair, a spokeswoman for the Bureau for At-Risk Youth, admitted that "We're actually a little embarrassed that we didn't notice that sooner" (New York Times, 1998).

Figure 0.iv. The Bureau for At-Risk Youth's infamous 'Do Drugs' pencil (1998).

Whilst convenient, the imagined boundary between design that is laughed *at*, and design that is laughed *with,* is not inviolable: one might conceivably laugh *at* a piece of design for reasons that are beyond the intention or comprehension of the designer, who originally intended the design's audience to laugh at some other aspect of the design. Obversely, following its Internet fame, the pencil featured above has now been recreated and sold by online retailer 'BRRYBNDS' (LaCAPRIA, 2021). Here the pencil is being sold in reference both the internet meme that made it famous and the original incident itself. For reasons of authenticity, the retailer's webpage for the remade pencil even provides a hyperlink to the original New York Times article (BRRYBNDS, 2014). In either case, or others, the distinction between laughing *with* and *at* collapses. Regardless, this distinction has been important in defining and conceptualising humorous design, and has shaped the thesis narrative, for example dictating the form of Chapters 2 and 3.

0.5.6). Military Metaphors and The Art of War.

This thesis draws three bodies of theory into one conversation: namely those of *design*, *humour*, and *entanglement*. In order to realise this ambition in a way that is comprehensible to the reader, the strategy developed here is to provide a short overview of the thesis in the introduction (Section 0.4), followed later by more lengthy chapter outlines (Section 0.8), and finally the eight chapters themselves. The inspiration for this approach was a casual reading of Sun Tzu's 'Art of War' (Sun Tzu, 2009) which prompted consideration of military metaphors in the writing method. The 'short overview' might be metaphorically conceived of as a high-speed pass by a fighter jet: broad, quick, and very low resolution, but still identifying key features in the research 'terrain' and the narrative of the thesis. The 'chapter outlines' are more akin to metaphorical satellites floating in orbit overhead: slower, more ponderous, able to capture more detailed information, and at higher resolution, but still very much providing an overview. Finally, the thesis chapters themselves are the metaphorical 'troops on the ground': moving slowly, metaphorical foxhole to foxhole, metaphorical face to face, this is where the action is — the detail of the thesis itself (fully referenced).

0.5.7). Doing it for the LOLs: Why Can't a PhD be Funny?

"Who among you can laugh and be elevated at the same time?"

Friedrich Nietzsche — 'Thus Spoke Zarathustra: A Book for All and None'.

(Nietzsche, 2006, pp.28).

Two small-but-important moments have influenced the written tone of this thesis:

a). The author has been previously criticised, albeit lightheartedly, for writing about funny things in a manner that was not very funny. This criticism was welcomed in the supportive and good-natured manner in which it was intended, but it was nonetheless taken seriously.

b). The author read a short sentence in the introduction to the 25th issue of 'Philosophy Now', a special *humour-focused* edition, written by editor Tim Madigan. It read as follows: "O.K. Bouswma, Daniel C. Dennett, Richard Gale, and Richard Watson have sprinkled their learned tomes with witty asides and lowbrow puns" (Madigan, 1999, pp.9).

The main body of this text has been written in the third person, and in an earnest tone befitting the long history of doctoral research (or this has at least been the concerted aim[49]). In light of the two moments mentioned above, and the author's proclivity for humour already outlined in the preamble (-1), this constraint has purposely not been extended to include the preamble that precedes the introduction to this thesis, nor the footnotes deployed throughout the text. The preamble and footnote devices have provided opportunities to include informative asides and additional contextual information, as are their principal functions, but they have also afforded some small opportunities to write humorously, and in a purposely informal and conversational first person. There are also a number of textual jokes sprinkled throughout the writing. These jokes were purposely selected to embody and illustrate the points at hand, and also to be reflective of the text within which they are situated (many being characterised by their design context). They are also, of course, intended to bring small scintillations of amusement to the reader —

[49] …mostly (see above).

something very important to this thesis. In this manner, the preamble, footnotes, and contextualising jokes have provided a Freudian ‘release valve’ (Freud, 1976): a playful foil to the assiduousness and solemnity of the main text. These decisions have been made to counter the idea that — as highlighted by Morreall (1983); Provine (2008); and extending as far back as Francis Hutcheson in 1750 (Hutcheson, 2010) — humour implies triviality in academic contexts, that serious matters should only be taken seriously, and that any deep and worthwhile engagement with academic research must be conducted and presented with a somber and joyless affect.

Much time has been spent scrutinising books, academic papers, archives, apps, and online sources for images of design, especially funny design. Images have been selected for inclusion in this thesis if they effectively represent a designed artefact, or genre of artefacts, or if they help explain a certain theoretical concept, or illustrated it as embodied in an artefact. Often, a key deciding factor for inclusion in the thesis was whether such images were found to be more or less funny by the author of this text. On occasions where a number of design artefacts were identified that all competently illustrated an idea, the one found funniest would invariably be the one that was selected to be included. Similarly, the textual jokes presented in this thesis have been selected primarily because they have relevance to the section in which they are nestled, and/or effectively illustrate or demonstrate something. That said, they have also been selected because the author has found them to be particularly funny, over other possible jokes: many prompted out-loud laughter. Whilst the reader, of course, may not find any specific content of this thesis to be funny (humour is highly subjective after all) please rest assured that the author has.

0.6). Limitations of the Research.

Humour Theory is Problematic.

This thesis has been authored by a designer who has come to the study humour. It is written from a perspective that recognises, as others have, that humour theory is complex, varied, extensive, incohesive, and problematic (see Chapter 4 for detail, especially Section 4.4). The thesis employs humour theory, synthesised with theories of design and entanglement, in order to explain humour and laughter as responses to design: in doing so it identifies and discusses problems with humour theory, but it does not attempt to solve them.

(Not) Disentangling Art and Design.

In order to keep this thesis focussed, few resources will be directed towards resolving the question of what constitutes art, as opposed to design, at the fuzzy and disputed boundaries where art and design might be thought of as meeting. This thesis is written from a perspective that is comfortable with such boundaries being indistinct, mutable, contested, and easily traversed (it does not try to overtly sharpen or concretise them), preferring to conceive of art and design as labels on a spectrum, rather than distinct and bounded entities (see Figure 0.v).

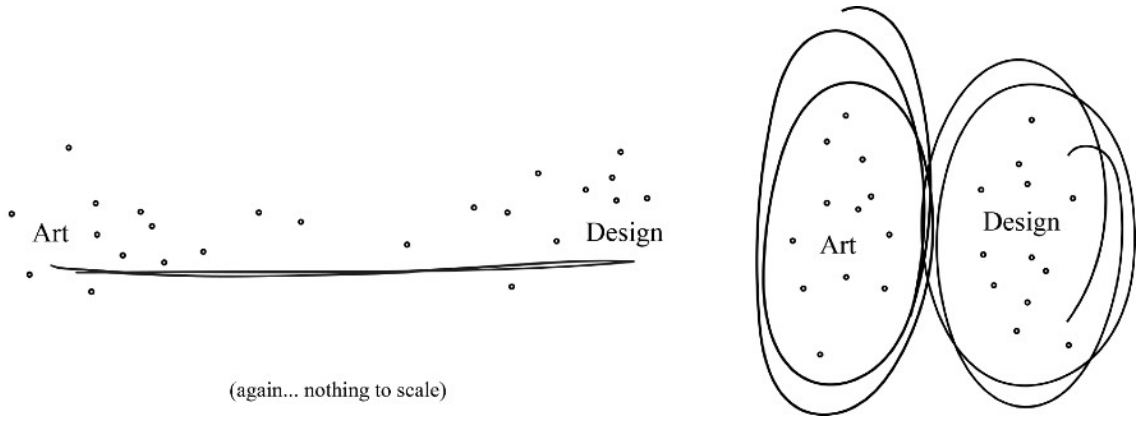

Figure 0.v. Art and design conceived of as sharing a spectrum (left), and, alternatively, as distinct bounded entities (right). The dots represent creative practitioners/practice/projects/ etc. This thesis is written from a perspective that prefers to conceive of art and design as the former, but recognises and discusses that others conceive of art and design in the manner of the latter (see especially Chapter 1), (author's own image, 2024).

Some creative practitioners already mentioned (e.g. Carelman, 1997; Hara, 2015; Errazuriz, 2004; Kamprani, 2020; Torran, 2001; Cuní, 2011; Colarusso, 2022), and their work, invite contemplation of the distinction between art and design but that is not a discussion that will be particularly indulged herein. This thesis subscribes to an inclusive model of design and makes many references to contemporary and historical creative practitioners who identify as artists, but who employ methods, processes, and/or attitudes that are more traditionally associated with design (e.g. design thinking, commercialism, and mass-manufacture). The research includes such practitioners alongside more mainstream 'affirmative' (Dunne & Raby, 2001) designers. Conversely, this thesis also makes many references to contemporary and historical creative practitioners who identify as designers, but who employ methods, processes, or attitudes that are more traditionally associated with art (e.g. post-optimalism (Dunne, 1999), incongruity, anti-commercialism, and bespoke crafting), and who have therefore been interpreted as artists by more

affirmative designers, and understood as being somewhat different to 'real' designers (e.g. more affirmative and market-oriented designers). Whilst this thesis does not intend to reinforce the perceived boundaries that, for some, segregate art and design, and artists and designers, such boundaries, and this segregation, will be discussed at times when their perception has been an important determinant in design history and discourse (for example in Chapter 1, especially Section 1.2). That said, the research investigation has been directed, first and foremost at design, and things that identify as design. Valuable contributions to the understanding of *designart* as 'hybrid practice' (e.g. Alex Coles' 'Design and Art', 2007), and art, humour and laughter (e.g. Angus Trumble's 'A Brief History of the Smile' (Trumble, 2004); Jennifer Higgie's 'Artist's Joke' (Higgie, 2006); or Sheri Klein's 'Art and Laughter', (Klein, 2007)) have contributed to this research, but such sources have not been a core focus.

Western Bias.

Despite calls for less Eurocentric, less Anglocentric, and more 'global' appreciation of design histories since the 1960s (see Huppatz, 2015), and valiant endeavours to meet these calls (e.g. Margolin's formidable three-volume 'World History of Design' (Margolin, 2015, 2017, 2024; and Adamson, Riello, and Teasley's 'Global Design History' (Adamson, Riello & Teasley, 2011), the contemporary Western bias embodied in this research is clear: any denial would be untenable if it were to be attempted. Design, humour and entanglement are presented here as universally pervasive phenomena of the experience of human being, whether considered at an individual, socio-cultural, or species level (for pervasiveness of humour see Hinde, 1974; Martin & Ford, 2018; Ziyaiddinovna, 2022. For pervasiveness of design see Cross, 2023; Catanese, 2012. For pervasiveness of entanglement see: Hodder, 2012). However, only texts written (or translated into) English

were considered during the course of this research, whether encountered in print or on screen[50]. A British-based online investigation via University resources, search engines such as Google, or apps such as Instagram or Pinterest (and others), in pursuit of examples of 'funny design', and associated ideas, tended to reveal only Western examples (design from other cultures typically being presented as a form of 'design jugaad' (see Chapter 2, Section 2.1.4) or excluded at an algorithmic level. Regardless of how 'deep' the dive, various algorithmic biases that have fed into this research appeared to be very much in favour of both the Western and the contemporary. The author of this text makes no claims to be a historian, nor a classical scholar, rather identifying as a designer and design academic. The vast majority of material studied for the purposes of writing this thesis was written in the late 20th and early 21st Centuries and this overshadowed material concerning the humour of classical antiquity and the ancient world.

Identity.

Whilst valuable academic contributions have been made regarding gender and humour (e.g. Provine, 2000; Hay, 1995; Lampert & Ervin-Tripp, 1998; Schwarz, Hoffmann & Hunter, 2015; Yoon & Lee, 2019; Nilsen & Nilsen, 2019; Tsai et al, 2015); ethnicity, cultural heritage, national identity, and humour (e.g. Pérez, 2022; Abdulasalam & Ja'afar, 2021; Nilsen & Nilsen, 2019; Malmqvist, 2015; Gini, 2015); sexual orientation and humour (e.g. Bing & Heller, 2003; Nash, 2015); other identity characteristics and their associated prejudices (e.g. Ford & Ferguson, 2004); and some impacts and implications of humour in such contexts (e.g. Janes & Olson, 2000) — these issues are not the focus here. For reasons of focus, humour is explored herein as a phenomena of the human condition,

[50] With the one exception of Carelman's 'Catalogue D'Objets Introuvables' (Carelman, 1997), which is basically an image book, and to which I brought the formidable power of Google Translate and the far-less formidable power of my three-decade old GCSE in French.

but not as a phenomena of any one human, or their individual identity, in contrast to any other or others.

Species.

This thesis focusses strictly upon humans. Non-human humour and laughter (see, for example, studies of kea birds (Burke, 2017); Chimpanzees (Darwin, 1999; Davila-Ross, 2011) or rats (Burgdorf & Panksepp, 2001; Panksepp & Burgdorf, 2003; Panksepp, 2007)) will not be explored in any detail, but are mentioned in passing when considering the biological and evolutionary aspects of human humour. Similarly, whilst some animals are argued to 'design' — whether rather collaboratively and autonomously, as with social insects such as wasps, bees, termites, and ants (Johnson, 2001), or more individually and intellectually, as with mammals such as chimpanzees and dolphins, or birds such as crows (Weir, 2005; Taylor et al, 2010; Wimpeny, Weir, & Kacelnik, 2011) or bowerbirds (Endler & Day, 2006) — the focus here is upon human design for human beings. Again, non-human design is mentioned briefly, on occasion, but only in recognition of the fact that humans are an animal species and for the purpose of exploring human understandings of human design.

0.7). Intended Audience.

This research contributes to the under-explored discourse of 'humorous design' and an emerging field of humour-centred design. The author of this thesis identifies as a designer, and design academic, who brings that heritage to the writing. It is hoped that, by extension and metaphorical osmosis, this research might inform designers themselves, although likely through design pedagogy and secondary sources, rather than by direct

reading. The text may also contribute to discourses concerning design and its history, humour and its history, especially in the application of humour theory to artefacts, and the discourse of entanglement theories. This research may be of interest to anyone who is curious about any aspect of design, humour, entanglement, and/or the intersection of the these discourses.

Over the previous two decades, the author has made contributions to design discourse through the publication of material in several books including: Betti Marenko's 'DiY Survival' (sic) (Marenko, 2005); Joan Gibbons and Kaye Winwood's 'Hothaus Papers: Perspectives and Paradigms in Media Art' (Gibbons and Winwood, 2006); Robert Klanten, Sven Ehmann, and Hendrick Hellige's 'All Allure' (Klanten et al, 2006); Katherine Wong's '[Art]ifact: Re-Recognizing the Essentials of Products', (Wong, 2007); Moniek Bucquoye and Dieter Van den Storm's 'Forms for Pleasure' (Bucquoye & Van den Storm, 2009); Martin Reiser's 'The Mobile Audience: Media Art and Mobile Technologies' (Reiser, 2011); and Transtechnology's 2011 Reader (Humphries & Thompson, 2011). As well as a number of papers (Humphries, 2017, 2014, 2012) and conference presentations (Research Through Design, 2017; DART Coventry, 2014), numerous symposia, and occasional public lectures.

Some of the text from these publications, and the author's design practice websites, has been synthesised into this thesis. For example, some material from the author's paper 'A Hippocratic Intuition For Balance In Warburg's Mnemosyne Atlas' (Humphries & Thompson, 2011) has been employed in Chapter 4, Section 4.1.1. Please note that such text constitutes less than 1% of the total text within this thesis.

The author's text, and images of his practice, have been published in periodicals such as 'Textile Fibre Forum Magazine' (Textile Fibre Forum Magazine, #127, 2017); 'XStitch' (XStitch, #1, 2017); 'Front' (Front, #183, 2013); Arena (Oct, 2005), Maxim (Spanish edition, #25, May 2006), and 'Cross Stitcher Magazine' (Cross Stitcher Magazine, #253, 2012). Public exhibitions of the author's practice include contributions to 'Running with Scissors' at Gallery1988, Los Angeles, USA (2022); the first 'British Textile Biennial' in Burnley, UK (2019); 'Stitch Fetish' at the Hive Gallery, Los Angeles (2017); 'Research Through Design 2017' in Edinburgh Museum, UK (2017); the 'Prototyping 2016 Expo' in Kortrijk, Belgium (2016); 'Mind is the World Knowing Itself' at The Bonnington Gallery, Nottingham, (2014); 'Stitching for Pleasure' at the Birmingham NEC (2012); 'The Stitch & Craft Show', Kensington Olympia, London, UK, (2012); 'ISEA 2007' in San Jose (2007), 'PixelACHE' at Kiasma Museum of Contemporary Art, Helsinki, (2005); 'Touch Me' at the Victoria & Albert Museum, London, UK (2005); and numerous smaller affairs. His 'Lapjuicer' project is part of the permanent collection at the Museum of Sex in New York, USA (Humphries & Worthington, 2004). The author also maintains online presences for his key projects and texts[51]. The author of this thesis is a contributing researcher to both Cardiff School of Art & Design's 'ARCA Design Futuring Research' group[52] (Design Futuring, 2024a, 2024b) and Plymouth University's 'Transtechnology Research' group[53] (Transtechnology Research Group, 2024a, 2024b).

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[51] Please visit *theohumphries.com* for my core portfolio; *crapestry.co.u*k for my 'Crapestry' subversive textile work (since 2006); *sarswarstoys.com* for y 'SARS Wars' critical design project (since 2020); and malentanglement.com for some work specifically conceived of as part of this current doctoral research project. For the time being, my 'Go On Graffiti' project (2023) currently has an Instagram account to represent it: *@go_on_graffiti*

[52] Formerly the 'Metatechnicity Research' group and convened by Dr. Stephen Thompson and Dr. Martyn Woodward.

[53] Convened by Prof. Dr. Michael Punt and Dr. Hannah Drayson.

The diversity of outputs listed above — critical design enacted through product design, interaction design, textile design, locative media, photography, street art, etc. — attests to the transdisciplinary nature (Coles, 2012; Held, 2016) of the author's creative practice, transdisciplinarity being a core principal of the research groups to which the author contributes[54], but also to the potentially broad appeal of this research in design terms. It is intended to contribute to design discourses, plural, and an umbrella of design discourse as a unified whole, not subdivided into various disciplines or professions. Further specificity concerning the intended audience would be toward those interested in humorous design.

0.8). Overview of the Chapters (A Satellite Drifts Overhead).

This section outlines the eight chapters that constitute the main body of the thesis, briefly describing chapter content and purpose.

Chapter 1 — A Hankering for Humourlessness: Design Professionals Take Themselves Seriously, and Want Others to do so Too.

Design literature proclaims that design is generally understood in three key ways: as a complex and ubiquitous process of human thought and action; as a field of professional practice enacted by self-identifying and autonomous designers; and as a category of human-made artefacts (whether material or immaterial) that are the intended outcomes of design processes. Essentially: everyone does it, some people do it for a job, and it is also a category of human-made things. In order to better understand how design

[54] 'Transtechnology Research' at Plymouth University, UK, and 'ARCA: Design Futuring' (formerly 'Metatechnicity Research') at Cardiff School of Art and design (Cardiff Metropolitan University), UK.

has understood humour and why design might have responded to laughter in certain ways, it is necessary to first explore something of the nature of design itself, and of designers. To this end, this early chapter presents an account of some key ideas concerning the nature, purpose, and history of design. Insight into the nature of design is offered through a synthesis of a number of definitions of design in terms of human thought and action, design processes, and professional categorisation from more 'affirmative' (Dunne & Raby, 2001) market-led modes of practice to more speculative 'discursive' (Tharp & Tharp, 2019) and 'critical' (Dunne & Raby, 2001; Malpass, 2012, 2017a) modes. When considering design histories, attention is paid to not only the professional practice of design, but also to histories of design's varied disciplinary teaching in Western educational institutions.

The purpose of this chapter is not to establish an authoritative taxonomy of design professions and/or disciplines, instead presenting an illustrative history of the emergence of design as a set of self-authored professions in a rich metaphorical 'ecology' of design practices. The chapter describes some common traits that the design professions share, but also their defining characteristics and differentiations, for the purpose of demonstrating something of the nature of this professional ecology. Rather than merely offering a potted history of the capitalist/industrialist led development and diversification of the design professions (for the purposes of contextualising the thesis), the text demonstrates a history that pays particular attention to moments when design has been felt to be somewhat undervalued. A proposition of the chapter is that such perceptions have fuelled in designers, and their associates, a desire for design to be 'taken seriously' as a professional practice. In reaction, designers have responded to these perceptions by intentionally distancing design from the spheres of art and craft (design's heritage) in favour of a closer

alignment with science through, for example, the embedding of a problem solving logic in mainstream design practices and in much design teaching. This chapter proposes that design's relationship to, and understanding of, humour has been caught up in this distancing and logical rationalisation. It is suggested that, partly in response to laughter that has been perceived as derisive, and encouraged by Modernist ideologues, industrialists, and commercial imperatives, designers have developed and propagated design methods in order to formalise, and therefore legitimise, their practice in a hope to be 'taken seriously' and thereby avoid derisive or dismissive laughter. It is argued that the emergence of a design-led 'problem solving' model of design, and associated attempts to 'tame' humour, have underpinned a misunderstanding of humour that has reinforced an interpretation of laughter (as a response to design innovation) that has been problematic for design. This is a design-focussed contextualising chapter that speaks more to broad movements and ideas, rather than specific artefacts, humorous or otherwise. More specific understandings of (and responses to) humour, by design, are dealt with later — mainly in Chapter 3.

Chapter 2 — A Perceived Problem: Losing Control of Humour — When Design is Laughed *At.*

The focus of this chapter is upon moments when design is laughed at. At this stage, how and why people may be laughing at design are not considered in depth (later chapters detail the *hows* and *whys* that laughter may occur). This chapter is concerned with the *wheres* and the *whens*. The chapter is divided into two sections, the first considers the presentation of 'laughable design' to the world: design that is intentionally presented for amusement, entertainment, and even ridicule. The second section describes a number of

case studies that have been purposely collated to illustrate instances in design history when moments of design innovation were met with laughter that was perceived by designers to be derisory, and therefore problematic.

Consumers of Western media appear to have an appetite for laughing at design. In the past, this has been capitalised upon by cartoon illustrators such as Heath Robinson (Robinson, 1965, 1975, 1977, 1979) and Rube Goldberg (Goldberg 1959, Goldberg & Garner, 1983; Keller, 1979). In recent decades, this appetite has fuelled published collections of 'funny' design artefacts that have been curated to entertain audiences. Examples include Wright's 'Patently Silly' (2008) and Cooper's 'Patently Absurd' (2004) both of which survey the archives of the Patent Office to identify and present examples of legitimately patented designs for what are considered by the authors to be "ridiculous devices" (Cooper, 2004). More recently, popular 'meme-based' entertainment websites such as 'Buzzfeed', 'Cheezburger', and 'Bored Panda' have trawled the "memosphere" (Hegel, 2017; Tanoukhi in Albright, 2024) of cyberspace and dedicated pages to hundreds of so-called 'design fails' — moments when designers, or their designs, appear to have erred and the results are perceived to be humorous. Instagram accounts such as @uglydesign (Nyffenegger & Mathys, 2021) serve a similar function and have proved popular (@uglydesign has three quarters of a million followers at time of writing (Uglydesign, 2024)).

In October 1988, fashion designer Victoria Westwood presented her 'Time Machine' fashion design collection on BBC Television's 'Wogan' programme — a prime-time television chat show, broadcast live and nationwide at 19:00, three days per week. The presenter, on this occasion, was Sue Lawley — standing in for Terry Wogan: the

programme's usual host. Westwood was joined by guests Roger Harty and Janet Street-Porter. All were seated in front of a live studio audience. As soon as Westwood entered the stage, she was mocked by Hearty, patronised by Lawley, and yet (later in the interview) defended by Street-Porter. The climax of Westwood's interview was the reveal of her 'Time Machine' collection: it being met with derisory laughter from Harty, Lawley, and (loudly) the live studio audience — for interview transcript, see 'Appendix 1' (12.1).

Nearly twenty years after the infamous Wogan incident, then CEO of the Microsoft Corporation, Steve Ballmer, openly laughed at the first generation iPhone during a televised interview with Scott Wapner for CNBC at the Rockefeller Center, New York, in 2007 (CNBC, 2007). Steve Jobs, Apple's then CEO, had just introduced the iPhone whilst on stage at a MacWorld event. Ballmer laughed at the iPhone for its high cost, and lack of physical buttons, stating that, "It doesn't appeal to business customers because it doesn't have a keyboard, which makes it not a very good email machine" (CNBC, 2007). In time, and in hindsight, the success of the iPhone was momentously important for Apple and highly problematic for Microsoft — for interview transcript, see 'Appendix 2' (12.2).

Over a century earlier, in 1884, architect Ernest L. Ransome had developed a method for reinforcing concrete with 'cold-twisted' iron rebar[55]. Twisting the square-section iron rod along its length, whilst cold, gave it an uneven, undulating profile that prevented any movement of the bar within the poured concrete, once the mix had solidified. Ransome presented his 'cold-twisted method for reinforcing concrete' to the Technical Society of the Pacific Coast in 1884 (Courland, 2011, pp.225) and later

[55] The name 'rebar' is an abbreviation of the terms *reinforcement bar* or *reinforcing bar*: steel rod, of varying dimensions and design, that is used to reinforce architectural structures that are made from poured concrete.

described, in his own words, being “simply laughed down” (Ransome, 2018, pp.3). Despite this reaction, Ransome persevered, employing his innovative techniques in numerous projects over the coming decades. His methods were vindicated in the infamous San Francisco earthquake of 1906 — his reinforced concrete buildings, bridges, and other structures survived, whereas a great many comparable structures did not (Architect and Engineer of California,1917b, pp.106).

Chapter 3 — First Analysis of the Perceived Problem: Designerly Understandings of Humour and Laughter, as Responses to Design and Design Innovation, in Design Discourse and Practice.

This chapter presents some orthodox design analyses of humorous things: exploring design’s perception, interpretation, and understanding of humour in moments when design evokes laughter. It considers how, over time, design practices have been guided by designer’s understanding of humour, especially their ability to anticipate humour responses to design. Notwithstanding the content of Chapter 2, designers do not perceive all humour to be problematic and they have a history of creating design artefacts that are intended to be found funny — although, as this chapter demonstrates, this is often done in rather prescribed and narrowly constrained ways that have generally resulted in under-explored and unsophisticated understandings of humour within design professions and discourses. There appears to be an important distinction between design that is laughed *at,* and design that is laughed *with,* that provides two neat sections that constitute the chapter.

The first section considers design that is laughed *at.* In such cases, a design artefact is created, but the intention on the part of the designer(s) is to create a *serious* piece of

design that addresses some human need or desire whilst conforming to the designer's personally and professionally held design logic. When laughter is elicited in response to design that is presented with solemnity (or at least without a desire to evoke humour responses), and such laughter is unanticipated by the designer, it may then be perceived as derisory in nature. This may be an accurate perception of course! Given the personal investment of many designers in their professions, and in their creative dénouements, it is unsurprising that any laughter that is perceived to be derisory may be taken as a rather personal and problematic affront. With Bergson's notions of *inelasticity* in the context of humour (Bergson, 2008) in mind, it is argued that linear problem-solving models of design might actually exacerbate audience's humorous responses — the opposite effect of their intended purpose — whilst simultaneously fanning the metaphorical flames of negative designerly interpretation of both humour and laughter and their responses to them.

The other constituent of this convenient when-design-evokes-humour-and-laughter dyad is design that is laughed *with*. Some design artefacts are intentionally created to elicit amusement responses, including humour and laughter. Such design might be thought of as being laughed *with*, in that the designer has intended and anticipated a humour response to their design and, importantly, that the understanding of the humour in the minds of the audience and the designer is 'aligned' — meaning that both designer and audience are finding humour in the same characteristics of the designed artefact and for the same reasons (or similar ones, at least). In these cases, designer and audience might be thought of as *sharing* a form of designerly 'joke' through the substrate of design artefacts. Such humour is explored here in terms of the methods and manners employed by designers to evoke humour and laughter, with much reference to design artefacts, but also in terms of investigations of such humour and laughter within design practice and discourse:

presenting an account, and meta-analysis, of designerly research into humour and laughter in the context of design. This chapter then considers how designers have been guided in the creation of 'funny design' by examining a pedagogy of design humour, before reviewing research that has experimented with the incorporation of humour into design processes: not necessarily into 'funny' outcomes, but as a strategy to enhance and empower creative design thinking in design and design innovation. Finally, the chapter discusses humorous design discourse, in its nascency, and a methodological approach that might be effectively entitled 'humour-centred design'.

Chapter 4 — Second Analysis of the Perceived Problem: Perspectives from Humour Theory and Discourse.

Previous chapters have discussed humour at length, but without significantly engaging with its theorisation. This chapter deals with humour theory directly, in the pursuit of understanding why people might find design to be humorous, and laugh at it. Whilst focusing upon humour theory, the text relates such theory to design through the illustrative use of example design artefacts, where possible and appropriate. The chapter begins by drawing some significant generalisations out of the research concerning the nature and complexity of humour and laughter (they are not synonymous), and their theorisation, before moving to consider understandings of humour over time.

Key ideas of humour theory are presented through a history that begins with a consideration of prehistoric humour, then moves to the oldest recorded understandings of humour from Classical Antiquity, to Medieval Europe, The Enlightenment, and then 19th,

20th, and 21st Century humour theory. Relatively recent times account for the bulk of this history which is reflective of the proliferation of humour study in recent decades.

The volume and diversity of humour theory presents significant problems for study and we might therefore somewhat forgive design, and designers, for their lack of engagement with the theorisation of an intimidatingly complex facet of being. For some time, those that have studied humour have attempted to describe its various and varied theorisations with reference to a tripartite model that divides humour theories into three broad camps: Superiority theories, Incongruity theories, and Relief theories. The *'Superiority / Aggression Theories'* conceptualise humour as an emotional response to the world and understand humour through the metaphorical lens of one person exercising power over or against another: there aways being a *victor* and a *victim*. The *'Incongruity Theories'* conceive of humour as an intellectual response to the world and focus upon what happens when people encounter something incongruous: arguing that humour occurs when our expectations are met with surprise. The '*Relief / Release Theories'* imagine humour as a homeostatic mechanism for the release of pent up nervous (psychic) energy, much in the way that a pressure valve regulates optimal performance in a mechanical steam system. Like many who study humour theory (e.g. Morreall, 1983; Beard, 2014) this thesis does not give much credence to this tripartite model, considering it an unconvincing and incomplete force-fit of complex and nuanced ideas. However problematic, the significance of this widely acknowledged attempt to organise and rationalise humour theory cannot convincingly be omitted from a serious study of humour theory over time.

Chapter 5 — Route to a Solution: Understanding Humour and Laughter, in Terms of Design and Material Culture, Through Theories of Entanglement.

Design has, thus far, failed to significantly engage with the theorisation of humour. This thesis asserts that this is, in part, due to a widely held historical scepticism of humour that has influenced design, and also, in part, due to the abstract and philosophical nature of much humour theory — material concerns being largely absent from a history of humour theory and discourse. Designers, therefore, appear to consider the study of humour somewhat irrelevant to their practice, being more often interested in aesthetics, functionality, material processes and properties, market forces, and other subjects considered more pragmatically useful in the realisation of design aims. The impact of this lack of engagement, and subsequent lack of understanding, is that when some designers do encounter forms of humour that they perceive to be problematic, they have seemed ill-equipped to interpret and respond to such humour as if it were anything but derisive. In order to address this resistance to engagement, and for design to better understand humour and laughter as responses to design, contemporary entanglement theory is proffered here as a 'bridging concept' (Dalsgaard & Dindler, 2014) to meaningfully connect humour theory to some prominent concerns of design: namely 'things' — especially material designed things.

The philosophical pursuit of thinking about things — not just *any* things, but tectonic material things — has a deep history that arguably extends back as far as the advent of philosophy itself. In thinking about material things, some thinkers have also thought about the interrelations between things, and how complex these interrelations between things appears to be. Such philosophical thoughts have given rise to contemporary theories of entanglement — which share a rich, varied, and deep history — and a driving interest in

the complexity of the interrelations between things. This chapter accounts for some of this history, considering the entanglement of things but also the *thingyness* of things, the effects of things, and the agency of things. It presents a 'choice of entanglements' drawn from the fields of philosophy, anthropology, and archaeology before detailing a 'Hodderian' model, that is, one drawn from the writings of contemporary archaeologist Ian Hodder and his writing partners (see Hodder, 2011a, 2011b, 2012, 2014, 2018, 2020; Hodder & Mol, 2016; Hodder & Lucas, 2017). This particular variety of entanglement theory has been chosen because it presents a comparatively straightforward model that is securely anchored to quotidian material things: such things being a key concern of much design and of many designers. Hodder pays special attention to interrelationships that he describes as "interdependencies" (Hodder, 2012). To paraphrase: 'Humans depend upon humans. Humans depend upon things. Things depend upon things. Things depend upon humans' (Hodder, 2012, pp.68). Entanglement theories envision these interdependencies as complicated, interwoven, enmeshed, and knot-like — *entangled*, as the naming of these theories suggests. Some of Hodder's key concepts, such as *forgettness*, *fittingness*, *taughtness* and *entrapment,* are explored before the chapter finally considers how entanglement theories, especially Hodder's, might contribute to understandings of humour and laughter as responses to design and design innovation.

Chapter 6 — Proposition: A Revised Strategy for Understanding Gelastic Design.

This chapter proposes a synthesis of ideas drawn from theories of design, humour, and entanglement to underpin a new strategy by which designers might understand humour and laughter as responses to design and design innovation. The chapter argues that once any and all things are understood as being *potentially* interdependently entangled with one

another, then ideas such as design innovation might be understood in a new ways. Innovation in design would be no longer just about the efficacy of 'inventions', but now a process of *entangling* — of metaphorically interfering with, unpicking, disentangling, and re-entangling designed innovations *into* a complex entangled web of established interdependencies. This *complexifying* of design provides a more subtle and nuanced picture of the adoption of design innovations into material culture than merely considering whether design innovation has provided an effective solution to a problem, or whether market conditions were favourable. This new understanding not only offers a fresh perspective upon why some designs, and design innovations, are readily adopted into the design status quo (i.e. easily entangled in material culture), but also why other designs, and design innovations, are not (because they could not be easily entangled). This perspective calls into question an established model of 'designer-as-problem-solver'[56], instead proposing the designer to be 'one-who-creates-things-to-be-entangled-in-material-culture' — there being a number of 'orchestratable' ways to achieve this entanglement, and ensure its legacy: effective problem-solving being one, having attractive form being another, functionality being another, price-point being another, evoking humour being another, and there being potentially many more[57]. This approach appears to be pertinent whether the design innovation in question is predominantly material, processual, conceptual, aesthetic, or a combination of all of these things and others.

This synthesised perspective also offers an explanation as to why some people might find design to be humorous — and to laugh at it. Put simply: if design audiences find

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[56] A pervasive contemporary model described in in Chapter 1, Section 1.5.

[57] Although the 'many more' are not the subjects of this particular thesis.

the *fittingness*[58] of any design to be incongruous then such interpretation may give rise to laughter as an involuntary response to juxtapositions between visual, functional, and conceptual design ideas. It is argued that, in the case of design innovation, reactions to perceived incongruity are exacerbated by the perceived *pre-entangled* nature of new designs and new design ideas. Some neologisms are introduced as convenient shorthand for these ideas. These include terms such as *malentanglement* (the interpretation of entanglement/fittingness as incongruous), and *remindness*[59] (used to represent the collapse of Hodder's 'forgettness' that is detailed in Chapter 5, Section 5.3.).

It is argued that such understandings will provide a theoretical footing toward a new way of designing for which 'problematic' humour is, simply put, less of a problem.

Chapter 7 — Speculative Testing with the Revised Strategy.

This short chapter revisits the case studies that are detailed in Chapter 2: Westwood on Wogan, 1988 (Section 2.2.1); Ballmer and the iPhone, 2007 (Section 2.2.2); and Ransome's Rebar, 1884 (Section 2.2.3). The case studies are reconsidered in light of the revised strategy for analysing gelastic design that is presented in Chapter 6: the concept of malentanglement, and others, being speculatively tested against an avant-garde catwalk fashion collection that disregards conventional associations between garment features, gender, and traditions of historical dress; an expensive mobile telephone that does not even have a keyboard; and deforming iron bars to enhance the integrity of architectural

[58] Hodder's term for the 'appropriateness' (sort of) of a design to satisfy its intended use, and also the perception of this appropriateness (Hodder, 2012).

[59] This isn't my term, but a spontaneous and perspicacious suggestion by Dr. Hannah Drayson (of Transtechnology Research at Plymouth University) during an online conversation in 2021, or thereabouts.

structures, as an explanation of why some people might find design to be humorous — and to laugh at it.

Chapter 8 — Taking a Humour-Centred Approach: Implications of the Revised Strategy for Understanding Gelastic Design.

This final chapter discusses some potential impacts of subscribing to the key ideas presented in this thesis: that humour and laughter, as responses to design and design innovation, have been historically misunderstood by design; that designers can be more accurately understood as 'entanglers of things in material culture', rather than problem-solvers; that humour and laughter, as responses to design and design innovation, can be explained (through the concept of malentanglement) as involuntary responses to juxtapositions between visual, functional, and conceptual *fittingness* of design ideas; and so on.

A case is made that such impacts might include the recognition of a need for the development of new design strategies, and design teaching, that accommodates a shift away from a problem-solving model of design to one that recognises material cultural entanglement as the principal concern of the designer and informs designerly understandings of humour and laughter as responses to design and design innovation by challenging designerly interpretations of such humour and laughter 'in the field' and redirecting how designers strategically respond to humour and laughter that they have historically perceived as derisory.

It is argued that the *reframing* postulated by this thesis can enable designers to reinterpret humour and laughter, not as derisory, but as welcome indicators of genuine design innovation: if people are laughing, then the design in question might not be being perceived as 'bad' design, it might merely be malentangled in the minds of its audience. Conceived of in this way, people laughing at design can be celebrated as a vindication of the pre-entangled (and therefore genuinely innovative) state of said design. This potential shift in posture and mindset is proffered as a foundational contribution to an emerging field of humour-centred design.

0.9). Conclusion: Understanding Humour and Laughter as Responses to Design and Design Innovation Through a Humour-Centred Approach to Design.

This research is the first academic work to deeply consider design, humour, entanglement, and the theorisation and discourses of these three subjects, within the same thesis. It is also the first research in the context of design discourse that considers, at such length, the implications of design being laughed at, and how designers might interpret and respond to such a thing.

The contribution to knowledge is made through this drawing together of ideas from design, design theory, humour theory, and entanglement theory, and their discourses, for the purpose of explaining how humour and laughter, as responses to design and design innovation, have been historically misperceived, and how this misperception might be addressed for the benefit of design and of designers. More specifically, through the concept of malentanglement, the thesis demonstrates how this synthesis of ideas provides a new designerly understanding of humour and laughter that is not framed in terms of derision,

but reconceives the problem as the solution: laughter, when more fully understood from a psychologically, physiologically, historically, and socio-culturally 'entangled' standpoint, becomes a welcome indicator of genuine design innovation, rather than an expression of derision.

In providing reasons why such designerly misunderstandings of humour and laughter may have occurred, this research critiques pervasive 'problem solving' models of design process, strategy, and logic. In doing so, it argues that an appreciation of entanglement (Hodder, 2012), through newly introduced concepts such as malentanglement, enables designers to make a shift away from a problem-solving conception of design to one that recognises material-cultural entanglement as the principal concern of the designer. Malentanglement, essentially, is a neologism created to describe *a perception of things as incongruously entangled* — their *fittingness*[60] appearing incongruous — this being an often misunderstood response to design and especially to design innovation that is problematic when interpreted, by designers, as derisive.

Along the way, other, more incidental, contributions are made. For example: that designerly approaches to the 'humourising' of objects typically involve *application* (the addition of humorous decoration to an otherwise unaltered design artefact[61]) or *alteration* (changing the design of the form of a design artefact for humorous effect[62]) or some

[60] In Hodder's terms (Hodder, 2012).

[61] e.g. a mug with a funny picture and/or text printed upon it — the mug's physical form isn't funny, the decoration is.

[62] e.g. a mug thats handle is shaped like the neck of an ostrich with its head in the sand. The physical form is different from other typical mugs.

combination[63] of the two[64]; or that when designers intend to create gelastic design, and their audiences find it to be humorous, then designer and audience senses of humour might be thought of as *aligned* (being laughed *with*), and that when designers intend to create serious design, and said design is instead met with humour, then designer and audience senses of humour might be thought of as *misaligned* (being laughed *at*)[65]; or that design can be employed for *forgetness* (i.e. to veil things, or to promote inconspicuousness[66]), but that humour relies upon *remindness* (i.e. humour 'collapses' forgetness, it *un*veils things, and makes things conspicuous[67])[68]; or that there is an established and often discussed relationship between depunctualisation[69] and technological failure[70], but that this depunctualisation also occurs in the case of humour — many jokes rely on the fact that their audience interprets words one way, but that there are other ways to interpret words. The humour emerges in the reminding of these alternative ways[71].

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[63] e.g. a mug thats handle is shaped like the neck of an ostrich with it's head in the sand and on the side is printed the phrase "drink tea and ignore your problems!". The form is funny, *and* the adornment is too (ok — not very…).

[64] See Chapter 3, Section 3.4.1, for further detail.

[65] See Chapter 3, Section 3.3.1, for further detail.

[66] e.g. typical contemporary TV, computer monitor, or mobile telephone phone design is designed not to attract attention away from screen content (they are typically black 'slabs' that merely *frame* screens), and most electrical goods and vehicle designs employ opaque casings and bodywork so that their internal components cannot be appreciated — as do many others.

[67] e.g. certain humour often depends upon its audience forgetting one semantic interpretation of a word in favour of another, for example: "6:30 is the best time on a clock, hands down" (Anon); or "I just got fired from my job as a set designer. I left without making a scene" (Anon); or "The person who invented Velcro died today. RIP. (Anon). In such cases, the *design* of the joke primes the audience to forget one meaning over another (for more on such humour, see Chapter 4).

[68] See Chapter 6, Section 6.1, for further detail.

[69] ANT's equivalent to 'remindness'

[70] e.g. a *car* appears as a unified monadic whole until it won't start, at which point the car shifts, conceptually speaking, to appear to be an *assemblage of component parts* — one of which has failed. The failure reminds of the assembled nature of the car.

[71] See Chapter 6, Section 6.1, for further detail.

The thesis challenges designerly interpretations of humour and laughter and prompts designers to consciously adapt their strategic responses accordingly. Conceived of in this new way, some humour and laughter aimed at design does not need to be interpreted as problematic, it can instead be celebrated as an indicator of genuinely design innovation (i.e. understood through malentanglement, people are laughing at the incongruity of innovation, not the quality of the design). Thereby, this thesis provides a theoretical contribution to an emerging field of humour-centred design, which is explored herein.

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Chapter 1).

A Hankering for Humourlessness: Design Professionals Take Themselves Seriously, and Want Others to do so too.

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1.1) Three Ways to Understand design.

The purpose of this chapter is to contextualise this thesis in design, and in the design discourses to which it is intended to contribute.

Design is generally understood in three core ways: as a universal process of human thought and action; as a field of autonomous and interrelated professional practices; and as a categorisation of human-made artefacts (whether material, immaterial, or a synthesis of both) that are the intended outcomes of design processes. The literature review confirmed that these three understandings are widely held and well established within design discourses. Whilst negotiated and mutable, as any understandings are, they are generally agreed upon in design discourses and practices. In order to further understand design, and to begin to investigate designerly understandings of humour and laughter, the following three sections explore these three broad ways of understanding what design is.

1.1.1). Design as Universal Processes of Human Thought and Action.

Design and *designing* have an established history of being understood as ubiquitous processes of thought and action that are enjoyed by all human beings[72] (see Erlhoff & Marshall, 2003; Sparke 2009). Design-as-pan-human-activity has been understood in a number of ways from abstract *scheming* to pragmatic *making:* and typically as a synthesis of the two. For example, the opening statement on the first page of Victor Papanek's 1971 book 'Design for the Real World' says as much:

> "All [people] are designers. All that we do, almost all the time, is design, for design is basic to all human activity. The planning and patterning of any act towards a desired, foreseeable end constitutes the design process. Any attempt to separate design, to make it a thing-by-itself, works counter to the fact that design is the primary underlying matrix of life. Design is composing an epic poem, executing a mural, painting a masterpiece, writing a concerto. But design is also cleaning and reorganizing a desk drawer, pulling an impacted tooth, baking an apple, choosing sides for a backlot baseball game, and educating a child"
> (Papanek, 2019, pp.3).

If defined as a process of planning-the-production-of — and then producing — *things*, e.g. tools, then designing not only appears to predate our 'sapiens' species (Leakey et al, 1969; Leaky 1996) but also our 'homo' genus (Harmand et al 2015), whilst also extending beyond human's 'mammalian' taxonomic class to the 'aves[73]' (see Weir, 2005; Taylor et al, 2010; Wimpeny, Weir, & Kacelnik, 2011; Endler & Day, 2006) and arguably even the invertebrate 'insecta[74]' (see Johnson, 2001) who have a remarkably different physiology from mammals.

Due to the universality of the human capacity for design thinking, and enacting such thinking, the relationships between *designers*, *users*, and *designed things*, are not as

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[72] By all who have the agency and capacity I mean. A human in a comatose state cannot design, but that would, of course, not render them non-human. Design is presented herein as a fundamental facet and asset of being human, but not as a test for it.

[73] Birds.

[74] Insects.

simple as the reductive models in design textbooks and on design websites might lead one to believe. Designers are not some rarefied class of human who possess knowledge and skills that are unknowable to design users, nor are users passive entities who merely operate or consume designed things. *Everyone* is a designer (making designerly decisions every day — what to wear, do, fix, say, plan, think, etc.); *everyone* is also a user (everyone uses designed things, all the time — from clothes, to lights and heating systems, to tools and utensils, to languages) therefore *all* professional designers are *also* users. Whilst some people claim to design as a profession — *everyone* designs. This is true of many professions, of course: mathematical thinking is a relatively universal human capacity, but some people are professional mathematicians; mimicry and pretence are relatively universal human capacities, but some people are professional actors; locomotion is a relatively universal human capacity, but some people are professional athletes; and so on.

Whilst various writers, like Papanek in the quote above, have drawn attention to the fact that "all that we do, almost all the time, is design", and "design is basic to all human activity" (Papanek, 2019, pp.3), these incidental, undervalued, overlooked — daily, hourly, minute by minute — acts of design are rarely documented with purpose. However, Richard Wentworth has sought to record such moments through his photographic practice, see Figure 1.i.

Figure 1.i. Three of Wentworth's images: (top left) bricks used to convert steps into an improvised ramp, probably for a barrow, photographed in London in 2007; (top right) plastic glasses abandoned upon fencing spikes, London, 2010; and (bottom) a cup props open a window, South West France, 2008 (Wentworth, 2015, pp.57, 99, and 75 respectively).

Examining Wentworth's images, one can imagine the events that precede them framed as design questions:

'I have an empty plastic glass in my hand and I want rid of it, where can I put it?

And design answers:

'These spikes afford glass stacking — they will do'.

Or:

"I need something about the size of my fist to prop this window open… That cup will do[75]*".*

Evidence of this universally distributed, non-professionalised design thinking is also abundant in the case of 'life-hacks' — design interventions, sometimes made to address design shortcomings, and often through repurposing design artefacts, see Figure 1.ii.

Figure 1.ii. Three life-hacks: (left) an empty drink can deformed into a mobile telephone holder; (centre) a CD spindle repurposed as a lunchbox for a bagel; and (right) a pair of nylon tights (stockings) stretched over a vacuum cleaner nozzle act as a filter for finding/ recovering jewellery.

Life hacks are of interest to this research because they present moments of opportunity for humour — usually in the form of a delight at the ingenuity of human design thinking.

[75] Or, more likely given the location: "J'ai besoin de quelque chose de la taille d'un poing pour maintenir cette fenêtre ouverte… cette tasse fera l'affaire".

Other evidence of universal human designing can be found embodied in the vernacular design of so-called ‘desire paths’ (see Smith & Walters, 2017; Leckie, 2021). Some of the best places to observe desire paths are urban parks and similarly orchestrated outdoor spaces. In such settings, designers typically try to achieve a compromise between the ‘arterial’ pathways that connect important entrance/exit points with those that offer more meandering and recreational circulations within park grounds or may afford more agreeable aesthetics in terms of landscape design. When people do not feel that the path that they are on is taking them where they want to go, they may stray from it and pursue a route of their own design or ‘desire’. In certain spots that afford such behaviour the cumulative effect of many people who are literally ‘forging their own path’ can be readily observed, see figure 1.iii.

Figure 1.iii. In order to reach the park gate, one may choose to follow the ‘designed path’ on a long looping meander to the right, or cut straight across the grass via the direct

‘desire path’. Enough people have made the latter choice to prevent the grass from growing. This strongly suggests that a path is necessary (to satisfy the evident desire), and was probably necessary in the original design, but was not anticipated by the original designer(s) (author’s own image, 2024).

1.1.2). Design as Professional Autonomies of Autonomous Professionals.

Designing, then, has an exceptionally deep history and broad occurrence — appearing to span at least the last 3.3-million years on Earth in hominin terms (Harmand et al, 2015), and arguably far longer longer than that from an inclusive pan-phylal understanding of design and designing: as many paleomyremcologists[76] agree, the ichnofossil[77] record indicates that social insects have been engaging in architectural excavation projects since at least the Upper-Cretaceous period, approximately a hundred millions years ago (Roberts & Tapanila, 2006).

Given these unfathomable histories of designing, it might seem surprising that the identified profession of ‘designer’ has a rather more recent heritage that has been slowly recognised over the last few centuries, in the West at least, that ‘design studies’ and ‘design history’ have only really emerged distinct fields within the last half-century (Fallan, 2010, pps. xvii and 2), and that new specialisms and sub-divisions within the profession(s) of design are still continuing to emerge with regularity (Held, 2016): many of these specialisms being linked to the emergence of specific technologies (e.g. car designer,

[76] paleomyremcologists being people who engage in the scientific study of extinct ants (e.g. Eric Roberts and Leif Tapanila mentioned above, or John LaPolla, Gennady Dlussky and Vincent Perrichot, through whom I read of Roberts and Tapanila’s fascinating work).

[77] Ichnofossils being fossilised traces of animal activity, rather than fossilisations of their bodies. Typical examples being footprints, burrows, and nests (LaPolla, Dlussky and Vincent Perrichot, 2013, pp.616).

lighting designer, web designer, and so on.). Design then, is simultaneously something that humans have done for as long as there have *been* humans, but has only comparatively recently been recognised as a profession.

Designer is a diverse and diversified profession that encompasses a changeable and indeterminate taxonomy of practices being practised by self-identifying practitioners who acknowledge one another to various degrees. A product designer will tend to refer to product design simply as design, a graphic designer will tend to refer to graphic design simply as design, a service designer will tend to refer to service design simply as design, and so on for brand designers, concept designers, fashion designers, furniture designers, game designers, jewellery designers, landscape designers, industrial designers, interaction designers, interior designers, packaging designers, set designers, software designers, sound designers, strategic designers, systems designers, textile designers, urban designers, user-experience designers, user-interface designers, vehicle designers, web designers, and every other established and emerging taxon of designer in what is a fluctuating and inconsistent category of professions. The preceding list does not even mention architects, human factors specialists, casing engineers, and all of the other professional designers who design, but do not explicitly stake a claim to the word designer in their job title. Given that all of these disciplines of design have specific understandings of the term, the potential for confusion, uncertainty, misunderstanding, and misappropriation is considerable. These difficulties are further complicated by ideas such as *user-centred design* (see Chapter 3, Section 3.5) and *human-centred design* (see Chapter 3, Section 3.5) that proffer design principles that assert to sit as a metaphorical umbrella over all design practices.

Commonalities and Differences.

Despite the illustrative lists above, the function of this section is not to established an exhaustive taxonomy of design professions, nor to define them individually according to the similarities or differentiations presented by practitioners and critics. Instead, the purpose of this chapter is to make clear that there are a diverse and fluctuating array of design professions, populated by self-identifying designers who share certain interests, concerns, and skills (and can therefore be referred to as a relatively cohesive whole), whilst maintaining professional distinctions from one another, through, for example, the names of their respective professions. This approach is taken for reasons of clarity and professional coherence and to indicate the specific design skills and experience of any one designer in comparison to any other(s) — a self-identifying product designer will likely be experienced, and therefore expert, in product design; a self-identifying graphic designer will likely be more experienced, and therefore more expert, in graphic design than product design: a self-identifying fashion designer will likely be more experienced, and therefore more expert, in fashion design over product design and graphic design; and so on, and so on, exponentially.

Throughout this text the general term ‘design’ is used to ring-fence a number of recognised professional practices with shared, or at least aligned, characteristics in terms of methods, contexts, and purposes. Despite the variation in design professions and their associated practices, there are some generally agreed concerns and commonalities amongst them, for example: interests in aesthetics, materiality, and functionality.

1.1.3). Design as Categories of Things: Things in History and Things With History.

This is a markedly different use of the word design in that it refers to the things that designers have designed, and that have been created, rather than the capacities or identifications of the designers themselves. Here *design* refers to design objects and design artefacts — designed things (material or otherwise) that are referred to as ‘design’.

For the contemporary human, designed things are inescapable: most people, in the West at least, are completely immersed in a 'designed world’ (Buchanan, Doordan & Margolin, 2010). What this means is that, for the vast majority of people, most of the things that they are surrounded by, perceive, and interact with, are designed. As Cross states: “just about everything that we have around us has been designed” (Cross, 2007). A trope of design texts is to begin by drawing attention to this fact: asking their readers to study their immediate surroundings, and to notice the things: a cup, a chair, some pens, a mobile telephone, an electric light, a table, maybe a television or a bed, a window, the walls, the floor, and the ceiling. Looking out of the window might reveal trees and plants that at first appear to be far from designed, but, upon consideration, are species that have been bred by people for certain aesthetic qualities or for increased hardiness. Imported from far flung locations, these trees are not self-seeded but planted by people, with design intent, and been pruned as they have grown. A glance in a mirror, another designed artefact, another human invention, reveals a person, seemingly ‘natural’ (a contested term in itself) but evidently designed in terms of haircut, clothing, footwear, maybe a piercing, a tattoo, and/or some make-up. If languages are taken as designed, in that they are culturally and technologically ‘held’ (they have to be learnt from things and people who use them), and distributed across populations of individuals who use and modify them, then much of our *thought* is arguably a form of design (for those who think in a language). When calling

typical, or archetypical, design to mind, it is common to think of designed material objects, as with the list above (cups, chairs, buildings, and so on), but designed things may be material or immaterial to varying degrees and by varying definitions. That is the reason that this section is entitled 'Design as Categories of Things' and not 'Design as Categories of Objects'. All references to designed *things* in this text include material things, immaterial things, and syntheses of the two by whatever degree: whether something has been 'designed' is the important factor — not its materiality or lack thereof.

Design histories are histories of things as much as histories of people, often more so. Such histories tend to identify moments in time, and then position design as a formation of material culture through key moments of change, for example, histories of inventions: the stone hand-axe; clothing; the bow; the wheel; written alphabets; the printing press; the engine; refrigeration; the light bulb; the telephone; the television; the computer; the Internet[78]; or examples of an innovative or archetypical aesthetic styles: Frank Gehry's

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[78] **The stone hand axe** represents the earliest known example of a tool fashioned to extend the human body by "prosthesis" (Foster, 2004). It could transfer force, like punching fists and kicking feet, but did not feel pain. It could be sharp, like teeth and nails, but could be readily resharpened or replaced if it chipped, shattered, or dulled. Other tools undoubtedly preceded it, the incidental handheld club of a rock, femur, or tree branch, but the stone axe was fashioned (knapped), and in this way, designed. A cognitive design process was arguably at play in the selection of incidental clubs — 'I need something heavy enough to cause damage, but not too heavy to swing, and long enough to extend my reach, but not so long as to be unwieldy' — the true hand axe, however, is crafted, not found. It is designed not discovered. ***Clothing*** enabled the spread of humankind into otherwise inhospitable climates and to convey identity and status. **The bow**, an early ballistic weapon magnifies the mechanical force of the archer, as do the slingshot and the atlatl (a spear throwing tool that dates at least as far back as the European Upper-Palaeolithic. Due to the slow draw (accumulation of potential energy) and quick release (release of kinetic energy), a human-drawn bow launches an arrow with much greater force and accuracy than a human can throw it. Design magnifies force through the bow. **The wheel**, for many the quintessential artefact of early civilisation, although this view has been challenged (Urcid, 2017). Another designed force-manipulator, this time radically reducing friction and thereby enabling heavy loads to be moved with ease and speed. The various and varied **alphabets**, traditionally first attributed to the Sumerians of Mesopotamia (Haley, 1995). With their invention, writing presents a new mode for the exchange of information: from word-of-mouth to word-as-material. The temporality of language extends from audible vibrations in the air, that quickly dissipate, to the relative permanence of marks in clay or stone, or pigments on scrolls: permanence at least in comparison to human lifetimes. **The printing press** does the skilled work of many, almost instantly, enabling a slow democratisation of information. **The engine** whether steam or combustion, does the work of many people or beasts of burden — needing fuel, but not rest. **Refrigeration** radically changes people's relationships with food — nutritional, pleasurable, economic, global (Rees, 2015). **The light bulb** defeats the tyranny of darkness and enables a complete reconfiguration of people's work-life and leisure-life. **The telephone, the television, the computer, the Internet:** all enable local and global communication of information that has profoundly impacted human lives.

‘Guggenheim Museum Bilbao’ (1997); Michael Thonet’s ‘Vienna Coffee House Chair’ (Bentwood Chair #14, 1859); Maija Isola’s ‘Unikko’ pattern for Marimekko (1964); the liquid metal ‘T-1000’ in the film ‘Terminator 2’ (special effects by Industrial Light and Magic, 1991), Vincent Connare’s ‘Comic Sans’ font for Microsoft (1994); and so on — see Figure 1.iv.

Figure 1.iv. (Top left) Gehry’s Guggenheim Bilbao (1997); (far right) Thonet’s Bentwood Chair (1859); (far left) Maija Isola’s ‘Unikko’ pattern (1964); (centre left) the ‘T-1000’ from ‘Terminator 2’ (1991); and Connare’s ‘Comic Sans’ font (1994).

Some histories present accounts of the development of designed artefacts that are considered successful in design terms and celebrated: Sony’s ‘Walkman’; Lego; Artek’s

'Stool 60'; the tampon; Ray-Ban's 'Wayfarers'[79]; or significant in terms of their singular momentousness: the Eiffel Tower; the atomic bomb; NASA's Apollo 11.

Other design histories focus upon disastrous and derided designs which are framed as cautionary warnings to current and future designers: single-use plastic straws, asbestos, hydrogen airships, the Ford Pinto, the :CueCat, Sony CD Copy Protection[80], etc., and there are even museums and archives dedicated to such things (e.g. Museum of Failure, 2024).

Other design histories reside within artefact categories: histories of lighting (e.g. Griffiths, 2014, Fiell & Fiell, 2017); histories of footwear (e.g. Le Maux, 2016); histories of bicycles (e.g. van Nierop, Blankendaal & Overbeeke, 1997; Fallan, 2013; Clarke, 1992); histories of hand-held weapons (e.g. Stone, 2013); histories of chairs (e.g. Fiell & Fiell, 2023; Fiell et al, 2017); histories of advertising posters; and so on. Most histories blend all three of these categories, presenting the objects that they consider most significant from the

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[79] Sony's **Walkman** (see Tuhus-Dubrow, 2017) revolutionised the way that people experience audio, and the world — somewhat by enabling them to be insulated from it. **Lego** (see Robertson & Breen, 2014; Baichtal & Meno, 2011): widely regarded as an exceptional toy — creative, educational, rewarding, and wholesome fun to play with. Artek's Stool 60, often known simply as 'the **Artek Stool**' (Heathcote, 2021), a Modernist icon, designed by Alvar Aalto in 1933. This wooden stool features a circular wooden seat with three wooden legs, each bent to support it. The Artek Stool embodies the core principals of late Modernism in furniture design: one manufactured material rendered into simple uniform geometric shapes, plus simple hidden fixings. The **Tampon**, invented in its contemporary form in the 1930's (Lil-lets, 2024), has been intimately related to women's liberation around the globe. Ray Ban's **Wayfarers**: Designed by Raymond Stegeman in 1952. Still cool now. Wayfarers are one of those rare design items, like Dr. Martens Boots, that are freed from the metaphorical moorings of the time of their invention and, whilst remaining relatively unchanged in design terms, are continually readopted and reconceived by successive generations (Davies, 2016).

[80] Widely manufactured and widely used, the single-use **plastic straw** has come to represent the lack of attention paid to ecological matters by contemporary design (Viera et al, 2020; Fanini & Guittard, 2021). **Asbestos:** an excellent example of a design solution that is successful in the short term (it 'works' in many designerly senses of the word), but is disastrous in the long term (unforeseen health effects have been globally disastrous), (Ramazzini, 2016). **Hydrogen blimps**: hydrogen is cheaper than helium, but highly flammable — see the infamous 'Hindenburg Disaster' (6th May, 1937) which heralded the abandonment of hydrogen enabled airships. The **Ford Pinto** car: another err of vehicle design, and another safety issue. Design flaws in the Pinto meant that its petrol tank was prone to ignite rather too easily (American Museum of Tort Law, 2024). The **:CueCat**, here spelt as intended (with a colon at the start), was a tethered peripheral barcode reader (for a desktop computer) that was produced by the Digital Convergence Corporation in 2000. The device looked like a cat in a pre-pounce crouch, clearly and humorously intended to accompany the computer's mouse. It enabled users to scan barcodes to visit websites. However, it was easier for everyone involved for people to just type a URL, so the product failed (Fletcher, 2010). **Sony CD Copy Protection**: a costly anti-piracy software security protocol that was developed in 2002 to stop music CDs from being copied. It was quickly circulated that the security features could be circumvented by colouring in the edge of the CD in with a marker pen (Wired, 2002).

historian's perspective, and dependent, historiographically speaking, upon the nature and function of the history that they are constructing.

Design historians pick and choose the artefacts that they use to populate their histories, as the sources above confirm. This is not an unusual practice, of course: art historians pick and choose their key pieces, literary historians pick and choose their key texts, military historians pick and choose their key battles and armaments, and every other history picks and chooses its key factors of interest (a historiographical observation coherent with that of Spalding and Parker, 2013). In the case of design histories, artefact selection appears to depend partly upon convention, and partly upon the historiographical narrative that is under construction. In most design histories, the pervasiveness of a designed thing does not necessarily correlate to its recognition in design history, rather it is sea-change inventions (design firsts) and/or more aesthetically focussed archetypes that represent newly emerging aesthetic forms. Anyone studying design history through texts centred upon design artefacts will likely notice that they encounter a comparatively high number of certain objects and a comparatively low number of others. For example, many design histories are festooned with references to chairs, but far fewer references to beds. Indeed, some design histories consist *only* of chairs (e.g. Fiell, Fiell, Binder, Gaines & Bosser, 2017; Fiell, and Fiell, 2023) and chairs feature heavily in other texts too. Beds are mentioned occasionally, but rarely focussed upon in detail, or, more often, the 'bed' is used as a metaphorical reference to the things that people often do in bed, tending to be primarily concerned with the histories of sexual interactions, and sociocultural conventions, rather than the bed-as-material-artefact in itself. Unlike chairs, beds are considered nothing but a mere setting for human interactions to play out (see, for example, Fagan & Durrani's 'What We Did in Bed: A Horizontal History', 2019; or Hinds' 'Cultural

History of Twin Beds', 2020; and 'Together and Apart: Twin Beds, Domestic Hygiene and Modern Marriage, 1890-1945', 2010).

It appears similarly the case for electric lights. Design histories, especially those that are focussed after the invention of domestic mains electricity, are often well furnished with examples of lighting, and some collections feature nothing but lights — pages full of pendant shades and table lamps, sit alongside wall-mounted and floor-standing varieties (e.g. Griffiths, 2014; Fiell & Fiell, 2017). In the face of this tendency towards monumentalism[81], artefacts that are neither radically new, nor aesthetically exemplarily, are much less likely to be accounted for. Whereas more utilitarian and quotidian items (clothes pegs, toothbrushes, remote controls, plastic shopping bags, foolscap ring-binders, etc.) barely feature, if at all. A plethora of high-end artefacts are presented[82] (an Aston Martin car, an Issey Miyake dress; a high-end Hi-Fi), but rarely low-end or disposable items such as budget alarm clocks, polystyrene electronic-goods-packaging-forms, or disposable wooden eating utensils[83]. This is despite the assertion by Jonathan Woodham (and others who share this views), that "the most famous designs of the twentieth century are not those in museums, but in the marketplace. The Coca-Cola bottle and the McDonald's logo are known all over the world, and designs such as the modernist 'Frankfurt Kitchen' of 1924, the 1954 streamlined and tail-finned Oldsmobile, or 'Blow', the inflatable chair ubiquitous

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[81] This thesis is somewhat guilty of the same monumentalism. For example, in comparisons between Van der Roeh and Venturi, I rely upon a rather traditional comparison of their chairs as exemplars which embody their comparative ideologies (despite them both being traditionally categorised as architects) and then to their architectural design. By contrast, other artefacts in this thesis are drawn from categories of things that are often neglected from design histories: novelty items, toys, tchotchkes, gimcracks, and gewgaws — designed things intended to be amusing, and designed things found to be amusing, but otherwise of lesser value.

[82] A commonplace exception would be graphic design histories which often feature advertisements, propaganda, and packaging designs that are more commonplace and packaging design collections which do the same (e.g. Milton, 1991; Grip, 2008).

[83] I'm thinking of the disposable wooden chopsticks or 'chip forks' that accompany some take-away foods in the UK.

in the late 1960s, tell us more about our culture than a narrowly defined canon of classics" (Woodham, 1997).

Some efforts have been made to buck these trends, notably collections such as Carlos Mustienes' two volumes of 'Extraordinary Objects' (Mustienes, 2003) which presents a diverse collection of designed objects, from around the world, whose extraordinariness unifies them, but not their price tag, or Arthur Eger and Hub Ehlhardt's 'On the Origin of Products' (Eger & Ehlhardt, 2018) which explores the designerly developmental biographies of 'everyday' consumer items for pedagogical purposes. Also of note is Fukasawa and Morrison's 'Super Normal: Sensations of the Ordinary' (Fukasawa & Morrison, 2007), which takes the opposite approach to Mustienes, attempting to construct a sort of menagerie of the refined-but-mundane: a collection of design exemplars that are presented as well-designed[84], but also to unobtrusively act as definitive category prototypes[85], albeit with a strong Japanese domestic bias (see Figure 1.v.). Some design histories are far less focussed on specific artefacts but instead account for design and its paradigmatic developments in response to social, technological, political, and economic milieu rather than with repeated reference to design artefacts.

[84] Whilst these images are intended to exemplify the super-normal as the *very* normal versions of design archetypes, the paperclips present another possibility. Most paperclips follow this bent wire shape, but Fukasawa and Morrison's paperclips have had a 'blob' of metal added to the cut ends of the wire. They are now far less likely to scratch the paper that they are paperclipping. In this way they are both super-normal, as in *very*-normal, but also super-normal as in *above*-normal because of this additional feature that enhances usability but also production cost and, one imagines, retail cost too.

[85] The word prototype is used here, not in the expected design sense — as an unresolved 'test-rig' that is a stepping stone to a final version of some designed thing — but instead in a sense drawn from 'prototype theory', i.e. "the most typical member of a category is referred to as the prototype of the category in question […], a prototype is an abstract entity, not an actual case […]. A prototype is a mental representation that serves as a cognitive reference point for the category. The most salient features of the prototype are the first features that come to mind when the category is mentioned. The effects that prototypes have on categorization are referred to as prototype effects" (Dahlman, Sarwar, Bååth, Wahlberg & Sikström, 2015, pp.163-4).

Figure 1.v. A selection of Fukasawa & Morrison's 'Super Normal' objects: some paperclips, a wooden chair, and a plastic storage basket (Fukasawa & Morrison, 2007, pp.73, 17, and 37 respectively).

1.1.4). A Spectrum of Design from *Affirmative* to *Critical*.

Despite the declaration that this thesis does not strive to define any individual design professions in relation to any other, discussion of affirmative and critical design are important to this research because affirmative and critical designers have understood, and capitalised upon, humour in different ways — although they have shared some resistances

to humour too (see Chapter 3). As this section demonstrates, 'affirmative' and 'critical' design are not labels for specific design professions: they are ways of corralling, conceptualising, analysing, and describing generalised approaches to designing that yield markedly different outcomes (Dunne and Raby, 2007).

Mainstream design rarely defines itself as such, simply declaring itself *design* or maybe appending a specialism: industrial design, interior design, furniture design, and so on. Labels such as 'mainstream' tend to be suggested from the peripheries, places where alternative practices try to define themselves through their difference to the mainstream. This was the case with critical design, a term coined by Anthony Dunne in the late 1990s (see, for example, Dunne, 1999) to describe design projects, created using design methods, that did not fit within the confines of mainstream commercially bound design (see Dunne & Gaver, 1997; Seago & Dunne, 1999). From the inception of the term, critical design has been strongly associated with the work of Anthony Dunne and Fiona Raby, designers such as James Auger, Elio Caccavale, and Noam Toran, and institutions such as The Royal College of Art (London). Critical design embodies a skepticism of the ideological nature of design, the ultimate aim being the "development of electronic products which, by 'making strange' or 'poeticizing the distance' between ourselves and our artifactual environment, facilitate sociological awareness as well as reflective and critical involvement with the electronic object, rather than its passive consumption and unthinking acceptance" (Seago & Dunne, 1999, pp.15). Figure 1.vi. Presents Dunne and Raby's 'Design Noir' suite of critical design objects: each created for the consideration and exploration of "hertzian space" (Dunne & Raby, 2001).

Figure 1.vi. Objects from Dunne and Raby's 'Placebo' project, 2001 (Dunne & Raby, 2001).

Critical design, in Dunne and Raby's sense, has always been anchored to product design, especially to the design of electronic products, "its purpose [being] to stimulate discussion and debate amongst designers, industry, and the public about the aesthetic quality of our electronically mediated experience" (Dune & Raby, 2001, pp.58), but this has become less imperative as critical design has matured, broadened its remit, become more speculative, and, eventually, speculative design has branched from it. Critical design has tended to criticise the design of *now* whilst considering possible futures (as all designers do to some extent), whereas speculative design tends to be more future focussed and deals with wider issues beyond the design of products, such as the climate crisis and more sweeping socio-technological change.

Dunne and Raby have posited 'affirmative design' as the binary opposite of critical design: affirmative design being "design that reinforces the status quo" rather than critiquing it (Dunne & Raby, 2007). In establishing a taxonomy of practice for critical

design, Matt Malpass conceives of affirmative design as “the production of objects solely for fiscal gain and technological development” (Malpass, 2012, pp.1). Affirmative design takes place in industrial and commercial manufacturing and production settings, and is market dependent, whereas critical design is generally undertaken in institutions such as universities, museums, and galleries, which have the freedom to explore other pursuits (Dunne & Raby, 2007).

In defining itself as a form of designerly critical practice, critical design has drawn a number of other design practices into its fold: for example, Italian ‘radical design’, ‘anti-design’, and ‘counter-design’ of the 1950s and 1960s, and British avant-guard design (Dunne & Raby, 2007; Malpass, 2012). In similar fashion, when Tharp and Tharp defined discursive design (Tharp & Tharp, 2018) they drew an umbrella over critical and speculative design, and a number of other proximate practices, see Figure 1.vii.

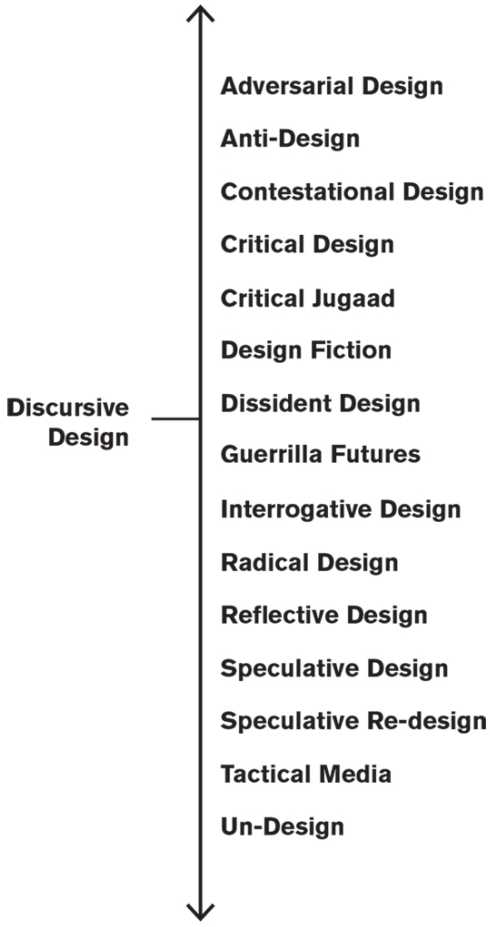

Figure 1.vii. A metaphorical umbrella of discursive design encompasses a number of other modes of design and illustrates the breadth of differentiated critical and reflective practices now recognised within the scope of design (Tharp and Tharp, 2018, pp.84).

The professional title '*designer',* then, refers to a varied field of self-identifying and autonomous professionals whose work can be conceived of as sitting upon a spectrum between the poles of affirmative and critical practices, with the considerable majority located at the market-driven affirmative end.

1.2). Schism, Science, and Solutionism: Methodisation and Systematisation of Design and Designing.

Design, of course, has no *singular* agency. One might speak of ‘design’ as a holistic entity, as this thesis regularly does, but this is an illusion born out of reductionist semantic convenience, and one that is particularly convincing when considering design histories from the perspective of hindsight. Claims that design(ers) ‘thought this’ or ‘thought that’, can only ever hope to be generalisations, but may be presented and/or interpreted as truths. Design — as a fluid, mutable, and unevenly distributed aggregate of the ideologies, decisions, and practices of uncounted and widely dispersed self-identifying designers — might be thought of as having agency, but it is an agency that emerges from, and is dependant upon, the average will of a miscellany. It is not controversial to say that 'not all designers agree with one another’, nor that ‘designers are not collectively steering their practice in any one direction’ because there is no such thing as their practice, only their practices, and no such thing as their ideology, only their ideologies. Again, it is uncontroversial to say that designers disagree on many things.

In light of the above, this section considers design history, its descriptions of patterns of ideas and of opinions, decisions, actions, and reactions, like currents in a metaphorical ocean of designerly discourses and practices. Currents, metaphorical or otherwise, do not operate without resistance, and there are/were counter-positions, and counter-actions, to all of the ideas presented below. Where there were voices calling for the segregation of art and design, and in doing so sanctioning a closer connection between design and science, there were converse voices calling for the preservation of art and design’s intimate relationship, and for their further unification. Like the currents of the World’s oceans, these ‘currents’ in design can seem irresistibly powerful and mighty. They

can bring about sea change[86]: their affects being significant, consequential, and distinctly observable. This section of the thesis aims to demonstrate that, since the advent of the Industrial Revolution in the mid-1700s, design has tended to become increasingly distanced from art and craft. The case is made that this process was enabled by industrialists and industrial manufacturing, a separation of designing from artistry and crafting in the mind (and hands) of the artisan, and a demand for a more 'scientific' design methods that led to the formation of a certain design logic which gave rise to a linear problem-solving model of design. This want for the scientific, fuelled by rational positivist ideologies, enabled the emergence of the design professions, has accompanied them through the development of their methodologies, and has/is materialised in their design artefacts.

The advent of the Industrial Revolution ushered in a schism in art and craft that gave rise to a recognition of design as an professional entity distinct from its forbears, and welcomed its conceptual and ideological separation, first as 'industrial art', as Herbert Read would refer to it (Kinross, 1988, pp.40), and later as design. Up until this point, the craftsperson tended to work locally, through cottage industry or small-scale workshops, or in situ at large-scale architectural projects, and through an apprentice-to-master career path. With the emergence of the factories, and the spread of industrial mechanisation, the design and the manufacture of many design items was no longer undertaken personally and locally by skilled craftspeople, unique bespoke creations gave way to standardised ones and people were trained to use machines, being subject to the principles of Adam Smith's 'division of labour'[87] (Fiell & Fiell, 2019), rather than to make artefacts from start to

[86] Pun intended.

[87] An idea that developed in the 1760-70s.

finish. Art and design historian, David Irwin, has observed that "discussions on industrial design usually start in the middle of the nineteenth century, paying scant attention to the previous period (Irwin, 1991, pp.219). He reminds the reader that "the first century in the Industrial Revolution in Britain and France laid the foundations of much that was to follow, not least in discussions on the interrelationship between art and design" (Irwin, 1991, pp.219).

This thesis has thus far mentioned design disentangling from art, in order to be to be recognised in its own right, but this separation was not one-sided: whilst "industrial artists" (Eastlake, 2003) (i.e. emerging designers), were trying to establish an intellectual and professional position as distinct from artists or artisans, so too were artists trying to force the fledgling design from the metaphorical nest that they shared. The Royal Academy (later 'of Arts'), established in London in 1768, was "not interested in the useful arts, and was indeed hostile to them" (Irwin, 1991, pp.220), and Percier & Fontaine's hostility is exemplified in their statement that: "the gravest abuse that is attached to the prostitution that is ceaselessly made of inventions of art and of taste, is their abduction by economy of labour, by the counterfeiting of materials, and by methodical or mechanical processes" (Irwin, 1991, pp.224). Despite its revolutionary epithet, industrialisation required some time and much capitol investment – it was not momentary and explosive, but relentless and inexorable. In the two centuries that followed, driven by an abundance of commercial opportunities, and the investment of governments and private sector industrialists, the mass-manufacturing of goods demanded, and was enabled by, new industrial design methods for maximising production: standardisation; systemisation; and division of labour — espoused by people such as Henry Ford and Frederick Winslow Taylor — and iterative, empirical product development exemplified in the 'scientific' design methods of Thomas

Edison and others (Fiell & Fiell, 2019). These methods were underpinned by a positivist rationalist logic that was modelled in the fields of science. For design, such ideas were consolidated into a notion that the human world, and the lives of those people that could afford it, could be *improved* through rational linear design thinking and industrial designerly action. Emerging production methods were accompanied by shifts in thinking that cohered with their logic: functionalism and the idea that there was an interplay between form and function (Sullivan, 1896), rejections of decoration for reasons of production efficiency and morality (e.g. Loos, 1997), perfect forms, and 'truth to materials' (Ruskin, 2018).

The *act* of designing incorporates a certain amount of mystery and resistance to both introspection and external analysis. These analytical difficulties, inherent in examining the conceptual mechanisms of designing, have been envisaged by Stephen Kerr as a 'black box' surrounding designing (Kerr, 1983). Kerr highlights that the rational response of design analysts has been to methodologise and systematise designing (Kerr, 1983) — to make designing explicit and sequential so that it can be modelled, understood, taught, reliably predicted, and repeated. This has led to a menagerie of methodological models intended to represent designing and design processes. Figure 1.viii. presents a collection of such models in order to demonstrate their variety (they are intentionally presented in a way that makes them impossible to read because the function of Figure 1.viii is to illustrate a variety of models, rather than to make them explicit).

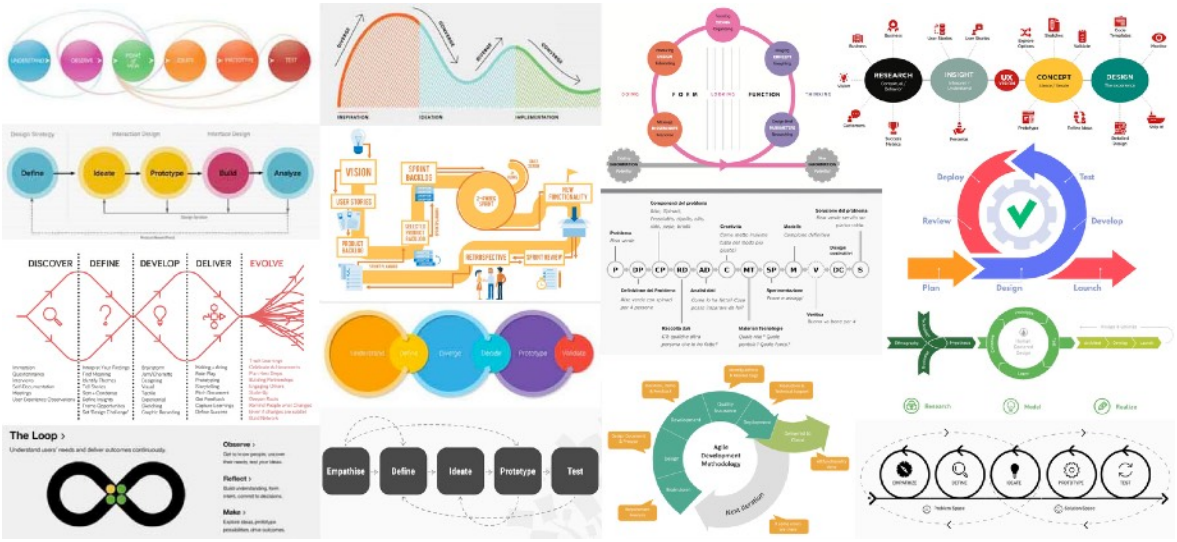

Figure 1.viii. A collection of models of designing, including: the Stanford Design School Model of Design Thinking; the Zurb Design Thinking Model; The Double Diamond; The Loop (The IBM Design Thinking Model); IDEO's Human Centred Design Model; the Scrum method; The Google Design 'Sprint' Process; Interaction Design Foundation's 5-Stage Design Thinking Process; Clarkson's Design Process / Methodology; Bruno Munari's Metodologia Del Design (Design Method); the 'Agile' Development Methodology; Jelvix' UX Vision; the 'Lean Agile' model; Nurun's Human Centred Design Process; and Crady's Design Research Model.

Others have embraced the impenetrability and turmoil of designing when visualising design processes. For example, in 2002 designer Damien Newman created his famous 'Design Squiggle' (Newman, 2024) which presents designing as a rather chaotic disordered and "uncertain" process (Newman, 2024) that is markedly at odds with the linear rationality of the diagrammatic descriptions presented in Figure 1.viii. (see Figure 1.ix for Newman's squiggle).

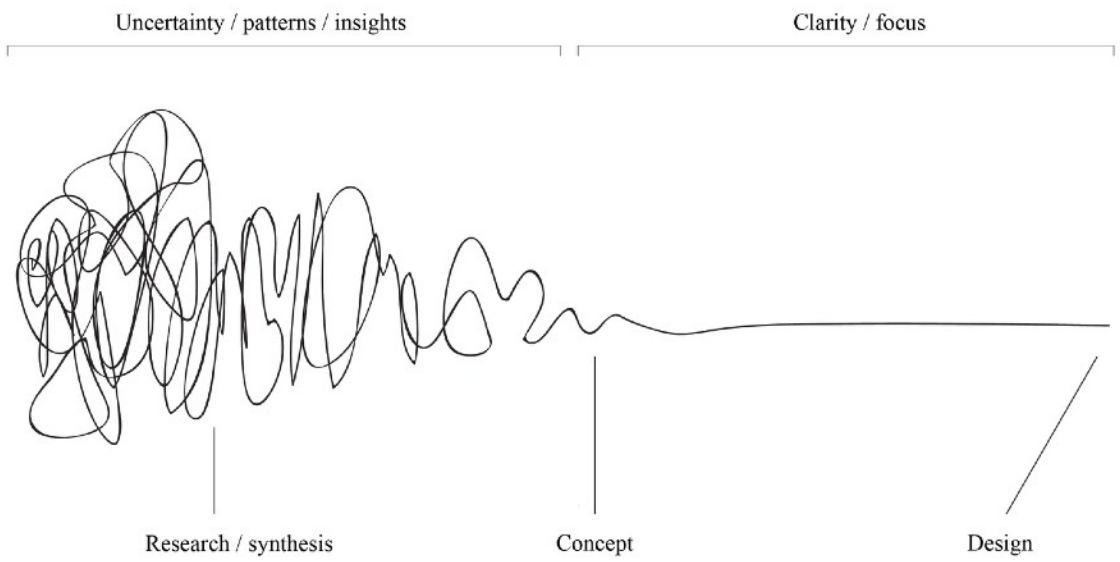

Figure 1.ix. Newman's 'Design Squiggle'[88]

In response to the complexities of conceiving of and describing design and designing, one tactic that has emerged is to frame designing as a problem solving process and designers as professional problem solvers, an approach that emerged in the 1960s and 70s (Dorst, 2006, pps.4 and 11). This approach rather neatly allows the designer to conceive of their role in simple terms, and to describe it in simple terms to others: identify problem, investigate problem, imagine and develop solutions to problem, test and refine problem solutions, *solve problem*. Much has been written that defines or infers designers as problem solvers and the practice of design as a problem-solving process (e.g. see Blythe et al, 2016; Dilnot, 1984b; Hannington et al, 2012; Johnson, 2004; Kruger 2006; Prakash et al, 2020). There appears to be broad consensus, explored below, in the discourse between commercial design consultancies, design communities, design authors, non-governmental design organisations, universities, and design academics, regarding this definition. For example, the United Kingdom's Design Council itemises "design's basic roles as

[88] This is the diagram that I think best represents my personal design methodology and probably my research and writing practices too for that matter.

‘framing’, ‘problem solving’, ‘form and function’ and ‘style’.” and continues that “these have different weightings depending on where you are on the spectrum of design disciplines, but problem solving and form and function are arguably the core” (Design Council, 2018). The idea that problem-solving is a core activity of the designer is similarly espoused by commercial designers such as Jessica Lascar[89], here speaking through UX Collective[90]: “There’s a widespread misconception that design is all about aesthetics. Most people don’t seem to understand that it’s about solving problems instead.” (Lascar, 2018). Whilst Lascar also implies that problem-solving is a core concern of design veiled by a concern for aesthetics, critical designers Dunne and Raby consider that most people can see through this veil, stating that: “when people[91] think of design, most believe it is about problem solving.” (Dunne & Raby, 2013). This is unsurprising, being that it is a reoccurring claim of much design rhetoric. Other academics in the field of design concur with Dunne and Raby. For example, Prof. Michael Erlhoff and Timothy Marshall from ‘The Board of International Research in Design[92]’ define the design process as “a problem solving process” furthering that a “‘problem’ here means an aim to be achieved.” (Erlhoff & Marshall, 2008, pp.307) and the Interaction Design Foundation (who describe themselves as “The World’s Leading Online Design School” (IDF, 2018)) have stated that “Product Thinking is Problem Solving […], the user buys the product to solve a real world problem for themselves.” (IDF, 2018). This is an important perspective in that it references the agency of the user: the designer creates the *solution* to a perceived problem, but the user deploys it.

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[89] At time of writing, a designer for digital banking company Monzo (Lascar, 2018).

[90] A popular design-focussed online resource that generates and aggregates design articles.

[91] I take ‘people’ here to mean designers, and those who contribute to design theory and discourse, rather than the average lay-person.

[92] Based in Basel, Switzerland.

Beyond discussions by academics, universities evidently recognise the problem-solving model at an institutional level too. For example, Central St. Martins encourages "[…] a shift in the focus of BA Product Design students' activities away from a purely market-orientated and problem-solving approach to a more analytical and critical approach" (Central St. Martins, 2018). Occasionally the word 'creative' is added before the term problem-solving to imbue the idea with a flair of dynamism. For example, design consultancy IDEO have stated that "design thinking is a process for creative problem solving" (IDEO, 2018), and the author's own institution, Cardiff School of Art & Design, asserts (in marketing materials for their their undergraduate product design programme) that "product designers are creative problem solvers." (CSAD, 2018).

An Experiment.

By way of experiment, this research has investigated the pervasiveness of notions of 'problem solving' in design, and of designers as 'problem-solvers'. The investigation faced a number of initial problems, most pressing of which was how to obtain any kind of reliable and representative data concerning the pervasiveness of such ideas in a professional culture as diverse and dispersed as design, with so many practicing practitioners, and involving largely commercial organisations who might not record, or might not want to share, such information — all factors exacerbated by a lack of clear historical precedent for doing so. A number of strategies were considered to address this problem, such as focusing the investigation to only consider design settings in the United Kingdom and conducting 'bellwether interviews' (Cook, 2012) with designers who worked with particularly representative and/or leading players in design (consultancies,

institutions, etc.). It is estimated, by the UK Government's 'Department for Digital, Culture, Media & Sport', and 'Office for National Statistics', that there were over 160,000 designers working in the UK design sector in 2019 (Creative Industries Council, 2019), and that about half of them are educated to degree level (Creative Industries Council, 2019). This statistic afforded a new strategic approach: to investigate the relatively smaller number of UK undergraduate design programmes (rather than the thousands of design enterprises and design institutions in the UK, and their 160,000 practicing designers[93]), the idea being that the indicative content of such programmes would reveal insights about design ideas and ideology that trainee designers would be exposed to. In order to further focus the investigation, it was targeted specifically at the the field of Product Design (as briefly discussed in the methods section of the Introduction to this thesis (see Section 0.5.1)). Notwithstanding the breadth of sources mentioned above, the investigation focussed particularly on the high value placed upon the problem-solving model by undergraduate product design programmes in UK universities — through which a significant number of designers are trained every year. Forty-eight undergraduate product design programmes were identified as being offered for the 2018/19 academic year. These programmes were identified using the United Kingdom's Universities and Colleges Admissions Service (UCAS) website to search for courses in 'product design'. All programmes entitled 'product design', whether BA, BSc, or BEng, were included in the investigation.

The sample extended to included programmes whose title also included other terms, but where a principle focus was judged to be product design, for example 'BSc (Hons) Product Design and Technology' at Loughborough University or 'BA (Hons)

[93] Which I felt rather beyond the scope of this research.

Sustainable Product Design' at Falmouth University. Programmes that were returned in the UCAS search that were not explicitly focused on product design, as it is traditionally defined, were excluded from the investigation. For example, 'BSc (Hons) Food Technology and Product Development' at Harper Adams University appeared to focus on the development of foodstuffs, rather than the traditional mass-manufactured commercial artefacts of the product design industry, and was therefore excluded. Once the forty eight product design programmes were identified, each was investigated through an examination of their online marketing materials and programme documents. Such materials are, of course, intended to entice prospective students by making the aims, content, and ideology of such programmes readily understood. These materials were accessed via hyperlinks obtained through UCAS. This investigation was conducted entirely online, and therefore digitally: no print media were reviewed[94].

In a clear demonstration of the pervasiveness of 'problem solving' as a concept in UK design training, the investigation revealed that forty-one of these programmes, over 85%[95], made explicit reference to 'problem solving' in their online marketing materials and programme documents, with several institutions making multiple references (for example, BA (Hons) Product Design and BSc. (Hons) Product Design Engineering at the University of Derby and BEng (Hons) Product Design Engineering at Loughborough University made a comparatively-high nineteen mentions apiece).

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[94] The search term used was 'probl' in order to return any and all instances of the words: problem, problems, problematic, problematical, problematise, problematised, problematises, problematising, problematically, problematisation, problem-solving, problem-space, and any 'z-for-s' Americanisations of the above spellings.

[95] The University of Chester made reference to 'product design solutions', which infers that there are product design problems without using that explicit wording. Taking this into account, the total figure would be 87.5%.

A complete account of the identified mentions is presented, by way of a multi-page spreadsheet, in Appendix 3: ‘Pervasiveness of ‘Problem Solving’ in UK Product Design Programmes, 2018/19’ (12.3).

1.3). Design Tames Humour, But What is Lost to Design Logic?

Humour often draws attention to problems, rather than solving them. If a core claim of design is that it is a linear problem solving process, as is generally claimed in the examples above, then humour is rather incompatible with design. Humour arises from the illogical, from the incongruous: if something is unexpected and unusual, but not overtly threatening — it is often funny (Veatch, 1998; McGraw & Warren, 2010, 2015a; Clarke, 2008), (see Chapter 4, Section 4.4, for a more detailed exploration of this idea). Given a history of design embracing rationalism — a determination to invent or discover design methods based on a rational scientific logic, and the pervasiveness of a problem-solving mindset — humour has been rather backed into a metaphorical corner by design, or rather into a ‘channel’. This clash of logics has resulted in humour being explored by design only through narrow and prescribed channels whereby the logic of humour can be forced to comply to the logic of design, or at least can be exploited by it. For example: advertising designers recognise that humour draws attention, so have employed humour to promote certain messages that they want audiences to attend to; product designers recognise that humour is interpersonal, so capitalise upon humour through the creation of funny objects that people will want to share with one another (e.g. novelty gifts); fashion designers realise that humour forms personal identity so have created clothing to enable people to project their sense of humour to others, see Figure 1.x. (see Chapter 3, Section 3.4 for further discussion of this idea).

Figure 1.x. (Top left) An advertisement for Heinz ‘Hot Ketchup’ by Agency ‘Leo Burnett’ 2004; (top right) the classic and much copied ‘I’m With Stupid’ T-Shirt; (bottom left) a ‘tyre mug’ from ‘XtremeAuto’, suggested as “A great gift for mechanics and car enthusiasts”; and (bottom right) a pair of mugs by Climbergoods — designed to appeal to the humour of indoor rock climbers.

Such an observation provokes a rhetorical question: in an attempt to tame humour, to force it to comply with design logic, what might have been lost to design? A familiarity with humour maintains an important connection to the incongruous and the unexpected. In seeking to eliminate incongruity, unexpectedness, unreliability and other such ‘noise’ from

design methods, for want of the linear, the rational, the predictable (what has been traditionally perceived as the 'scientific'), there has also been a loss, to design, of responsiveness and plasticity when confronted by laughter — when outside of prescriptive channels, humour and laughter have become unfamiliar, uncontrolled, and therefore perceived as threatening. When Modernist designers rejected or abandoned the decorative excesses that were exemplified by Victorian and early 20th Century tastes — e.g. Neo-classicism, Art Nouveau, and Art Deco (Engel, 2015; Seddon, 2007) — humour, characterised by fancifulness and frivolity, was also rejected. The seriousness of much science and the dour aesthetic minimalism of late-Modernist design leave little room for humour. The legacy of desaturated late-Modern humourlessness in design has notably been punctuated with celebrated moments of departure — for example Ettore Sottsass' delightful Memphis furniture, or Milton Glasser's iconic 'Bob Dylan' poster — however, despite their jovial colourfulness, such artefacts are geometric in visual aesthetic and functionalist in operation. However 'wacky' and outlandish Memphis furniture has been perceived to be, the 'Carlton' shelves are structurally sound, on the level, and are capable of supporting and storing material artefacts, and the 'Tahiti' lighting is decidedly functional (see Figure 1.xi, below).

Figure 1.xi. (Left) Sottsass' 'Carlton' bookshelf/room-divider (Sottsass, 1981) and (right) 'Tahiti' table lamp (Sottsass, 1981).

Elsewhere, humorous design is reduced to either cheap gauche novelty, or a knowing in-joke between designers (and those that understand the nuances of design culture in such a way that they can appreciate it ironically), or, occasionally, a synthesis of the two, as in kitsch design.

Humour has been claimed as "evidence of divergent thinking" (Razumnikova, 2020, pp.761), and a sense of humour has been associated with a willingness to take intellectual risks (e.g. Shaheen, 2020, pp.1143). Through a circular reinforcement, with the rise of systemisation in design, accompanying limitation of aesthetic and methodological diversity, and inescapable pressure to service market demands, designers have been less willing (and less able) to take intellectual risks that might afford wider explorations of humorousness in design. This has resulted in further metaphorical calcification of design

practices and less conceptual room to deviate from pervasive and prescriptive methodologies and subject specialisations. As François Burkhart, writing in the mid-1980s about German design schools, has noted "Unconventional thinking, intellectual mobility, and the overall view of the designer […] were lost the moment the design schools established specialised departments" (Burkhardt, 1986, pp.32). The omnipresent po-faced authority of late-Modernist minimalist functionalism that has dominated professional design practices for the last century has reduced capacity for appreciation of humour by (and through) design, which has further reduced capacity for appreciation of humour by design — the result being that, when confronted by unanticipated humor, design (and designers) have interpreted such humour as unfamiliar and problematic[96] (see Chapter 2).

[96] Designerly caution and scepticism concerning humour are explored further in Chapter 3, Section 3.3.2.

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Chapter 2).

A Perceived Problem: Losing Control of Humour — When Design is Laughed *At.*

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"O, I am stabb'd with laughter!"

(Shakespeare, ~1909, *Love's Labours Lost*, Act 5, Scene 2, line 80).

2.1). *When* and *Where* is Design Laughed At?

This chapter concerns moments when design is laughed *at*, rather than *with*. These *laughed at* moments are problematic for design because they manifest challenges to the authority of design thinking and methods, and to the authority of designers as autonomous professionals.

This chapter is divided into two sections. The first section, 'When and Where is Design Laughed *At*?' (2.1), considers the presentation of laughable design to the world, when design is intentionally presented for amusement, entertainment, and humorous ridicule, and is organised initially by 'medium' (literature, museums, exhibitions, archives, websites, applications, etc.), and then by 'manner' (design fails, user fails, outsider design, decontextualisation, recontextualisation, etc.). The second section, 'Three Case Studies' (2.2), describes three case studies that have been purposely selected to illustrate that, at specific moments in design history, innovative design has been met with laughter, and that such laughter was interpreted as derisory. The case studies are: Vivienne Westwood presenting her 'Time Machine' fashion collection on BBC 1's primetime television chat

show ‘Wogan’ in 1988 (2.2.1); Steve Ballmer (then CEO of Microsoft) responding to Steve Jobs’ (then CEO of Apple) presentation of the first Apple iPhone in 2007 (2.2.2); and Ernest L. Ransome presenting his newly-patented ‘cold-twisted rebar’ invention to the Technical Society of the Pacific Coast in 1884 (2.2.3). Importantly for this research, all three case studies detail moments when design innovation was initially laughed at, but came to be assimilated into design status quo — thereby being widely and convincingly vindicated.

At this stage, *how* and *why* people may be laughing at design are not considered in depth (later chapters detail the hows and whys that humour and laughter might manifest as as responses to design). This chapter is instead principally concerned with the *wheres* and the *whens*.

2.1.1). Media.

Consumers of Western media evidently have an appetite for laughing at design. This appetite has been fed in a variety ways: for example through the presentation of *genuine* design artefacts, ‘real’ commercial products, packaging, signs, buildings, posters, adverts, etc., that have been identified as funny and presented as such, and through the *invention* of speculative design artefacts (or their illustration) that embody satirical, critical and/or humorous dimensions. These dimensions typically draw attention to some aspect of people's relationships with design, or with other people (but where this is mediated through designed things), or both. In either case, the modus operandi is the same: audiences are expected to laugh *at* design, *at* designers, and/or *at* design users, whether providers of such media are *curators* of collections of found artefacts or *creators* of collections of imagined ones.

In recent decades this appetite for laughing *at* design has fuelled the publishing of a number of collections of 'funny' design artefacts that have been curated to entertain audiences. Examples include Daniel Wright's 'Patently Silly' (2008), Christopher Cooper's 'Patently Absurd' (2004) and Richard Ross's delightfully titled: 'Patently Ridiculous: Scuba-Diving Dogs, Beerbrellas, Musical Toothpaste, and Other Patented Strokes of Genius' (2005b)[97]. All three of these books have been created by surveying patent office archives to identify examples of legally and legitimately patented designs for what are considered by the authors to be "ridiculous devices" (Cooper, 2004) (see Figure 2.i, below).

[97] Ross has also authored a book entitled: 'Patently Erotic. Tear-away Bras, Couple's Chairs, Vibrating Condoms and Other Patented Strokes of Genius' (Ross, 2005a), very much a companion to Patently Ridiculous and released in the same year. Patently Erotic is pretty funny in places, but a bit off topic to be mentioned above.

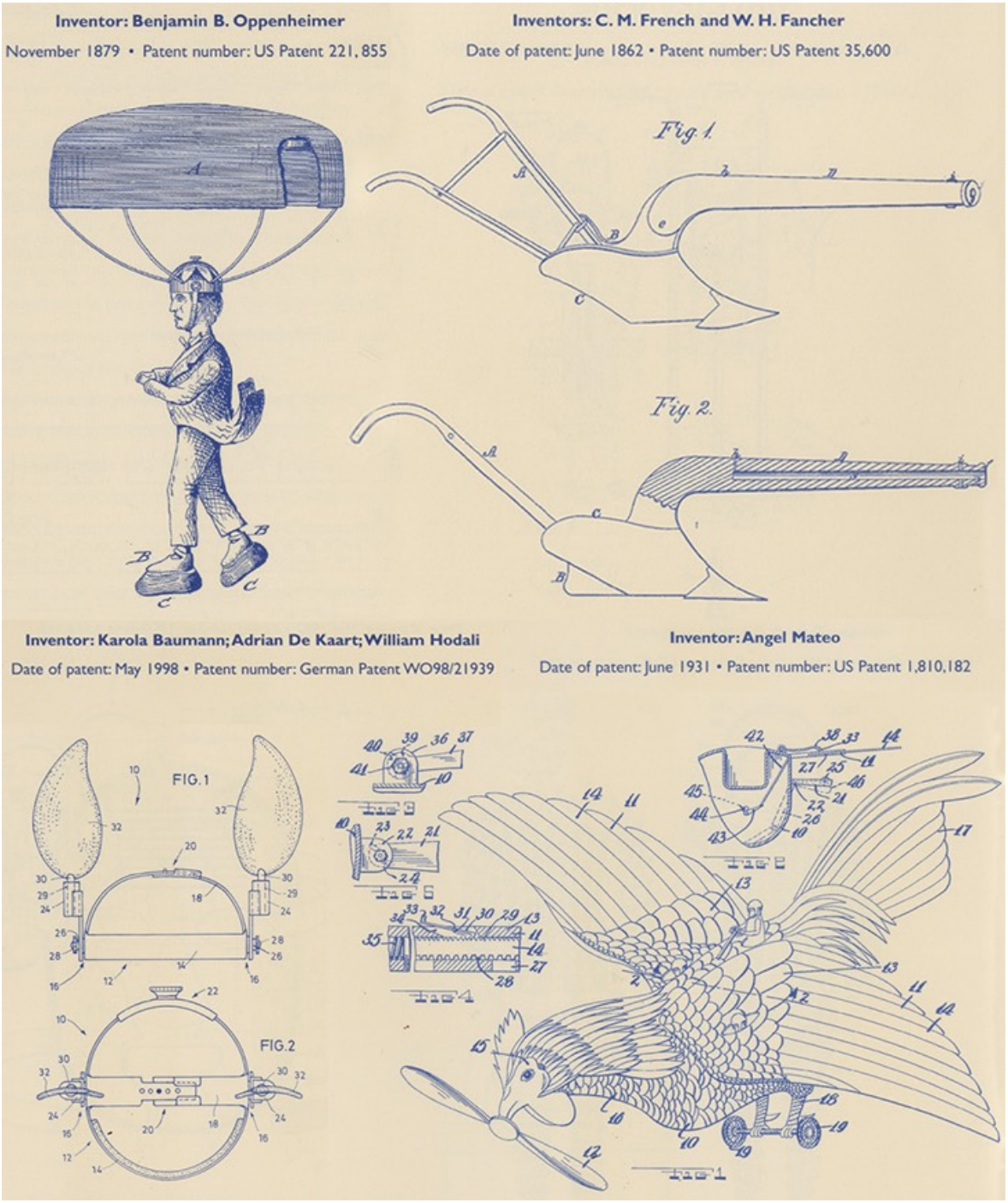

Figure 2.i. Genuine patent drawings for (top left) a ‘parachute hat’ with accompanying bouncy shoes; (top right) a ‘combined plough and gun’; (bottom left) a pair of prosthetic ears for communicating with animals[98]; and (bottom right) an ‘airplane of rooster shape’, all four sourced from Cooper’s ‘Patently Absurd’ (Cooper, 2004, pp.12, 39, 86, and 36 respectively).

[98] Which calls to mind the previously mentioned work of Paul Granjon (Granjon, 2009).

Design that appears to be underperforming in some way, whether due to some shortcoming in the design, or through (mis)use, or appears to be otherwise problematic, may be labeled a 'design fail', to use the vernacular of the Internet. The advent of the Internet has, of course, had profound effects upon humour as it is both enjoyed and understood (see, for example, Salvatore Attardo's 'Humor 2.0: How the Internet Changed Humor', 2024). A number of online media providers have capitalise upon audience appetites for clicking upon hyperlinks to view and share such content (and a host of other 'fail-oriented[99]' images and video). For example, the website failblog.com receives, curates, and presents design fails, alongside other forms of fails too. Failblog has proved popular enough to prompt the authoring of a curated collection of design fails in the form a book entitled 'Fail Nation: A Visual Romp Through the World of Epic Fails' (Vatomsky & Huh, 2009). This book orchestrates a menagerie of design fails that have been drawn from Failblog's archives, presenting them through the narrative device of a tourist visiting a fictitious realm known as 'Fail Nation'. In a similar vein to Vatomsky & Huh's 'Fail Nation', other popular meme-based entertainment websites such as *Buzzfeed*, *Cheezburger*, and *Bored Panda[100]* have trawled the "memosphere" (Hegel, 2017; Tanoukhi in Albright, 2024) of cyberspace and dedicated web-pages to hundreds of so-called 'design fails'. In this context, design may be interpreted as failing for a number of reasons, tending to be attributed to failure on the part of the designer(s); the design itself, or its user(s): the results being perceived to be humorous. These web-based fail-peddlers[101] are accompanied by

[99] People falling over, sporting accidents, typos with consequences, people not doing their jobs properly, and so on…

[100] https://www.buzzfeed.com/uk, https://www.cheezburger.com, https://www.boredpanda.com

[101] I don't mean this in a derogatory sense, just a statement of fact — these commercial entities are capitalising upon an audience want for media representations of 'failure' that they find to be funny, entertaining and sharable.

similar provisions in mobile applications such as Pinterest and ‘Instagram’ that feature accounts such as ‘@uglydesign’ (Nyffenegger & Mathys, 2021) and ‘@designfailures’.

Design fails have been recognised for their cultural importance at an institutional level through the existence of organisations such as ‘The Museum of Failure’ — part online archive, part internationally touring exhibition[102]. The museum “aims to stimulate productive discussion about failure and inspire[s] us to take meaningful risks”, providing “unique insight into the tricky business of innovation and new product development” for the reason that “all progress, not only technological progress, is built on learning from past failures and mistakes” (Museum of Failure, 2024). That said, the exhibition artefacts are presented in a humorous manner and finding aspects of the design collection humorous is a key component of the audience experience: see figure 2.ii, below.

[102] Recent exhibitions have included: Washington DC and New York, 2023; Calgary, 2022; Taipei, 2022; Minneapolis, 2021; Saint-Étienne, 2020; Paris, 2019; Shanghai 2019; Helsingborg, 2018; Los Angeles, 2018; and Helsingborg, 2017.

Figure 2.ii. A collection of design artefacts from the Museum of Failure: (top) the ‘Uroclub’ (2008), a golf club with integral urine reservoir and ‘privacy shield’ for those that are caught far from a toilet when out on a golf course; (bottom left) Nike’s ‘Magneto’ sunglasses (1995), which stay in place by way of magnets. As people’s faces are not magnetic, magnets must be glued to the skin before the sunglasses can be worn; (bottom centre) the Ford Edsel (1957), over-marketed, underwhelming, and considered ugly at the time of release; and (bottom right) a Facit calculating machine that now exemplifies lack of investment in design research, development, and innovation. The machine calculated accurately, but Facit quickly went bankrupt upon the release of Japanese electronic calculators in the early 1970s — such devices offering many more arithmetic functions and being a tiny fraction of the size and weight (i.e. ‘pocket sized’).

Alongside collections of ‘real’ designed things that have been created in the world, such as those presented by the museum of Failure in Figure 2.ii, sit more whimsical and imaginary design collections. Cartoon illustrators such as Heath Robinson (Robinson, 1965, 1975, 1977, 1979) and Rube Goldberg (Goldberg, 1959, Goldberg & Garner, 1983; Keller, 1979) have enjoyed long careers imagining fictional contraptions. These imagined assemblages are caricatures of designed systems and apparatus in the real world: their precariousness and impracticalities being exaggerated for comic effect, see Figures 2.iii and 2.iv.

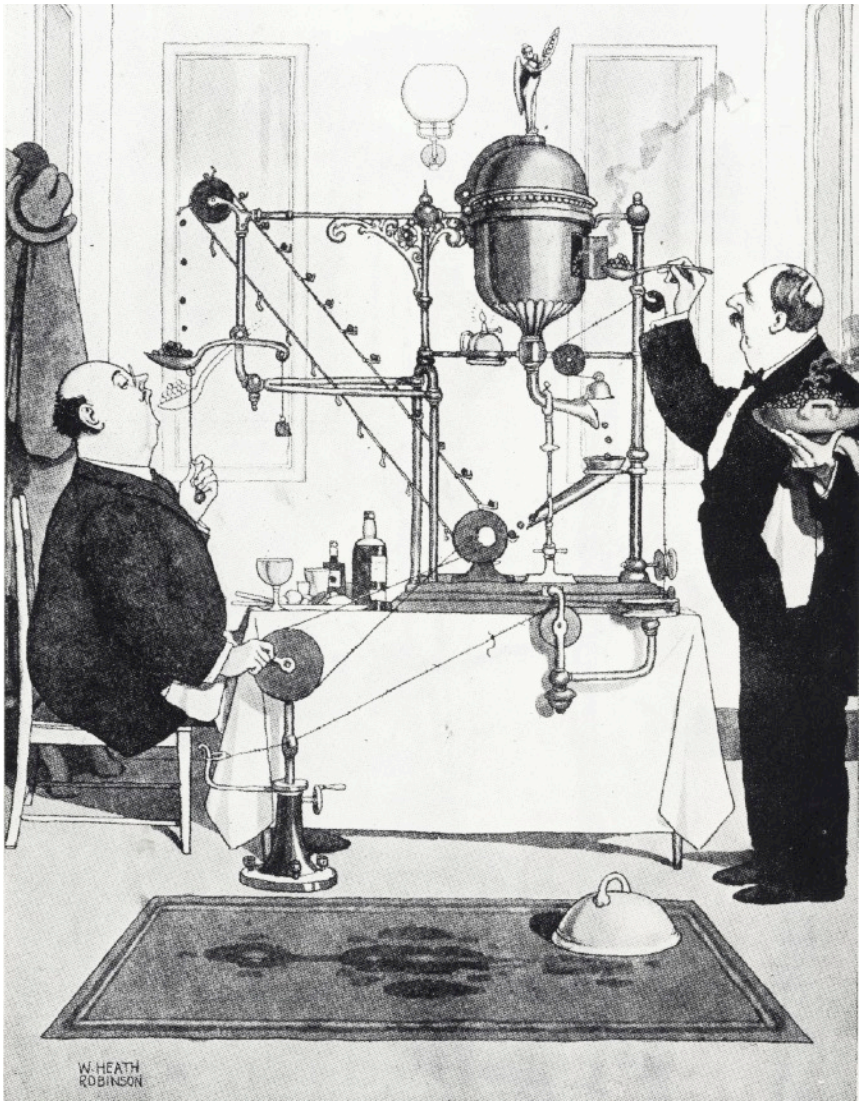

Figure 2.iii. ‘An Interesting and Elegant Apparatus Designed to Overcome Once and for all the Difficulties of Conveying Green Peas to the Mouth’ (Robinson, 1975, pp.7).

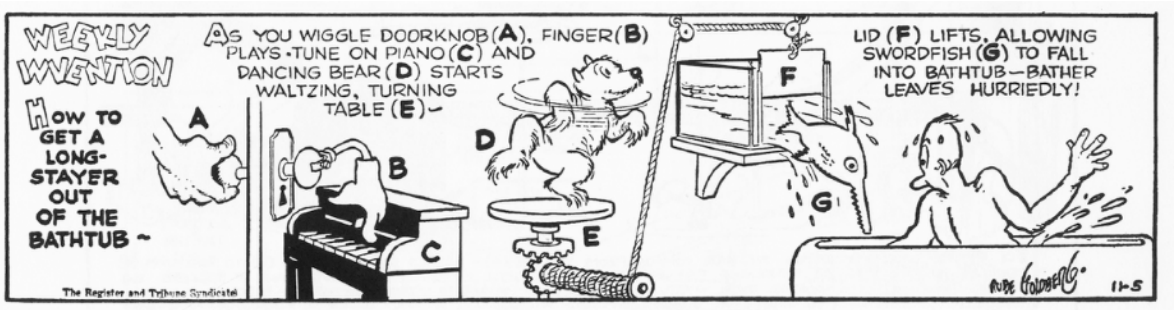

Figure 2.iv ‘How to Get a Long-Stayer Out of a Bath Tub’ (Goldberg & Garner, 1983, pp.69).

Robinson’s ‘Pea Apparatus’ is humorous for the amount of designerly and mechanical effort that goes into *delivering* the peas, when the butler who is filling the pea-hopper could just as easily feed the diner, were he incapable of doing so himself (which he does not appear to be). The cloche on the floor is an interesting detail: highlighting that the apparatus makes no accommodation for the butler whatsoever. The design does not feature a shelf nor hanger for the cloche so the butler is forced to place it on the floor and retrieve it later. Goldberg’s assemblage is even more ridiculous: requiring the upkeep of a bear and a swordfish as living components of the design and the ‘long-stayer’ to enter the bath in presumed knowledge of both. The illustrations of Robinson, Goldberg, and others foreshadow chindōgu by many decades and forefront many issues later addressed through critical, speculative, and other discursive design: e.g. post-optimality (Dunne, 1999; Malpass, 2012). Goldberg’s 1959 book even references the problem solving models of design, being entitled ‘*How to Remove Cotton from a Bottle of Aspirin and Other Problems Solved*’ (Goldberg, 1959).

UK based adult comic ‘Viz’ regularly prints satirical advertisements that have been created for comic effect. These spoof adverts promote fictitious products that perform a

similar humorous role to that of Robinson and Goldberg's illustrations, see Figure 2.v. and 2.vi.

Figure 2.v. Viz's spoof advert for a 'Titfer[103] Tilt' electric hat tilting machine (Vis, 2003, pp.13).

[103] The word 'titfer' is derived from an expression in the London dialectical system known as Cockney rhyming slang: 'tit for tat' meaning *hat* and shortened to 'titfer'.

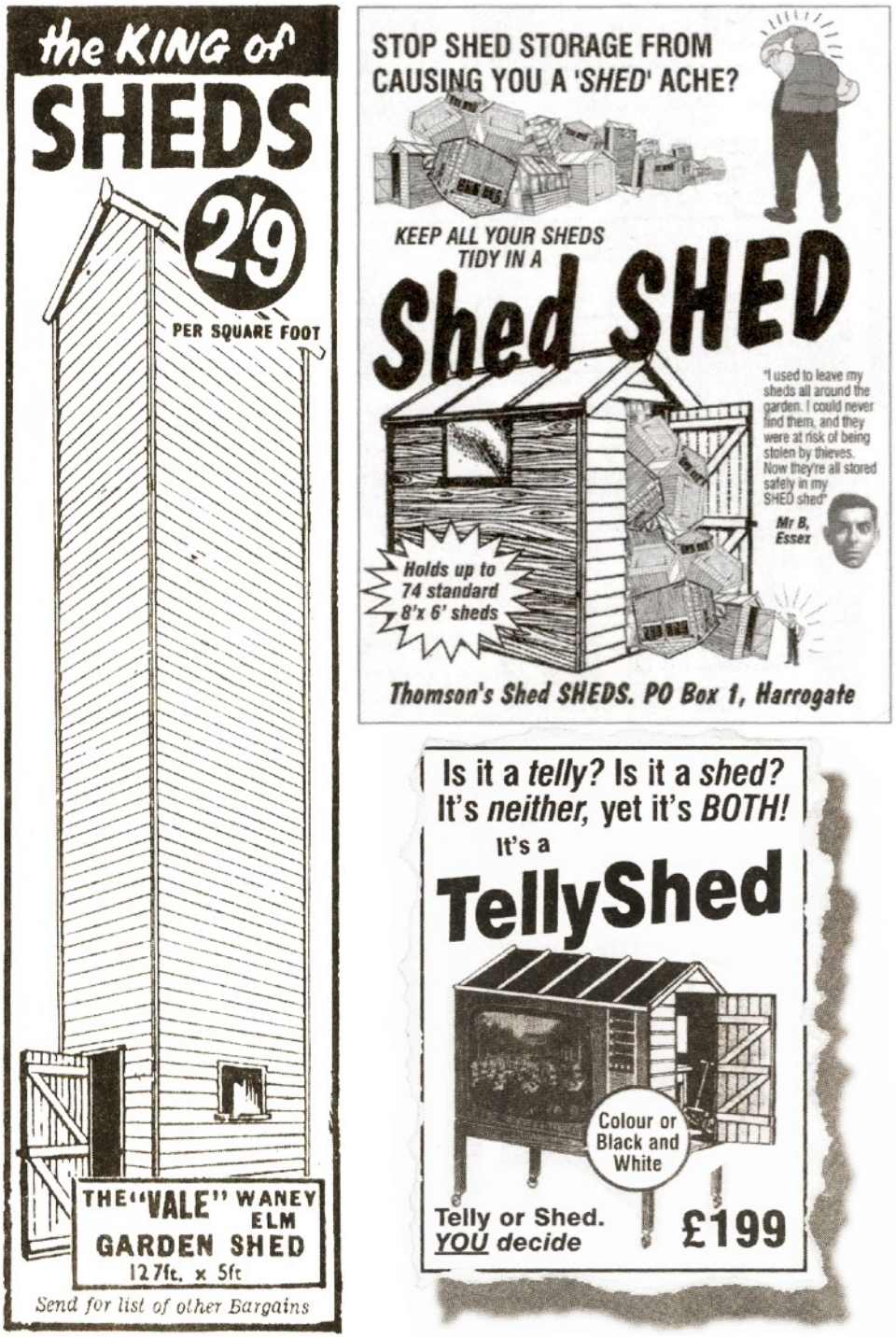

Figure 2.vi. Three Viz adverts for sheds that draw attention to design's ambitions to satisfy user desires in terms of status — 'bigger is better' (the King of Sheds); efficiency and ordering (the Shed Shed); and multi functionality (the Telly-Shed) (Vis, 2003, pp.57, 84, and 24 respectively).

Materialised equivalents to the above illustrations have been created by people[104] such as Jeff Wysaski who began his 'Obvious Plant' project in 2015. Wysaski creates high fidelity speculative toys (and occasionally books and other media) that parody genuine design products for comic effect, see Figure 2.vii.

Figure 2.vii. Obvious Plant's 'I would Kill for You' toy knife (2020) and 'Funeral Kazoo' (2019).

The illustrations of Robinson, Goldberg, and the creatives of Viz, and the objects of Obvious Plant and others, are interesting for this research because audiences are expected to laugh *with* these creators but *at* design (and by extension designers) in terms of its unnecessary complexity, deviation from principles of efficiency, and/or at design users in terms of their pomposity and/or trust in design that appears to be precarious, unreliable,

[104]See also Dan Polydoris (Death by Toys); Sucklord; Airmaxanimated; Retrogimmick; and myself.

and/or against their best interests, or somehow otherwise inappropriate. In these cases this happens *through* design — design exercised to laugh at design.

Film, television (and radio) have a part to play also. Comedic productions, of course, necessarily employ design in terms of the planning, writing, managing, sets, props, costumes, hair and make-up, performance, lighting, recording, editing, packaging, and broadcast/distribution — to name but a few very obvious elements that contribute to the production of such media. Design is inescapable, as previously discussed (Chapter 1, Section 1.1.3). That said, accounting for the breadth of 'actors' at play in the network of designed things who perform a role in the creation of film and video is not the focus here. Instead, the following text considers moments in film and television culture where design itself is the butt of the joke: the *object* of ridicule rather than just an enabler of, and vehicle for, humour. For example, popular long-running animated sit-com 'The Simpsons' has made fun of Apple's 1993 Newton PDA[105]. The Newton was the first commercial hand-held device to be able to accept handwritten text inputs, but its poor reliability was present in the public imagination and was a ripe target for The Simpsons writing (see Figure 2.viii).

[105] Released in 1993, the Newton was Apple's personal digital assistant (PDA), essentially a precursor to the smartphone: a device that enabled its user to manage a calendar, address book, and digital notes. Not to be confused with contemporary personal digital assistants (also PDAs) such as Apple's 'Siri' or Amazon's 'Alexa'.

Figure 2.viii. The Simpsons pokes fun at Apple's Newton PDA[106] (The Simpsons, S06:E08, 'Lisa on Ice', 1994).

In a similar vein, when scriptwriter John Sullivan was choosing a trade-vehicle for the Trotter Brothers, two central characters in long-running BBC sit-com 'Only Fools and Horses' (1981-1991), he decided upon the now-iconic, three-wheeled, 700cc, 'Regal Supervan III' (see Figure 2.ix.) that was produced by British vehicle manufacturer 'Reliant' between 1963 and 1972 (National Motor Museum, 2024). Described as a "genius idea" by show-star David Jason (Jason, 2023), this decision would go on to immortalise the Regal as a comic vehicle in the minds of much of the television viewing British public.

[106] Two bully's, characters Kearney Zzyzwicz and Dolph Starbeam, intend to beat up a third character, Martin Prince, for a comment that he made in support of his school Principle. They try to create a reminder on Dolph's Newton but the device misinterprets the text input and instead Kearney throws the Newton at Martin with a dismissive 'Bah!' (The Simpsons, S06:E08, 'Lisa on Ice', 1994).

Figure 2.ix. The Trotter Brothers' yellow Reliant Regal, and actors Buster Merryfield, David Jason, and Nicholas Lyndhurst (from left to right) playing the characters Uncle Albert, Derek 'Del Boy' Trotter, and Rodney Trotter, respectively.

The decision to place the television show's characters into a dirty and dilapidated sunshine-yellow Regal afforded great potential for comic affect, being in many ways reminiscent of the circus 'clown car' as described by Bruce Feiler (Feiler, 2009). The vehicle's 'missing' forth wheel feels unsettling and is incongruous with utility vehicles of similar size, whilst being mildly reminiscent of a wheel-barrow. The low status and seeming physical precariousness of the Trotter's Regal seemed to map metaphorically onto the characters themselves: unfit for purpose, but bold and characterful nonetheless, and the precariousness of the three-wheeler a metaphor for both the socio-economic precariousness of the Trotter Brothers, always scheming to make ends meet[107], and the way in which the comedic tensions of the show's plots played out: something perpetually 'just about to go wrong'.

[107] I wonder whether the name 'Trotter' was chosen because the trotters are parts of a butchered animal that are typically unpopular with UK consumers and are likely to be subject to disposal, pet feed, or industrial rendering rather than enjoyed as part of British cuisine. Trotters being 'rejects' in both cases. I haven't been able to confirm this possibility either way.

The examples throughout Section 2.1.1 present an infinitesimally small percentage of the instances of people laughing at design. However, they are offered here to give insight into the breadth of contemporary and historical humour for which design is a target. Given the pervasiveness of 'laughing at design' as a cross-media theme, designers, and design audiences, are regularly exposed to various and varied instances of design being laughed *at*. Designers are therefore aware that there are inherent risks involved in exposing their practice to the public, and that their design, and design practices, may be subject to derisory laughter.

2.1.2). Designer Fails and Design Fails.

> "The designer of the USB-stick died recently — their funeral was last week. The coffin was lowered into the ground, lifted back out, flipped over, and then lowered back into the ground again."
>
> (Anon).

When design errs, the results can range from inconvenient to catastrophic: from a leaking carton of milk to the sinking of the Titanic[108]. Where there is disaster, or even the potential for disaster - there is the potential for humour to occur, often in the form of schadenfreude[109]. Design makes promises to solve problems in a logical and rational manner. When this process goes awry, whether by fault, negligence, or ignorance on the

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[108] 'Successful' design can also be interpreted as disastrous, of course. One need only look to the human and environmental damage inflicted by design 'successes' hailing from the petrochemical and the arms industries: from vehicle exhaust, to single use plastic straws, to the atomic bomb.

[109] A German word for "an emotion defined as deriving pleasure from another's misfortune" (van Dijk & Ouwerkerk, 2014). Schadenfreude is explored with reference to the 'Benign Violation Theory of Humour' (McGraw & Warren, 2010, 2015) and the 'Superiority/Aggression Theories of Humour' in Chapter 4.

part the designer(s), or the user(s), or both, an incongruous situation emerges in relation to this logic and this may lead to humour. The remainder of this section identifies and presents examples of such moments and gathers them together into broad groups centred around the manner of what is being found humorous: designer fails and design fails; user fails; 'outsider design'; recontextualisation; decontextualisation; similitude; and process/ practice.

Design fails arise from an error in analysis and/or anticipation: the designer, or design team, design and produce a piece of design, but do not notice something erroneous about it before it is deployed (lack of analysis) or, once deployed, do not predict how their design might be (mis)used, or (mis)interpreted (lack of anticipation). To address this issue, design methods, as described in training lectures and textbooks, typically involve some form of reflective test phase(s) where the design in question is scrutinised for potential failures. However, insufficient testing and reflection (whether due to negligence or otherwise) results in design being released into the metaphorical 'wild' of user-space and then failing in some way.

A certain amount of what professional designers do requires an active and honed imagination. Whether understanding a problem and imagining possible solutions, looking at a plain surface and imagining possible decoration, or musing over an imaginary user interacting with an imagined thing, or an imaginary audience viewing it. The process of 'realising[110] imagination' is, in essence, a rather succinct definition for what designers do. This is not imagination for its own sake, for the experiential pleasure that imagination may bring, but the modelling of possible futures. Hence why anticipation is important: a

[110] Realising as in *making 'real'*, not *becoming aware of*.

competent designer imagines possible futures and designs to encourage, accommodate, or avoid them — capitalising upon either case. However, as Chapter 1, and the examples below, demonstrate: this process not straightforward or guaranteed and some designers have missed things that seem obvious to others, see Figures 2.x, 2.xi, and 2.xii.

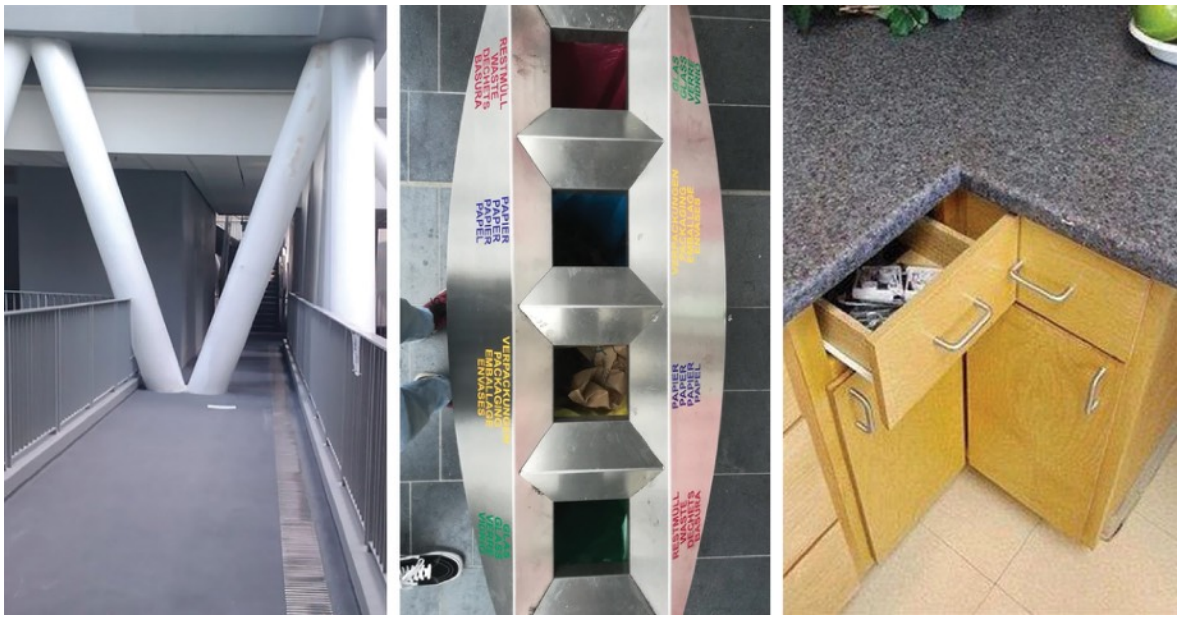

Figure 2.x. Three material ‘design fails’: (left) presumably vital structural supports interpenetrate a pedestrian walkway; (centre) an array of waste bins — they hold rubbish, but are labeled in such a way that the ‘left’ labels counter the instructions of the ‘right’ labels and vice-versa; and (right) corner drawers that block each other.

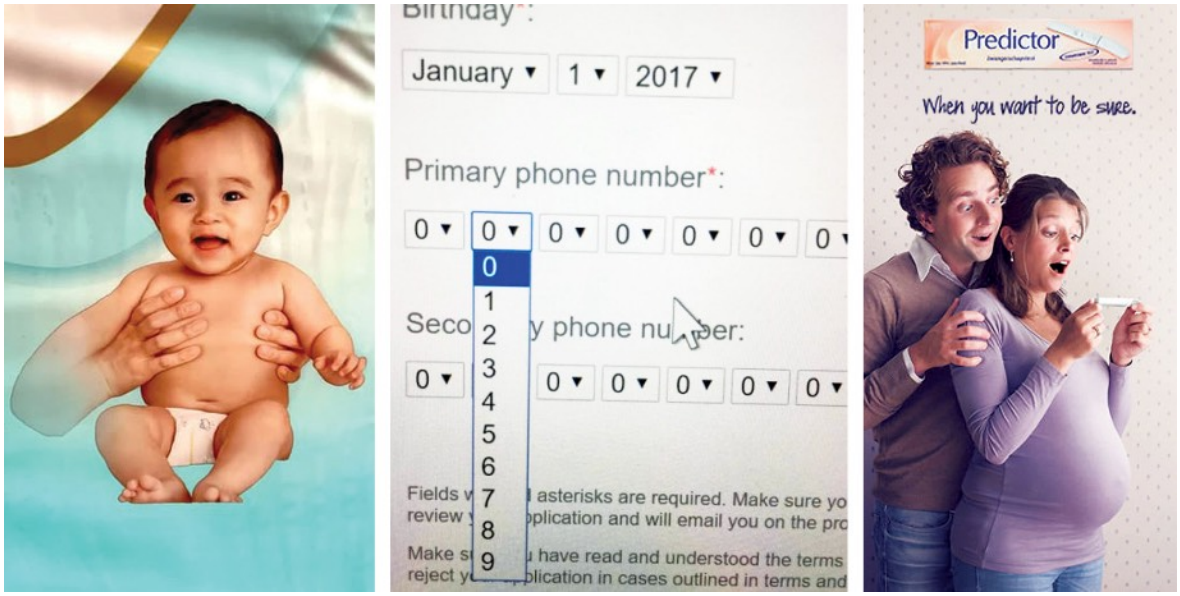

Figure 2.xi. Design fails are not only material, as the examples in Figure 2.x are. Fails can be *visual* as demonstrated by the confusing photo-editing of this baby (left); *interactional* (centre), rather than simply enabling keyboard input into a text box, this UX/UI[111] designer/software engineer has decided that twenty or more drop-down menus are a better option; and *conceptual* (right), this advert for a home pregnancy test is touted as a design fail because the mother-to-be is evidently in her final trimester and long past requiring a pregnancy test[112].

The pregnancy test advert in presented in Figure 2.xi raises the question of audience interpretation. Humorous design fails often emerge when audiences interpret design in a different manner than the designer intended, e.g. the examples in Figure 2.xii.

[111] UX/UI being a popular shorthand for 'user experience/user interface design(er)'.

[112] However, I suspect that this advert is making the point that the 'Predictor' test is so reliable that this couple trust it above all of their other senses, including common sense. I don't think that it's a fail, I think it's a joke. I have included this example to demonstrate that the interpretation and categorisation of design fails is subjective and contingent and because this is a popular example of a design fail that might not actually be one.

Figure 2.xii. (Top left) One might see a *number one* shaped cake with the name 'Emma' written upon it (tilt head to the left), or a *penis and testicles* shaped cake with the word 'WEED' written on it (tilt head to the right); (top right) according to this advertisement infographic, Thompson Reuters' core values appear to sit *outside* the principles of trust, partnership, innovation, and performance; (bottom left) one might read the phrase 'Non stop action and excitement' in this NBL advertisement, as the designer intended, or 'Non action and stop excitement'; (bottom right) are rooms 201-216 to the left, or to the right? Or rooms 217-226 for that matter?

Whilst the examples in Figures 2.x, 2.xi, and 2.xii might be professionally embarrassing for the designers responsible, potentially damaging for commercial 'brand image', and both inconvenient and expensive to address, other fails that are presented as funny are potentially highly dangerous, see Figure 2.xiii. The more dangerous such fails appear, the more humorous and 'shareable' they appear to be found. Various humour

theories have considered this correlation, and the complex relationships between threat and humour (these are explored in Chapter 4).

Figure 2.xiii. Three potentially deadly design fails: (left) a geometric patterned carpet confuses the edges of some stairs; (centre) a yellow and black brand identity is unthinkingly applied to cans of insect poison and cooking oil spray — affording an easy and dangerous mix-up; and (right) a play-ground slide that splits into three halfway through the descent!

Design is also presented as funny for reasons of aesthetic taste. When design outcomes deviate from generally recognised and accepted norms (whatever they may be) they can be the subject of derisory humour or found funny for their incongruity (see Figure.2.xiv.).

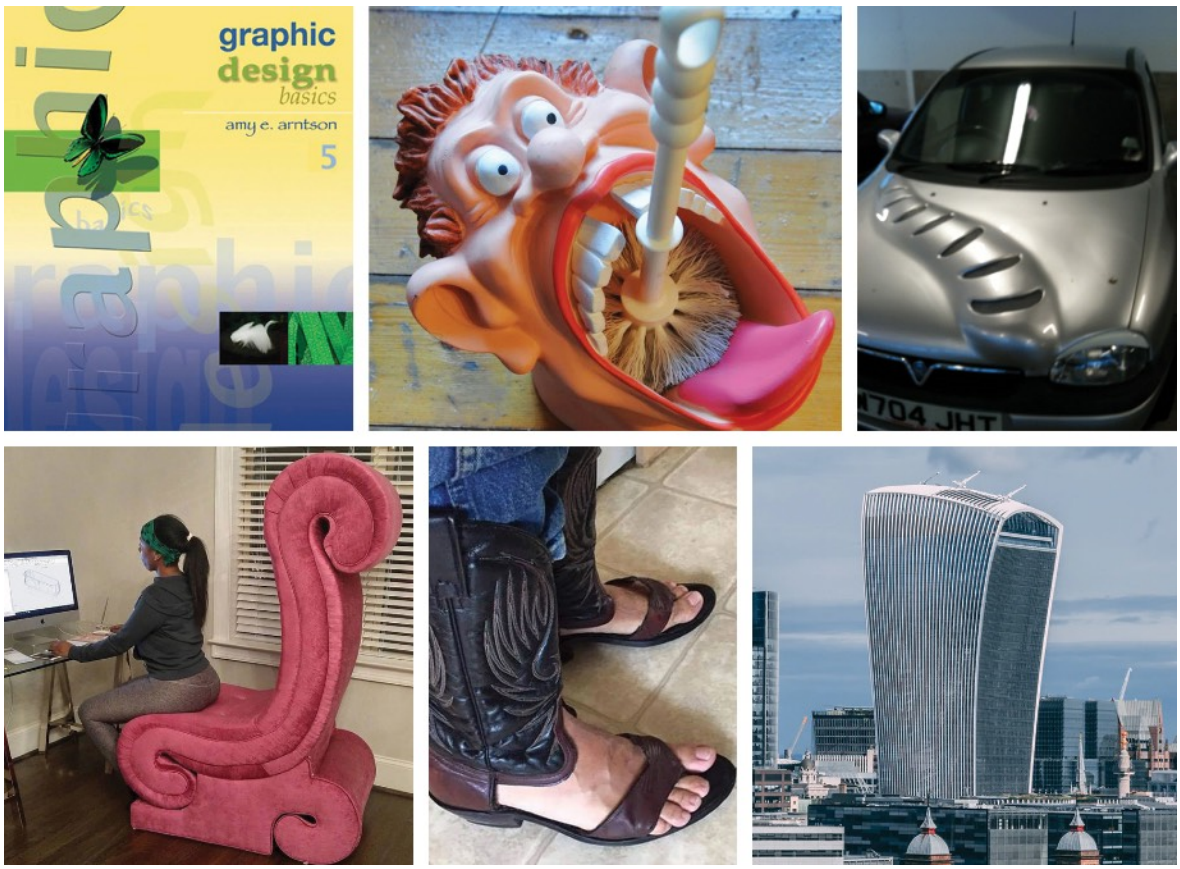

Figure 2.xiv. (Top left) The cover of Amy E. Arntson's 'Graphic Design Basics' (Arntson, 2006) is widely referred to as an example of graphic design that is so aesthetically distasteful that it is found funny, the humour being heightened by the irony that this is the cover of a graphic design textbook; (top centre) a toilet brush holder in the form of a caricature face; (top right) a custom car-bonnet modification (author's own image[113]); (bottom left) an oversized chair as a sort of Disney princess parody; (bottom centre) an amalgam of leather cowboy boots and leather sandals; (bottom right) London's 'Walkie Talkie' tower, designed by Rafael Viñoly, is a caricature of the skyscrapers that surround it, and winner of the 2015 'Carbuncle Cup[114]' (Wainwright, 2015).

[113] But not of the author's own car!

[114] 'Building Design' magazine's award for the worst British building completed each year (Wainwright, 2015).

Sometimes design fails are more subtle: for example, the user phenomenon of ‘desire paths’ mentioned in Chapter 1. Within design discourse Naomi Smith and Peter Walters conceive of desire paths as acts of resistance against the tyranny of “defensive architecture” (Smith & Walters, 2017, pp.2980) and Barbara Leckie has considered them acts of social protest (Leckie, 2021). Outside of such discussions, desire paths can often be found being described as funny because they represent a failure on the part of the designer to either enforce their designerly will upon design users, or to effectively anticipate the agency of such users and account for it in their design.

Design, and designers, are not just subject to humour in terms of the outputs of their design practices — designed *things* — but also for professional methods, processes, and the nature of design practices themselves. Figure 2.xv presents an example of the famous ‘Tree Swing’ or ‘Tire Swing’ cartoons that emerged in the 1960s and have persisted and been reiterated ever since. The author of this particular example remains a mystery, as do the exact origins of these particular cartoons. Whereas commercial design promises to deliver effective solutions to pressing problems, such cartoons illustrate the opposite for comic effect: commercial industrial and product design being represented as illogical and incompetent.

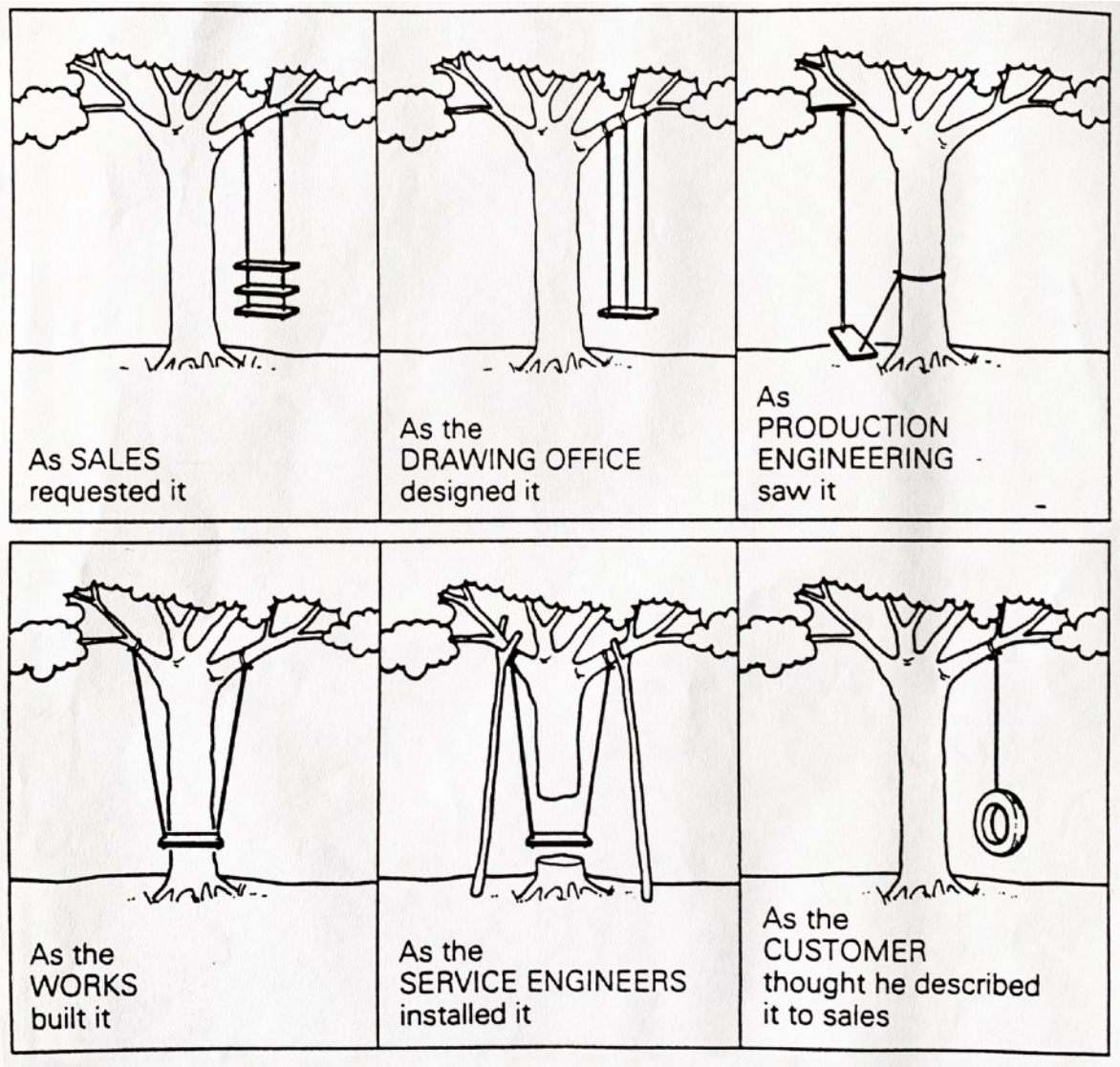

Figure 2.xv. A ‘Tree Swing’ or ‘Tire Swing’ cartoon (Anon).

At other times professional designers themselves generate and share self-deprecating humour concerning the nature of their design practices. Figure 2.xvi. has been shared by several popular Instagram accounts that are authored by designers with designer audiences in mind: a sort of self-reflective rhetorical humour.

Figure 2.xvi. Three memes that pokes fun at (left) graphic design perspectives (Anon); (centre) professional life (Anon); and (right) professional practices (Anon).

Other widely-circulated gelastic memes underline the frivolity of design (i.e. its preoccupation with mercurial aesthetic trends) and the resources that design demands and squanders in facilitating the tastes and desires of consumers and consumerism — resources that, arguably, could be put to better use in addressing increasingly pressing problems such as international and domestic conflicts and the climate crisis (see Figure 2.xvii, below).

Figure 2.xvii. A meme depicts ‘the world on fire’ whilst a designer distracts from the important issues at hand (Anon).

2.1.3). User fails.

"Designing bear-proof trash cans can be very hard… There will always be a significant overlap between the smartest bears, and the dumbest people" (Anon).

Flicking on a light switch, reading a clock, and a plethora of other quotidian interactions with design all qualify as moments of *use*. Such interactions can be quite prescriptive, with limited options for the user (do *this*, do *that*, in *this* order) and little necessity for designerly decision making. However, other designed things are rather more *open*, being designed to enable users to make and realise design decisions of their own, whether for pragmatic or creative reasons. Chapter One cited the Interaction Design Foundation in their claim that "the user buys the product to solve a real world problem for themselves." (IDF, 2018) and a great many design artefacts, from chisels, to bicycles, to apps, to cameras exist to do this. Despite the opening gambit of Don Norman's influential book 'The Design of Everyday Things' — the assertion that 'there is no human error, only bad design' (Norman, 2000) — sometimes, it does appear that competently designed things have been misused by users that one might characterise as incompetent. In such circumstances, there is a clear potential for humour. Again, schadenfreude feels like an appropriate label for this kind of humour: audiences laughing at the incompetence, errors, and/or shortcomings of others, especially in cases that might lead to injury, social embarrassment, or some other potential form of suffering (see Figure 2.xix.).

Figure 2.xix. (Top left) Cable conduit deployed in a wildly incorrect manner; (top centre) a front door fitted upside down; (right) a toilet installed before the critical ‘door test’ — the workaround being to remove part of the door to allow it to pass the toilet (the hole will likely impact privacy when the door is shut; (bottom left) a satellite dish installed through a ladder, instead of above it; (bottom centre) eyebrows haphazardly applied with a microblade device.

Such user fails underline the complexity of design definitions and interactions described in Chapter 1: everyone is a designer (making designerly decisions every day — what to wear, do, fix, say, etc.); but everyone is also a user (everyone uses designed things, all the time) therefore all professional designers are *also* users.

2.1.4). ‘Outsider Design’: Jugaad, Kludges, ‘Redneck Engineering’ and ‘Hillbilly Design’.

Innovative design thinking, as embodied in design artefacts, is especially vulnerable to being subject to derisory laughter when it exists outside of the boundaries of commercial and academic organisations. ‘Outsider art’ has been defined as “the work of artists who are disenfranchised from the art world, that is, artists who have been called ‘outsiders’. Typically, these ‘outsider artists’ are untrained and untutored, most of them are poor” (Prinz, 2017, pp.250). In looking for a comparator in design — design that takes place outside of the boundaries of commercial and academic organisations — this section considers jugaad, kludges, so-called ‘redneck design/engineering’ and so-called ‘hillbilly design/engineering’.

Indian ‘Jugaad’ design has been unfairly subject to derisory humour. Searches for ‘funny design’ quickly turn up examples of jugaad — a Hindi word that has been variously translated as “hack” (2019, Rai, pp.ix); “put together” (Prakash et al, 2020, pp.312); “making do” or “finding a smart solution” (Dru, 2015, pp.48); “an improvised solution born from ingenuity and cleverness” (De Vita, 2012); and “the art of overcoming harsh constraints by improvising an effective solution using limited resources” (Prabhu & Jain, 2015, pp.847). Jugaad is as a colloquial term that originally referred to “jalopies” (Singh, Gupta & Mondal, 2012, pp.88) — rather ramshackle, hybrid motor vehicles from the Punjab region of India that had been repeatedly and unconventionally repaired and/or substantially adapted with non-standard or homemade parts such as “water pumps for engines, bullock cart bodies for chassis, and the like” (Prabhu, J. & Jain, 2015, pp.846). Some such vehicles are scratch built. For examples see Figure 2.xx.

Figure 2.xx. Four jugaad vehicles: (top left) built from the front of a tuk-tuk (auto-rickshaw), a plastic chair, a steel chassis, and a small motor featuring a plastic drink bottle fuel tank; (top right and bottom left) two ‘trikes’ that meld motor bike (for power and piloting) and cart (for cargo), one carrying passengers, the other carrying materials; a car chassis that employs a repurposed engine and wooden parts.

The idea of jugaad extends from vehicles to other situations characterised by limited resources and opportunities for lateral thinking, see Figure 2.xxi, below.

Figure 2.xxi. A selection of smaller jugaad interventions: (left) a sandal used as a mobile telephone holder; (centre) a clothes iron supported by books used as a cooking surface; and (right) a plastic bottle used as a switch housing (probably for an electric light).

In academic discourses concerning design, innovation, management, economics, anthropology, psychology, globalisation, creativity, and entrepreneurship, jugaad is celebrated for providing shining examples of triumphs of human ingenuity and "frugal innovation" (Rai, 2019) in the face of limited resources and "infrastructural deficit" (Sharma, 2009, pp.147). In these academic discourses, jugaad is not laughed at. A growing body of academic analysis of jugaad has demonstrated two aims: to analyse jugaad as a design method (e.g. see Prakash et al, 2020), and to consider ways in which 'jugaad thinking', as design method, may be (or has been) of benefit beyond the personal circumstances of the creators and users of jugaad artefacts, to "social ventures, large Indian firms, multinationals, and the government" (Prabhu & Jain, 2015, pp.844), (e.g. see Ananthram & Chan, 2019; Bhattacharya & Bhattacharya, 2020), often addressing both (e.g. see Rai, 2019; Singh, Gupta & Mondal, 2012).

The conceptual and contextual drivers for jugaad to emerge have been presented through the use of visual illustrations, such as that shown in Figure 2.xxii, and the jugaad method for problem solving has been refined and reduced to: "(i) yearning for the solution/ product, (ii) experimentation and learning, (iii) exploring options, and (iv) choosing the most suitable solution" (Prakash et al, 2020, pp.313) or the more romantic "six principles: seek opportunity in adversity, do more with less, think and act flexibly, keep it simple, include the margin, and follow your heart" De Vita, 2012).

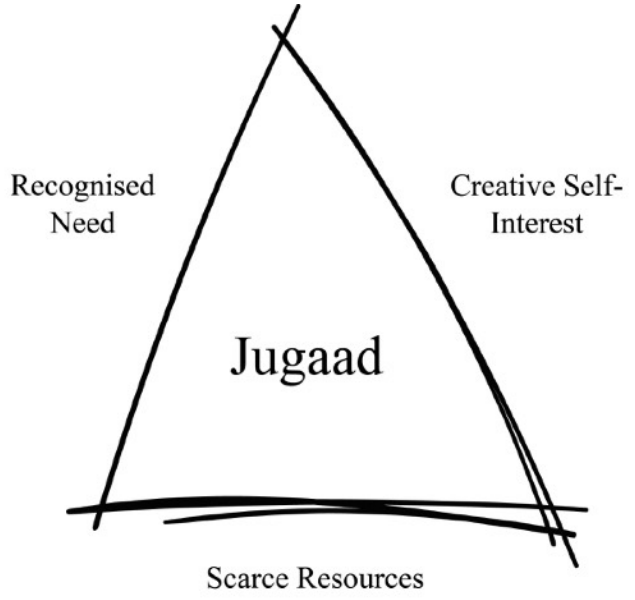

Figure 2.xxii. An illustration of a 'Jugaad Triangle' (author's version of a diagram by Prakash, Chatterjee, Srivastava, and Chauhan (Prakash et al, 2020, pp.313).

Whilst such contexts and methods are discussed with reference to design objects like the vehicles in Figure 2.xx. and the interventions in Figure 2.xxi, they are also embodied in successful commercial products, for example the oft cited 'Mitti Cool' clay

refrigerator (see Ananthram & Chan, 2019, pp.1034; Prabhu & Jain, 2015, pp.846), see Figure 2.xxiii.

Figure 2.xxiii. The Mitti Cool refrigerator (two different models).

Created by Mansukhbhai Prajapati, a rural "grassroots innovator from a village in Gujarat" (Prabhu & Jain, 2015, pp.846), the Mitti Cool refrigerator is ceramic, apart from the door and the tap. It requires no electricity, so is particularly suited for rural settings where electricity may be difficult or impossible to access, unreliable, and/or expensive. The device employs internal evaporation for cooling, only requiring the addition of water to work (which can be removed by way of the tap). It would be fair to say that the Mitti Cool cannot compete with electrical fridges in terms of temperature control. However, having no complex working parts (just a passive form), exceptional longevity, low purchase cost, practically non-existent maintenance costs, and with far less environmental impact, the Mitti Cool prevails in other areas.

Jugaad solutions are not immune to criticism. The designs presented in Figures 2.xx and 2.xxi demonstrate that jugaad solutions are realised by compromising, often considerably, upon standards of physical safety, quality and efficiency, legal vulnerability, design aesthetics, and ecological friendliness when evaluated against comparable mass-manufactured commercial design artefacts (to paraphrase Prakash et al, 2020, pp.314).

Jugaad is considered in this chapter because it is laughed at. Whilst the academic discussion of jugaad is broadly celebratory, this is not the case in other contexts. Many of the media identified in Section 2.1.1 have been employed to circulate images and video of jugaad design as objects of humour, even ridicule. Whilst some audiences may be laughing at the appearance, or imagined use, of jugaad design — either or both of which they perceived to be incongruous, and other audiences may be be marvelling at the ingenuity that jugaad embodies, it is also not hard to imagine a more sinister dimension of schadenfreude with post-colonial overtones: people laughing at the struggle and misfortune of those perceived to be less fortunate than themselves. Little academic analysis or interpretation appears to have been explicitly made with reference to post-colonial perspectives and sensitivities towards jugaad[115].

Jugaad is "similar to indigenous concepts in other countries such as *gambiarra* or *jeitinho* in Brazil, *kanju* in parts of Africa, *jua kali* in Kenya, *jiejian chuangxin* in China, *DIY (do-it-yourself)* in the United States [and the UK], and *Systeme D* in France" (Prabhu & Jain, 2015, pp.847). Like jugaad, the design artefacts associated with Prabhu and Jain's

[115] but jugaad methods have been considered as a strategy for writing from postcolonial perspectives (see Jammulamadaka, 2020).

‘indigenous concepts’ have also been subject to derisory laughter: see Figure 2.xxiv, an Internet meme that ignores the design ingenuity embodied in this image in favour of denigrating the user in terms of their socio-economic status.

Figure 2.xxiv. An Internet meme attempts to evoke humour by ‘punching down’ at users with less socio-economic agency.

Western equivalents to jugaad can be found in notions of the ‘kludge’ (Marcus, 2009) and so-called ‘redneck’ design/engineering or ‘hillbilly’ design/engineering — pejorative classist expressions that have been popularised on the Internet. These terms are used to identify sub-optimal ‘bodge jobs’, to employ another colloquial term. In the early 1960s, Jackson Granholm borrowed a delightful dictionary definition for the term kluge: “An ill-assorted collection of poorly-matching parts, forming a distressing whole” (Granholm, 1962, pp.30) — a description that is clearly apt for jugaad as well[116]. The missing component of such a definition though, to concur with Granholm, is that a kluge

[116] As a critical designer, I find the ecological and safety aspects of jugaad distressing, but not the aesthetics. I find the look of the things intriguing and, like the academics cited above, a delightful reminder of human designerly ingenuity and intelligence.

works — it solves the problem, addresses the need, completes the task. It may be funny-looking (in both senses of the term), incongruous, ugly to the eyes of aesthetes, and unsettling to design perfectionists — but it *works*. Whereas the word kluge conjures impressions of complicated bespoke "assemblages" (Antczak & Beaudry, 2019), redneck design/engineering, and hillbilly design/engineering (hereafter referred to collectively as redneck design, for sake of convenience), are often more simply and bluntly executed, see Figure 2.xxv.

Figure 2.xxv. Five examples of redneck design: (top left) a burglar alarm — the handle turns, the pan drops; (top centre) a makeshift double-door lock; (top right) an improvised parking sensor — the rubber chicken honks on contact with another object; (bottom left) a simple example in a refrigerator door repair; (bottom right) a rare and far more complex example — the front quarter of a dismembered Chrysler PT Cruiser drives a trike.

Here the undertone of certain audience laughter shifts from a postcolonial schadenfreude in the context of jugaad, to a socio-economic one in the context of redneck design. The problematic terms ‘redneck’ and ‘hillbilly’ have a derogatory history, regardless of the way that such terms have been analysed and possibly reclaimed (Beech, 2004). Redneck design embodies a similar spirit to DIY[117] culture, which has a long history, and the more recent Internet disseminated concept of the ‘life hack’[118]: users taking personal responsibility for addressing problems that are usually solved by commercial design products — in the cases of Figure 2.xxv: electronic security systems; lockable double-doors; electronic parking sensors; spare-parts services or buying a new refrigerator; and consumer vehicle design. As with jugaad, redneck design is visible evidence of human design ingenuity in the context of ‘outsider design’. Like Jugaad, and similar practices, there are downsides to redneck design (concerning safety, quality and efficiency, legal vulnerability, design aesthetics, and ecological friendliness) and, again, the more dangerous redneck engineering appears to be, the more humorous it is found (see figure 2.xxvi).

[117] Do-It-Yourself

[118] Which also has a long history in newspaper and magazine advice columns for homemakers and small business-owners.

Figure 2.xxvi. (Left) A ‘mains adapter’ kluge made from nail clippers; and (right) a makeshift ‘emergency stop switch[119]’.

2.1.5). Decontextualisation and Recontextualisation.

Many of the ‘outsider design’ objects identified above have been *decontextualised* (isolated from their original settings by, for example, being photographed) and then *recontextualised* (distributed via the internet to markedly different cultural contexts) and presented as humorous — hence the postcolonial and class concerns outlined above. Design artefacts are also plucked from the past, from the context in which they were originally created, and presented in contemporary contexts as being humorous (e.g. see Stack, 2014). Such things were not intended to be funny then, but are found to be funny now. For example, the cup presented in Figure 2.xxvii (below) has a built in ceramic guard to solve the problem of beverages wetting the moustache, moustache products (such as wax) entering the liquid or being spoiled by it, and drink froth from attaching itself to moustache hair.

[119] The meaning of ‘not aus’ in German is ‘emergency stop switch’.

Figure 2.xxvii. A china tea cup with integrated moustache guard.

This type of object is presented as funny in that it embodies the different aesthetic tastes of the day — existing in a time when an oversized moustache was rather more commonplace than it is today[120]. A number of published collections feature similar design objects, for example Maurice Collins' 'Eccentric Contraptions' (Collins, 2004) and 'Ingenious Gadgets' (Collins 2004) which celebrate the ingenuity of antiquated gadgetry whilst also deriving some amusement from it. Often, such humour arises from the comparison between the qualities of previous lives and our own, as embodied in the designed artefacts of each time. For example, Figure 2.xxviii presents a hair drying product that seems more visually akin to industrial plant machinery or vehicles than to anything found in contemporary Western salons. Similarly, the military 'listening apparatus' for tracking aircraft seems ineffective when compared to RADAR and contemporary satellite-enabled global positioning technologies — the idea of listening for an enemy aircraft now

[120] I own a number of these cups and I also sport a substantial beard and moustache. I don't find these cups funny at all: I think they're marvellously effective and quite beautifully designed. People without moustaches find them very funny though: they are a common feature in collections of funny things. This further illustrates the subjective dimension of humorous design.

seems comparatively and laughably problematic, as a carrier pigeon or horse-borne messenger is in comparison to an email or mobile telephone call.

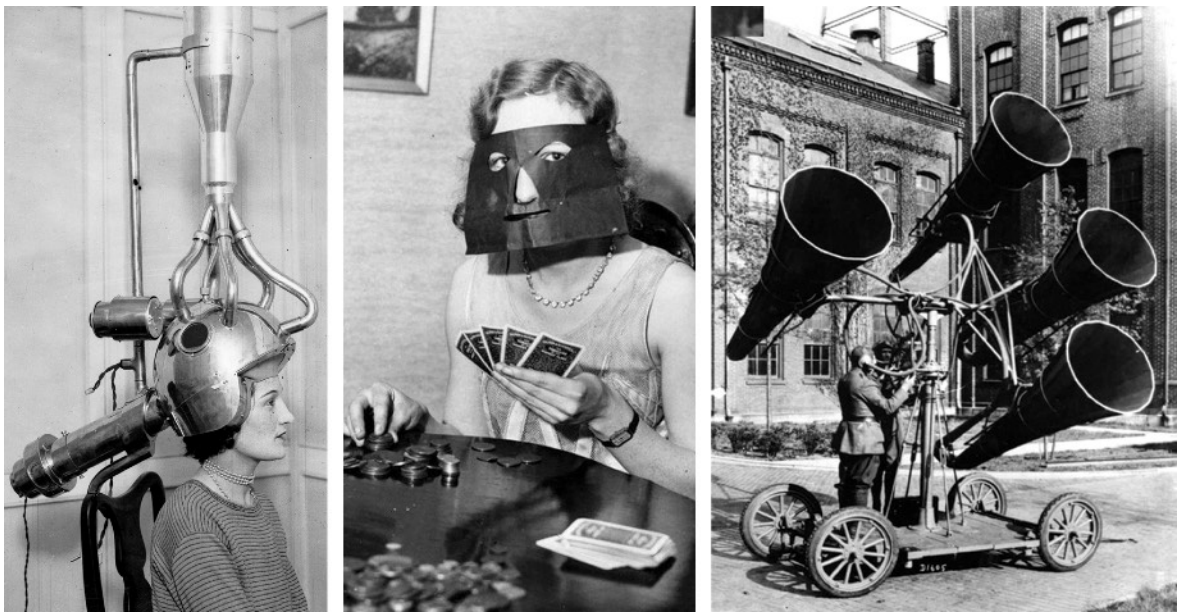

Figure 2.xxviii. (Left) A hairdryer (1930s); (centre) a mask which acts as a 'poker face' when playing cards (1932); and (right) a US Military listening device for pinpointing flying aircraft (1928).

The previously mentioned illustrations of Robinson and Goldberg propose comic design solutions for humorous effect. Other illustrators have taken the task of imaging design (especially design futures) more seriously, but their creations have nevertheless been found humorous. For example, for the World Exhibition in Paris, in 1900, Jean-Marc Côté (and others) produced a collection of illustrated design fictions that imagine scenes from life in the year 2000 (Asimov & Côté, 1986[121]) — see Figure 2.xxix.

[121] Originally intended as cigarette cards, Côté's illustrations remained forgotten in storage for decades before being rediscovered and eventually published by Isaac Asimov in a book entitled 'Futuredays: A Nineteenth-Century Vision of the Year 2000' (Asimov & Côté, 1986).

Figure 2.xxix. Four illustrations depicting: (top left) 'An Aviator Agent'; (top right) a 'Whalebus'; (bottom left) 'Seaside Season in Atlantis'; and (bottom right) 'Radium Heating', (Asimov & Côté, 1986, pp.40, 58, 34, and 94 respectively).

Côté's 'En L'An 2000[122]' collection has been found humorous for the predictions that it got wrong. At the time of conception there was an expectation that humans would 'conquer' the seas and skies in much the same way as they have the land, so the 'whalebus', holidaying underwater, and personal air transport did not seem beyond the realms of possibility. Similarly, then contemporary breakthroughs in the understanding of physics meant that gathering for warmth around a nugget of radium did not seem beyond the realms of possibility either. With hindsight, casually 'hanging out' under the sea, as one would outside it, clothing and interior design fashions remaining unchanged for a century, and similar depictions, now seem laughable. However, whilst failing to predict the emergence of the transistor and the digital technologies that it enabled, Côté's collection is

[122] 'In the year 2000'

often rather good at foreshadowing a period that has arguably seen the most rapid technological development in human history. For example, Figure 2.xxx (below) presents four more scenes from ‘En L’An 2000’: a panel depicts what is essentially a video call (the human ‘operator’ now being a smart device and a software application); another illustrates an airborne postal service not dissimilar from ‘drone delivery[123]’; a third shows children at school who are having books fed into a machine for them to hear the content through headphones — not wildly different from the audiobooks, videos, TtS and OCR[124] technologies that do this today; and finally a horse presented as a ‘curiosity’ illustrates that people are curious about the technologies of the past (in this case the horse-as-engine), but also the spectacle of the ‘natural world’ (a popular media genre) and the fact that creatures that are not perceived to actively benefit humankind are at risk. Other works from the collection of seventy-eight illustrations portray robot vacuum cleaners, ballistic weapons integrated with vehicles (tanks), agricultural machinery, mechanised animal farming, and the automation of music, all of which are commonplace today.

[123] Whilst not widely available, Amazon’s ‘Prime Air’ drone delivery service is now a reality.

[124] Text-to-Speech (TtS) and Optical Character Recognition (OCR).

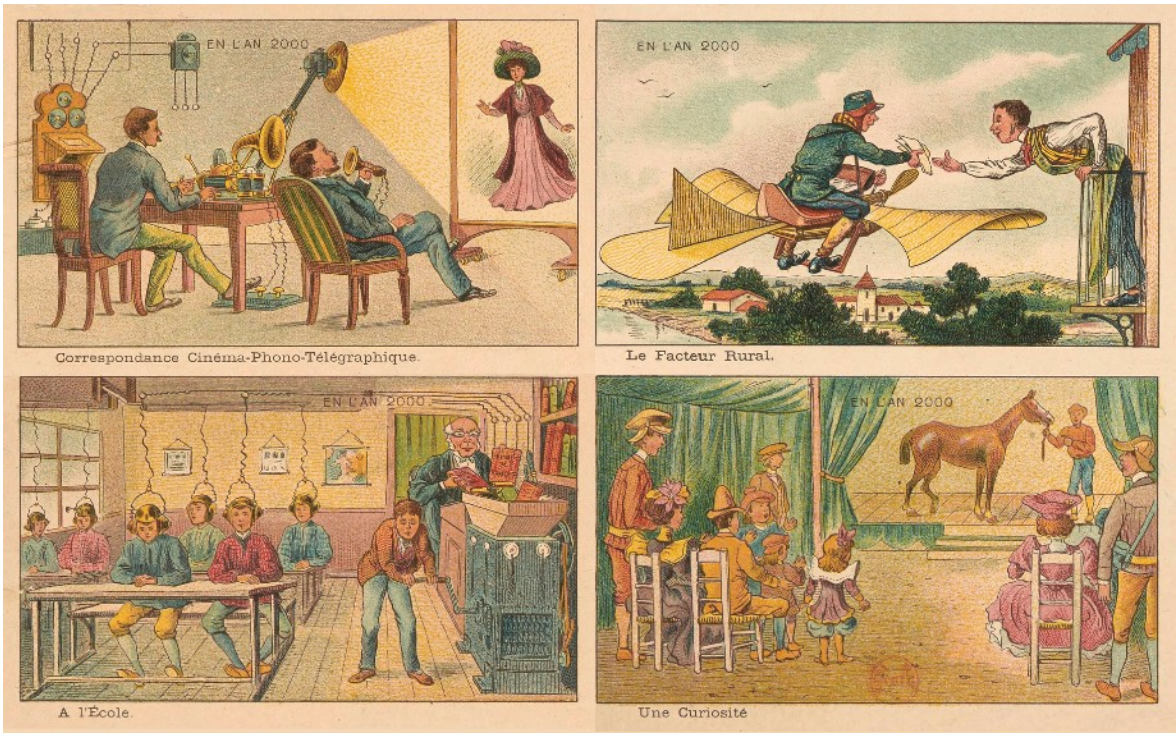

Figure 2.xxx. Four illustrations depicting: (top left) 'Cinematic-Phonotelegraphic Correspondence'; (top right) a 'Rural Postman'; (bottom left) 'School'; and (bottom right) 'A Curiosity', (Côté, 1986, pp.78, 44, 60, and 92 respectively).

The humorous response to historical design artefacts, such as those featured in this section, undermines the endurance of design as a professional activity that may result in a 'fear of future funniness': a concern that at some point in the future one's designerly efforts may be considered ridiculous to the point of being comical.

Much of the design identified in this section, was not intended to be humorous in its inception, but has since been presented as funny. Whilst some humorous artefacts remain funny today (see Mitchell, 2012; Beard, 2014), some humour from the past remains rather inaccessible now (see Chapter 4, Section 4.3.1, for further consideration of this point) — things that were intended to be funny *then,* no longer are. This underlines the instability, mutability, and temporality of humour in cultural/contextual terms. Ironically, such

artefacts may be found humorous again, but for reasons of uncanniness or incongruity rather than for the reasons that were originally conceived.

2.1.6). Similitude.

Sometimes design is presented as humorous and laughed at for the simple reason that it resembles something unrelated (and is therefore incongruous). Given that the human brain and central nervous system have been described as a "pattern recognition engine" (Clarke, 2008), the theories of gestalt psychology, and the phenomena of pareidolia[125], this is not surprising. An example of such design is the so-called 'Hitler House' in Swansea, Wales, a house that, as the name suggests, reminds people of the face of Adolf Hitler — see Figure 2.xxxi.

Figure 2.xxxi. (Left) The 'Hitler House', Swansea, UK, and (right) the dictator Adolf Hitler.

[125] A psychological phenomenon whereby people recognise well-known forms, especially faces, in random or arbitrary visual material.

The resemblance was noticed in 2011 by Charli Dickenson, a youth worker, who posted an image of the house on social media (Dickenson, 2011). The image was picked up by British comedian Jimmy Carr, reposted by him, and 'went viral' (Carr, 2011). The humour directed at this particular resemblance was likely heightened by the fact that the house did not just look like a person, but happened to resemble a man who personifies evil in the popular imagination[126], there is therefore a *taboo* dimension to this humour (further considered in Chapter 4).

2.1.7). Design at the Peripheries: Discursive Design and Derisory Laughter.

Design practices, as identified in Chapter 1, that sit outside of 'affirmative' design organisations and practices — those that have been identified as discursive, critical, speculative, radical, and so on — have a complicated relationship with humour and laughter that is explored through Chapters 3 and 4. At this point, suffice to say that these discursive modes of design are also found humorous, typically more so than mainstream design, which, by definition, is less likely to be regarded as unusual, unexpected, or otherwise incongruous, and therefore less likely to be found funny. Mainstream affirmative design has established and perpetuated various conventions and, being as discursive design and its associated practices often express a critique of design ideology by defying it, discursive design projects often appear aesthetically and/or conceptually incongruous to audiences more (or even *only*) familiar with affirmative design.

Like discursive design, other innovative and avant-garde design ideas have been met with a humour that arrises from the factor of their difference to traditional tropes and

[126] and rightly so, of course.

practices, especially if the difference is visual, for example, the Vivienne Westwood case study featured in Section 2.2.1. Essentially: difference affords humour. This is not a new idea, having been discussed as far back as Ancient Greece (see Chapter 4). The more pronounced the difference — the more incongruous with orthodoxy — the more chance of humour being a response. This is the case with design as much as it is with art[127], theatrical clowning or slapstick comedy, cartoon caricatures with wildly exaggerated facial features, and so on.

2.2). Three Case Studies.

A typical search for occasions when humour and laughter have been recorded as derisory responses to design, and design innovation, reveals a number of such moments, with some general archetypes and specific examples detailed in the first section of this chapter. If searching outside of the contemporary web-enabled context of 'design fails', this number reduces considerably. It drops further if looking for historical examples of design innovation being laughed at, and to a metaphorical handful if one looks for examples that have been studied in any significant depth, comparatively speaking. Three of these rarer moments have been selected as case studies for presentation and contemplation in this section: Westwood on Wogan, 1988 (Section 2.2.1); Ballmer and the iPhone, 2007 (Section 2.2.2); and Ransome's Rebar, 1884 (Section 2.2.3).

The Westwood on Wogan incident was chosen because it is arguably the best available example of a designer presenting innovative ideas, being publicly laughed at, interpreting such laughter as derisive, taking this derision personally, and responding

[127] I'm thinking of Dadaist and Surrealist works such as Meret Oppenheim's fur covered cup and saucer, the YBAs (e.g. Damien Hirst's shark and Tracy Emin's bed, Sarah Lucas' assemblages) and works that are so conceptual as to transcend materiality entirely, such as the invisible immaterial works of Maurizio Cattelan, Yves Klein, Andy Warhol, Tom Friedman, or Salvatore Garau.

accordingly. It was also a very public event, not only unfolding in front of a live television studio audience, but also in real-time in the domestic settings of several million television viewers, and is now readily available online.

In addition to the Westwood case study, Steve Ballmer's response to the iPhone was chosen because it is again a very public moment that has been widely reported[128], but it also offers a vehicle by which to consider the 'laughee': this case study acting as a foil to the designer-focussed perspectives presented in the first and last case studies (namely Westwood and Ransome).

The Ransome case study was chosen because, whilst far less well publicised, it demonstrates that humour and laughter as responses to design and design innovation are not contemporary phenomena: the incident in question, Ransome's innovative 'cold-twisted iron rebar' being "simply laughed down" (Ransome & Saurbrey, 2018, pp.3) by members of the Technical society of California, having occurred some one hundred and forty years ago (at time of writing). In some ways, Ransome's response to what he interpreted as derisory laughter was rather different to Westwood's: for example, it galvanised him to create more convincing proofs of the validity of his ideas. In other ways, it is very similar: both Westwood and Ransome recounted these laughter incidents *decades* later in personally authored and published textual accounts, so one might therefore interpret them as to be of evident significance as defining moments in their personal life-stories.

[128] See the case study itself for the numerous sources.

Importantly for this research, for reasons explored in Chapters 7 and 8, all three design innovations, Westwood's fashion designs, Apple's iPhone, and Ransome's rebar, were all vindicated over time. This is a trait shared by all three case studies: they were laughed at in their nascence, but were assimilated relatively quickly into the design states quo. In this way they might be speculatively added to Gershwin's lyrical list of design innovations (Gershwin, 1939) that was presented in the introduction to this thesis (0.1).

2.2.1). Westwood on Wogan, 1988.

"If they don't stop laughing I shall tell the next person not to come on"

(Westwood, 1988).

Figure 2.xxxii. Fashion designer Dame Vivienne Westwood[129] being interviewed by Sue Lawley on BBC television chat show 'Wogan' (S8.E31, aired on 11th March 1988).

[129] Although she was not Dame Vivienne Westwood until 2006, having first been awarded an OBE in 1992 (Johnson, 2023, pp.74).

The name Vivienne Westwood is synonymous with British fashion: in his oft-cited[130] 1989 book 'Chic Savages', John Fairchild, a respected American fashion writer, listed Westwood as one of the top fashion designers in the world: "There are six designers today who are true twinkling stars: Yves Saint Laurent, Georgio Armani, Emanuel Ungaro, Karl Lagerfeld, Christian Lacroix, and Vivienne Westwood. From them all fashion hangs from a golden thread. […] All eyes are on those six, they show the rest of the industry where to go" (Fairchild, 1989, pp.34). Fairchild then picks out Westwood for special mention: "of the six, British Vivienne Westwood is the designers designer […]. She is copied by the avant-garde French and Italian designers, because she is like the Alice in Wonderland of fashion, and her clothes are wonderfully mad" (Fairchild, 1989, pp.34). Entirely self-taught (Mulvaugh, 1998, pp.250), in 1990, Westwood was decorated with the 'Fashion Designer of the Year' award by the British Fashion Council, for many this award being considered rather overdue (Connolly, 2002, pp.48). She was bestowed the same award the next year in 1991 (Connolly, 2002, pp.57). And yet, despite these accolades, only a year or two before, Westwood had found herself on national television being ridiculed, patronised, and laughed at by a live studio audience, a TV presenter, and a fellow guest, all in front of a domestic television audience in the millions.

"The child of a weaver mother, and grocer father, […] Vivienne Westwood was born Vivienne Isabel Swire on April 8, 1941, in Glossop, England" (Johnson, 2023, pp.74). In 1958 she and her family moved to London for economic reasons (Westwood & Kelly, 2014, pp.72). In the same year, she briefly studied at Harrow Art School, leaving due to a crisis of faith concerning whether she would be able to make a living wage from artistic

[130] See, for example, Fury, Westwood, & Kronthaler, 2021, pp.10; Westwood & Kelly, 2014, pp.318-319; Mulvaugh, 1998, pp.6.

pursuits — a concern that she attributes to her working class roots (Westwood & Kelly, 2014, pp.72-79). In 1962, working as a primary school teacher (Mulvaugh, 1998, pp.25), she married Derek Westwood, whose name she retained until her death — despite their marriage effectively lasting less than two years (Johnson, 2023, pp.14). Now Vivienne Isabel Westwood, and a single mother, Westwood met Malcom McLaren, with whom she became professionally and romantically involved. McLaren "channeled her latent creativity into fashion […], Vivian evolved from a cussing, churchgoing housewife into a subversive seamstress of agitprop clothing" (Mulvaugh, 1998, pp.26). In the following years, Westwood and McLaren owned several clothing shops, each on the same site on The Kings Road in London: 'Let It Rock', 'Too Fast to Live, Too Young to Die', 'SEX', 'Seditionaries', and 'The End of the World'[131] (Johnson, 2023, pp.27). Through the earlier retail outlets, and by wider influence, Westwood and McLaren are widely credited with profoundly influencing the visual style of the British Punk movement in the 1970s (e.g. Westwood & Kelly, 2014; Mulvaugh, 1998; Vermorel, 1997; Johnson, 2023; Connolly, 2002), (see Figure.2.xxxiii, below).

[131] Still trading in 2023 (Johnson, 2023, pp.27).

Figure 2.xxxiii. Left image: a ‘pre-Sex Pistols’ Sid Vicious (left) and Westwood in 1976 (Connelly, 2002, pp.28). Right image: Jordan[132] (left), Westwood (right), and a friend, wearing Westwood and McLaren in 1977 (Johnson, 2023, pp.29).

Through the late 1970’s and into the 1980s, Westwood appeared to lose interest in Punk: in line with the emerging ‘New Romantic’ pop-movement, she was instead “drawn to beauty” — “her designs were now morphing into a vessel for exploring and distorting the concept of class, historical narratives, and national identity (Johnson, 2023, pp.41). These explorations gave rise to an eclectic ‘dressing-up-box’ style (Westwood & Kelly, 2014, pp.304; Mulvaugh, 1998, pp.239) in the form of, for example, Westwood’s debut catwalk show collection ‘Pirate’ (autumn/winter, 1981) (Fury, Westwood, & Kronthaler, 2021, pp.22-35), and the “Norfolk jackets, flat caps, and plus fours […] teamed with

[132] ‘Jordan’ was a persona of Pamela Rooke, later Jordan Mooney (Baron, 2022).

medieval armour allusions in the aptly named ‘Time Machine’ [collection] (autumn/winter, 1988)” (Westwood & Kelly, 2014, pp.305), see Figures 2.xxxiv.

Figure 2.xxxiv. Articles from Westwood’s ‘Time Machine’ collection, Autumn-Winter 1988-89.

In a decision that she would later describe as “disastrous” (Westwood & Kelly, 2014, pp.305), Westwood accepted an offer to appear as a guest on the BBC television programme ‘Wogan’ — a popular prime-time chat show that ran from 1982 to 1992. On this occasion, Sue Lawley was covering the role of the show’s usual presenter, and namesake, Terry Wogan. As usual, the programme was to be broadcast live. Westwood was the third guest, joining “the literary critic and TV compere Russel Harty” (Mulvaugh, 1998, pp.238), and the journalist and BBC Television executive Janet Street Porter. At the

appropriate time, Lawley — described by Jane Mulvaugh as "the epitome of middle England, dressed on that occasion in navy-and-white polkadot suit and peep-toed white slingbacks[133]" (Mulvaugh, 1998, pp.238) — introduced Westwood, who entered the stage wearing her bright red 'Centaurella' dress and 'Rocking Horse Shoes' (Mulvaugh, 1998, pp.238). The unusual shoe design was immediately noticed by the audience: one of whom can be heard to shriek "the shoes!" (see Appendix 1, (12.1)). Lawley exclaimed "…we're going to have to look at the shoes again" and Westwood placed a leg across Street Porter's lap, presenting her shoe for inspection. Harty makes a rather incomprehensible gesture, seemingly indicating that Westwood's feet smell. He then laughs, presumably to indicate that this is a playful act. This interaction foreshadows an interview that Westwood would later describe as "excruciating" (Westwood & Kelly, 2014, pp.305). For the next eleven minutes "Vivienne was systematically lampooned by Lawley and Harty, who encouraged the audience […] to laugh at her expense" (Mulvaugh, 1998, pp.238). A transcript of the interview (BBC, 1988) can be found in 'Appendix 1' (Section 12.1)[134]. The interview culminated in the parading of a selection of outfits from Westwood's 'Time Machine' collection (Autumn-Winter 1988-89), see Figure 2.xxxv, below.

[133] A type of shoe design that is secured onto the foot by way of a heel strap

[134] By far the best way to engage with this interview is by video. It is widely available online: see the List of Figures, Bibliography, and Appendix 1 (Section 12.1), for hyperlinks.

Figure 2.xxxv. Three outfits from Westwood's 'Time Machine' collection, 1988, being modelled on Wogan (S08:E31, 1988). Sara Stockbridge is centre, and Michael Clarke is on the right[135].

Westwood has since situated the interview "in the long British tradition of mocking the avant-garde and the aesthetic, Lawley appear[ing] to encourage the audience to laugh at the designer and her creations" (Westwood & Kelly, 2014, pp.305). At one point Westwood insists that "If they [the audience] don't stop laughing I shall tell the next person not to come on" (12.1). To which Lawley replies, in a patronising tone, "Oh dear. [Then, directing her attention to the audience] You're not to laugh. I know you want to laugh." (12.1). The audience, primed so by Lawley, then laughs even more loudly. Westwood retreats somewhat, addressing the audience: "You *can* laugh. You can laugh, but look as well. It's really great." [12.1]. Harty is similarly derogatory, decrying the outfit that Sara Stockbridge is wearing: "It looks like a chip shop, I mean, can you imaging going to

[135] None of my sources name the suited model with the long-handled umbrella in the left image.

Sainsbury's in that in real life?" (11.1), and then dramatically prat-falling back onto the sofa, with mouth agape in mock shock, when he hears the price of Westwood's outfits.

Throughout the interview, Westwood's sole defender is Janet Street-Porter, "a champion of *avant-garde* youth culture [Mulvaugh's emphasis]" (Mulvaugh, 1998, pp.238), a stance for which Westwood later thanked her (Westwood & Kelly, 2014, pp.305). Street-Porter's interjections, for example saying: "I think we're being very unfair here. Vivian's a very very successful designer, and the most influential designer in England at the moment" (12.1) and "Vivienne, they look great. They look wonderful" (12.1) were largely ignored by Lawley and Harty. Undeterred, Street-Porter added that she owned some of Westwood's pieces, and recounted anecdotes of wearing them to important public events (12.1). Finally, "At the end of the farcical performance, Lawley patronisingly turned to Vivienne and, patting her on the knee, said 'We haven't upset you?" (Mulvaugh, 1998, pp.238).

Decades later, Westwood recalled, "I remember being on the Tube the next day, […], and I overheard two Cockney lads talking about it. So it reached out. And I remember one said, "That Sue Lawley just couldn't handle it," and always afterwards I've thought: you have to remember, it's not about the studio audience, it's about the millions watching" (Westwood & Kelly, 2014, pp.305). Westwood and her advocates bore a grudging animosity to the whole experience: "A few months later, on being told of Harty's death, she [Westwood] bluntly responded, 'Serves him right! He's a bugger anyway" (Mulvaugh, 1998, pp.238) and, with similar metaphorical venom in recalling the event, model Sara Stockbridge has claimed that, "She was such a bitch, Lawley. Janet Street-Porter tried to rescue things, but basically Sue Lawley just got the whole audience laughing at me and

Michael Clarke and the other model[s]. And for those people who thought Vivienne was ridiculous I fear we probably just cemented that view" (Westwood & Kelly, 2014, pp.305). Terry Wogan, the show's usual host, may have been thankful that his presenting role was covered by Lawley on that occasion, and he could remain somewhat distanced from this event. He does not mention it in his autobiographies (Wogan, 1998; Wogan, 2001; Wogan, 2006). Despite acknowledging that the 1988 interview was "much talked about" (Herbert, 2016, pp.116) it is barely reported in Emily Herbert's biography of Wogan (Herbert, 2016), which includes a cursory account of the event, but no analysis or discussion. Herbert simply states that, "Westwood's designs, based on medical clothing[136], were paraded in front of an audience that promptly fell to pieces laughing: Vivienne became so annoyed that she told Sue [Lawley] that, if the audience didn't stop its hilarity, she would stop the models from coming out" (Herbert, 2016, pp.117), before changing topic.

One might wonder as to the extent to which Lawley was following a preconceived script, conducting the interview in a preplanned manner, and/or according to prompts by the production team, and how much of it was more spontaneous and improvised: playing out in real time. It was a live television broadcast after all and any television programme, despite the negativity here being largely heaped upon Lawley, emerges from the efforts and interactions of a plethora of experienced decision-makers. The other guests — Harty and Street-Porter — have also been described as "playing roles" (McDowell, 2009). One might also wonder how this interview, described as "a classic piece of car-crash TV" (Timeshift, 2009), and "probably the rudest interview ever" (McDowell, 2009) might have played out differently in Terry Wogan's hands.

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[136] The Time Machine collection was not based upon "medical clothing". Westwood describes it as "very English" but "with pagan touches: Greek and Roman" (11.1). I wonder whether Herbert's recollection is clouded by the character Alan Partridge's parody of the Lawley/Westwood interview that had a strong medical theme (see Chapter 7).

Despite this interview, Westwood went on to achieve great things before her death in 2022: an OBE and a damehood, two professorships[137], numerous prestigious national awards, commercial and critical successes, collections and exhibitions, and a number of worthwhile activism and charity projects (Vivienne Westwood, 2024). Her's is not only a household name, but continues to be a globally recognised brand, enjoying over sixty retail stores worldwide and a strong online presence (Mapp, 2021).

2.2.2). Ballmer and the iPhone, 2007.

"It doesn't have a keyboard, which makes it not a very good email machine"

Steve Ballmer on CNBC (CBNC, 2007a, 2007b).

Figure 2.xxxvi. Microsoft CEO Steve Ballmer being interviewed by Scott Wapner for CNBC News in 2007.

The first case study in this Chapter, Vivienne Westwood on Wogan (Section 2.2.1), and the final case study, Ransome's cold-twisted iron rebar (2.2.3) focus upon the designer

[137] Professor of Fashion at the Vienna Academy of Applied Arts from 1989 to 1991, and Professor of Clothing Design at the Berliner Hochschule der Künste from 1993 to 2004 (Westwood, 2024).

who is laughed at. This case study takes a different metaphorical tack, instead focussing upon a laugher: Steve Ballmer, former Microsoft CEO, who laughed at the first generation iPhone when it was presented by Steve Jobs, former Apple CEO, at a MacWorld event in 2007.

Steven Anthony Ballmer was born in 1956 in Detroit, Michigan, USA (Brownfield[138], 2024, pp.10). His father, Frederic, worked as a manager at the the Ford Motor Company (Luis[139], 2023, pp.8), a fact that Ballmer has referenced as an influence upon his mindset in business (Wingfield 2010a, 2010b; Johnson, 2023, pp.8). Ballmer was educated at Harvard University, enrolling in 1973, where he became friends with Bill Gates, cofounder and former CEO of the Microsoft Corporation (Hayden, 2023, pp.9-10). After a "brief stint" (Johnson, 2023, pp.10) working for consumer goods company Proctor & Gamble, Ballmer undertook an MBA at Stanford before joining a fledgling Microsoft Corporation in the role of business manager — he was an early employee of the company, reportedly either the 24th (Johnson, 2023, pp.13), or the 30th (Brownfield, 2024, pp.13; Luis, 2023, pp.20), but early in either case. Through the 1980s and 1990s Ballmer achieved a variety of appointments including Executive Vice President for Sales and Support in 1992 (Luis, 2023, pp.22), and company President in 1998 (Luis, 2023, pp.27), before taking the position of CEO that Bill Gates vacated in 2000 (Hayden, 2023, pp.15), a position he would hold until 2014 (Johnson, 2023, pp.23).

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[138] Ballmer appears to be still alive, at time of writing (2024), regardless of the fact that Brownfield's biography reports his death (Brownfield, 2024, pp.16).

[139] Luis' 2023 biography of Ballmer is a decidedly peculiar text. Whilst informative, it reads like it has been written by an AI that has been constrained to be both enthusiastically sycophantic and unwaveringly uncritical: whilst fecund with facts, I could not detect a single critical perspective in the entire book, let alone a negative view of Ballmer, his ideas, ideology, opinions, decisions, actions (their implications or impacts), or his career. Neither Ballmer's comments regarding the iPhone, the ill fate of the Windows Phone, nor the costly decision to buy Nokia, feature in Luis' biography. Brownfield, 2024, and Johnson, 2023, do not follow this model: more freely discussing Ballmer's shortcomings, as does Hayden, 2023, but to a far lesser extent: Hayden dedicates about one hundred and fifty words of his entire book to any criticism of Ballmer.

On the 9th of January 2007, then Apple CEO Steve Jobs presented the first iPhone at a Macworld[140] event in San Francisco's Moscone Center. Jobs' eighty-minute, in depth keynote presentation (Jobs, 2007) was streamed across the Internet and widely reported in the press. This proved to be an auspicious moment in Apple's history, and in design history. Jobs first promised the introduction of three new products: "a widescreen iPod[141] with touch controls […], a revolutionary mobile phone […], and a breakthrough internet communication device" (Jobs, 2007) before revealing a performative twist — that the iPhone was all three of these products in one. In reference to this, Evans later described the iPhone as an "everything engine" (Evans, 2017) and Gizmodo's[142] editor-in-chief, Brian Lam, christened it[143] "the Jesus phone" (McNish & Silcoff, 2015, pp.134). Jobs smoothly detailed the functions and interaction design of the iPhone, by way of an impressive and extended live demonstration, interspersed with cheers and applause from the assembled crowd and guest appearances from Jony Ive, Phil Schiller, Eric Schmidt, Jerry Yang, Stan Sigman, and recorded messages from Al Gore, and Tim Cook[144].

A short time later, Ballmer was quizzed about the iPhone by Scott Wapner for CNBC News, whilst at the Rockefella Centre in New York (see Figure 2.xxxvi., above). Wapner enquired of Ballmer: "let me ask you about the iPhone, and the Zune[145], if I may?

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[140] Macworld: an online magazine/website focussed on Apple Mac products and services.

[141] The iPod was an iconic handheld portable media player (PMP), first released by Apple in 2001.

[142] Gizmodo is a popular "gadget blog" (McNish & Silcoff, 2015, pp.134).

[143] Pun intended.

[144] Jony Ive, then Apple's Senior Vice President of Industrial Design; Phil Schiller, then Senior Vice President of Worldwide Product Marketing at Apple; Eric Schmidt, then CEO of Google; Jerry Yang, cofounder and then Chief of web service provider Yahoo!; Stan Sigman, then CEO of Cingular at AT&T; Al Gore, former US Vice President; and Tim Cook, then Chief Operating Officer at Apple.

[145] The Zune was a PMP, marketed by Microsoft, to rival Apple's iPod. It was released in 2006.

The Zune was getting some traction and then Steve Jobs goes to MacWorld and he pulls out this iPhone. What was your first reaction when you saw that?" (CNBC, 2007a, 2007b). Ballmer, *laughing*, replied: "Five hundred dollars! Fully subsidised! With a plan! I said — that is the most expensive phone in the world and it doesn't appeal to business customers because it doesn't have a keyboard, which makes it not a very good email machine" (CNBC, 2007a; 2007b). A transcript of Steve Ballmer's CNBC interview with Scott Wapner can be found in 'Appendix 2' (Section 12.2). Ballmer appears to laugh because the lack of buttons on the iPhone seems, to him, like an interaction shortcoming rather than a liberation that enabled a far more dynamic interface. Fixed keyboards are just that: physically fixed. However, on-screen digital keyboards are dynamic and mutable in real time. Digital keyboards can be instantly reconfigured, repositioned, replaced, resized, and revised according to user requirements: hold the device in a landscape orientation and the keyboard reconfigures and orientates to match, rotate it to a portrait orientation and the keyboard reconfigures and reorientates; the iPhone digital keyboard is actually many in one, a mini 'qwerty' keyboard, another with numbers and commonly used characters, another with more rarely used characters, and others with scrollable emoji and memoji[146] collections; visually impaired users can benefit from increased font size; keyboards can be application specific (Jobs, 2007); can instantly change language, software updates can update digital keyboards (Jobs, 2007); and so on — all features that are difficult for, or beyond the capacity of, physical keyboards. The digital keyboard can also disappear on command, and reappear when summoned: something that physical buttons cannot do. This fact ultimately enables all of that 'real-estate' that would be dedicated to physical buttons, to become screen (see Figure 2.xxxvii).

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[146] Less well known and less well used than emojis, memojis are "customizable animoji (animated emoji) introduced by Apple in iOS 12 [released in 2018]. Memojis let people design an avatar of themselves" (PCmag, 2024).

Figure 2.xxxvii. (Left) Steve Jobs discusses the iPhone's competitors: fixed-button smartphones (from left to right: the Moto Q, the Blackberry, the Palm Treo, and the Nokia E62) at the iPhone's first public presentation. (Right) The 1st generation iPhone in comparison (not to scale with the other smartphones).

Around the same time as the CNBC interview, Ballmer made the now infamous statement that: "there's no chance the iPhone is going to get any significant market share. No chance" (Katt[147], 2007; Walker 2015; Preston, 2023; Rexaline, 2023; Dallas Morning News, 2007). This was a powerful and very public prediction that quickly proved demonstrably untrue: the iPhone and its operating system, 'OSX', "grabbed market share practically overnight" (Cox 2009). On the 29th of June 2007, dubbed 'iDay' (McNish & Silcoff, 2015, pp.134), five months after Job's first public demonstration of the iPhone, the iPhone finally went of sale. "Apple sold 270,000 first-generation iPhones in three hours. It sold 1.39 million in the first year. The company sold 211.88 million iPhones in 2016" (Evans, 2017), and in 2023 the figure appeared to be approximately 235 million units sold worldwide (Sellers, 2024). Two years post-release, in 2009, "the iPhone accounted for 25.1% of the US smartphone market […] compared with 15.7% for phones running Windows Phone software, according to comScore Inc." (Wingfield, 2010a, 2010b).

[147] Spencer F. Katt was a pseudonymous fictional (but nonetheless widely read) gossip columnist for online technology magazine eWeek, formerly PC Week.

In Ballmer's defence: these events are, of course, being discussed in hindsight, whereas Ballmer's laughter was delivered in a live interview at the time that the iPhone was released, and before the threat potential of the iPhone may have been fully understood. This point should be considered in the entire reading of this case study.

By 2009 Ballmer admitted publicly that he had "screwed up" (Cox, 2009) and vowed that "this won't happen again" (Cox, 2009). Unfortunately for Ballmer, it rather did, in the form of the Windows Phone: Microsoft's counter to the iPhone. The Windows Phone, has been described as "a slow disaster" that began in 2001, and "the biggest stinker in Microsoft history — the unloved, unpopular, multi-billion-dollar money pit[148] known as Window's Phone" (Gralla, 2023). This 'slow disaster' began in 2001, "when Microsoft released a mobile operating system called 'Pocket PC 2002'. That was six years before Jobs unveiled the iPhone, but the more-than-half-a-decade lead did nothing to help Microsoft own the mobile market. That's because Microsoft, under Steve Ballmer and Bill Gates' leadership, decided to mimic Windows [on a desktop PC] when designing phones, rather than build a mobile operating system" (Gralla, 2023). Cox shares Gralla's view, lauding the iPhone, and OSX, as a "finger friendly interface" (Cox 2009) over Windows approach of mapping a PC environment onto a diminutive mobile screen, and constrained by the comparatively small processing power of the mobile devices of the time. Gregg Sullivan, then Senior Product Manager for Microsoft's Mobile Communications Group stated that "Choice and freedom are two themes we're stressing" (Cox 2009), "You can choose the form factor, the phone maker, the network operator, and whether to get your

[148] Microsoft spent "countless billions of dollars developing it [the Windows Phone], including $400 million to publicise it's launch in 2012. A full $1,666 was spent in marketing and advertising for each Windows Phone sold — well above the $100 retail price, which Microsoft slashed to $50" (Gralla, 2023).

software from an online marketplace or a third party" (Cox, 2009). This strategy was in direct opposition to that of Apple: "essentially one phone type, from one vendor, on one network[149], with one source of applications" (Cox, 2009). The Apple strategy, which underpinned straightforward interactions between device, services, and user (minimising choice, whilst maximising compatibility and thereby easing uptake of emerging technologies in the form of apps) proved to be the better option.

Ballmer has an energetic and theatrical personality[150]. "At an all-company meeting in a Seattle sports stadium, one hapless employee used his iPhone to snap photos of Microsoft Chief Executive Steve Ballmer. Mr. Ballmer snatched the iPhone out of the employee's hands, placed it on the ground and pretended to stomp on it in front of thousands of Microsoft workers, according to people present"[151] (Wingfield, 2010a, 2010b). This allegedly led some employees to conceal their iPhones or disguise them with cases that make them look more like generic handsets (Wingfield, 2010a, 2010b). In a similar, but clearly more committed act of bravado, Stephen Elop, President of Microsoft's Business Division, placed his personal iPhone into an industrial-strength blender and destroyed it in front of a meeting of Microsoft sales executives — apparently parodying a popular internet meme of the time (Wingfield, 2010a, 2010b). In another attempt to discourage iPhone use amongst Microsoft employees, and by a different strategy, "in early 2009 [Microsoft] modified its corporate cellphone policy to only reimburse service fees for employees using phones that run on Windows Phone software" (Wingfield, 2010a, 2010b).

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[149] The exclusive carrier in the US was Cingular, whilst in the UK it was O2. This later developed into a multi-carrier service in both countries.

[150] See, for example, his performance in a parody video in which he sells Windows 1.0 in the manner of a 'crazed' salesperson. Whilst Ballmer's character may be a spoof, the performance is genuinely accomplished. The 'internal' video was allegedly intended to entertain employees at Microsoft and was not for public dissemination. However, it is now readily available, e.g: https://www.youtube.com/watch?v=DgJS2tQPGKQ

[151] Wingfield's accounts are rather vague in terms of the provenance of sources, which tend to be unnamed (see Wingfield, 2010a, 2010b).

Notwithstanding these theatrical or policy events, by 2009 “iPhone sales contributed about 25% to the company’s revenues” (Rao, 2024) and by By 2012 “Steve Ballmer was admitting he missed the mobile wave and fell prey to Apple and the iPhone” (Clark, 2019).

Albeit in hindsight, Ian Fogg, director at IHS Technology has commented that “there has been no Apple product with greater impact than the iPhone, for Apple, and the mobile industry, and because of the spread of mobile technology, for the whole technology industry” (Evans, 2017). Currently, “the big three brands are Apple, Huawei and Samsung, and every smartphone looks like an iPhone: rectangular devices controlled by multi-touch and a sheet of glass. Apple set the template for ten years of mobile design” (Evans, 2017). Evans wrote this in 2017, but it is still arguably the case today (2024, at time of writing). “Simply put, the smartphone market—and indeed, the broader mobile market — has two ages: the pre-iPhone era and the post-iPhone era” (Reisinger, 2017a), and by 2023 “half of Apple’s $383 billion revenue came from their phones, and the iPhone routinely dominates the top 10 best-selling phones every year [USA], as evidenced from research by tech analysts Omdia” (Rao, 2024).

2023 Best Sellers	2023 Sales
iPhone 14 Pro Max	31M
iPhone 14	26M
iPhone 14 Pro	24M
iPhone 13	22M
Galaxy A14	20M
Galaxy A14 5G	14M
Galaxy A54 5G	14M
Galaxy S23 Ultra	13M

Figure 2.xxxviii. USA smartphone sales in 2023 by manufacturer and model (Rao, 2024).

Apple's iPhone appears to be the best selling smartphone, but it is not the best selling mobile telephone — at least this is the situation apparent from sales data up until 2023. The Nokia 1100 and 1110 models enjoyed comparatively high uptake and market-share in the developing world and thereby bested the iPhones in terms of unit-sales (see figure 2.xxxix.).

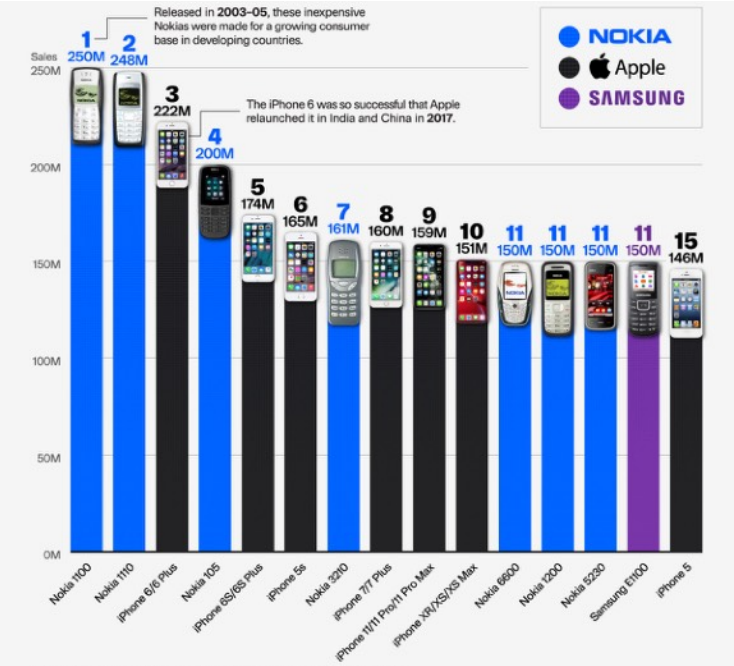


Figure 2.xxxix. The best-selling mobile phones of all time (Rao, 2024).

Ballmer's response to the iPhone is occasionally referenced when a powerful executive has been perceived to have derided a commercial competitor and/or dismissed a threat that they appear to pose. For example, Ford Motor Company CEO Jim Farley has been compared with Ballmer for his response to Tesla's 'Cybertruck' (Rexaline, 2023), and Meta Platform CEO Mark Zuckerberg has been compared to Ballmer for extolling the virtues of Meta's 'Quest 3' mixed reality headset over Apple's 'Vision Pro', a similar device (Jain, 2024). Farley and Zuckerberg's positions are predictable, of course, being CEOs of Ford and Meta respectively, they are hardly likely to do anything but promote the

products and interests of their respective companies and down-play any threats to their market share and future stability. Zuckerberg refuted the comparison (Mok, 2024; Jain, 2024), insisting that "I am not laughing a them. I take Apple seriously" (Jain, 2024). This may well have been Ballmer's original intention[152]: to play-down the threat of the iPhone and to reassure customers and stakeholders that the iPhone was not going to critically impact the Microsoft business. He may have felt it unwise, and understandably so, to have made a more doom-laden prediction at the time of the iPhone's release in 2007. He did make such statements later, in 2009, when the impact of the iPhone was much more apparent and he felt able to admit that he had "screwed up" (Cox, 2009). Steve Ballmer has now been added to an unenviable list of people who, throughout design history, have made public predictions and assertions that have proved to be profoundly wrong: "History is replete with examples of failed assumptions, especially those that may be disruptive to the old order. Robert Metcalfe, inventor of the Ethernet said in December 1995 in InfoWorld magazine, "I predict the Internet will soon go spectacularly supernova and in 1996 catastrophically collapse."" (Walker, 2015). And with reference to the 'Millennium Bug'[153]: Byte magazine editor Edmund DeJesus proclaimed in 1998, "Y2K is a crisis without precedent in human history" (Walker, 2015). Needless to say: it turned out that the internet did not, and Y2K was not.

Whilst Ballmer is well known for his comments regarding the iPhone, he was not the only CEO whose company was threatened by the iPhone. In Parmy Olson's article for Forbes, entitled 'How Does One Company Go from Controlling Half the World's Smartphone Market to Less than 1% Today, and from a Profit of $1.9 Billion to a Gaping

[152] This is my suspicion, but I have yet to find much supporting evidence for it.

[153] For an explicit and accessible explanation of the Millennium Bug and the Y2K problem, see Machles, 1998.

$5.8 Billion Deficit -- All Within the Space of 5 Years?' (Olson, 2015), she quotes from McNish and Silcoff's book 'Losing the Signal: The Untold Story Behind the Extraordinary Rise and Spectacular Fall of BlackBerry' (McNish & Silcoff, 2015) that details an account of Blackberry co-CEO Jim Balsillie watching a webcast of Jobs' unveiling of the iPhone. Balsillie reportedly said to fellow Blackberry co-COE Mike Lazaridis: "It's OK — we'll be fine" (McNish & Silcoff, 2015, pp.133).

In 2007, the laughter surrounding the iPhone was not only happening in one direction. Then Vice President of Apple's iPod Division, Tony Fadell, the so-called 'Godfather of the iPod' (Lee, 2017) recalled that "We [meaning "everyone on the iPhone team" (Reisinger, 2017b)] all laughed at him [Ballmer]" (Lee, 2017). Fadell continues that "we also laughed at Blackberry. Whenever I create a new product, and I learned this with Steve [Jobs], if the incumbents laugh at you, and the press laugh at you, you go, 'we've hit a nerve'" (Lee, 2017).

2.2.3). Ransome's Rebar, 1884.

"When I presented my new invention […], I was simply laughed down"

(Ransome & Saurbrey, 2018, pp.3).

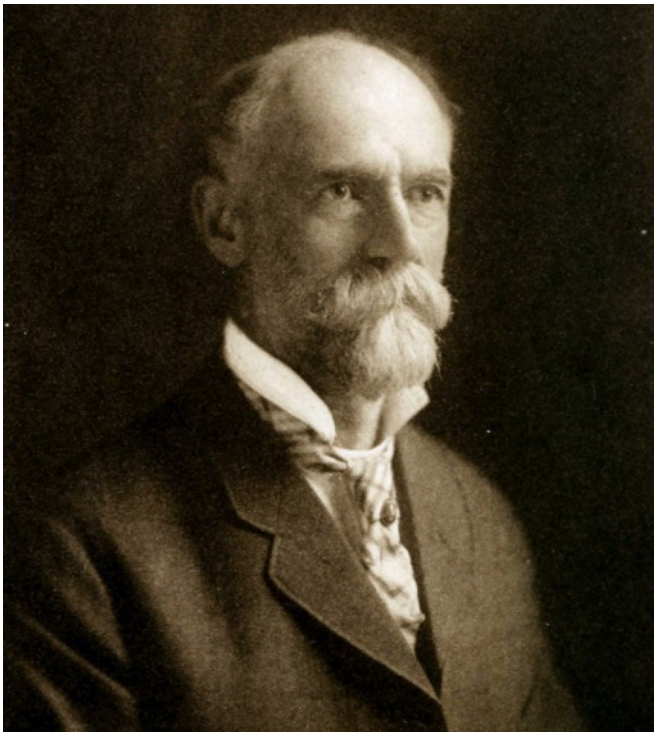
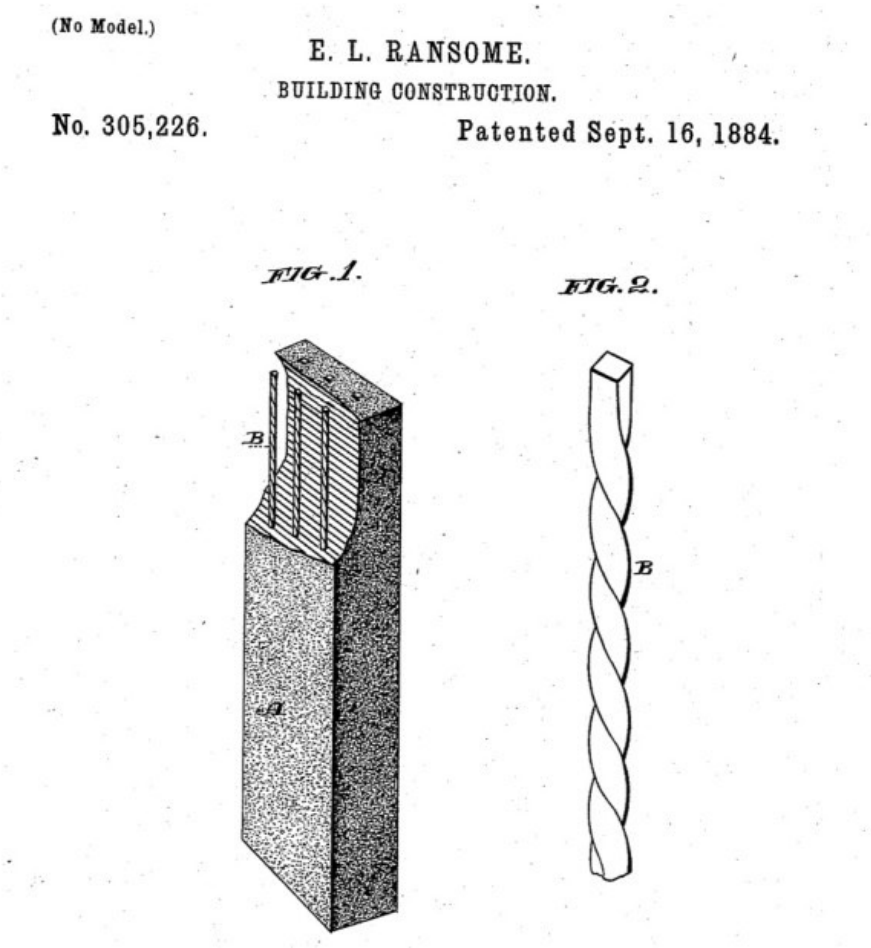


Figure 2.xxxx. Ernest L. Ransome, photographed in 1910.

The name Ernest L. Ransome may have been “largely forgotten” (Courland, 2011, pp.233), but this is not an accurate or adequate reflection of his continuing legacy in design. The profile of the steel reinforcement bar (rebar) that can be found on contemporary construction sites around the world can trace its ancestry back to Ransome ‘cold-twisting’ iron rods in the 1880s. It is for this reason, and for the career that encompassed this invention, that the construction historian Carl Condit named him "the man who did more than anyone else in the United States to make reinforced concrete a common structural material” (Hurd, 1996, pp.50). Whilst accounts differ, Ransome was born in Ipswich, England, in either 1844 (Mikesell, 2019, pp.79; Banham, 1983, pp.383; Hurd, 1996, pp.50) or 1852 (Courland, 2011, pp.220). He took up an apprenticeship in his father’s agricultural implements company at the age of fifteen (or, if Courland’s birth date for Ransome is accurate, at the “strikingly young age of seven years old” (Courland, 2011, pp.220). Ernest Ransome’s father, Frederick Ransome, reportedly patented a form of

‘concrete stone’ (Art journal, 1867, pp.192) which was ‘artificial’ in that it was ‘stone’ that could be cast (Mikesell, 2019, pp.79), i.e. poured as a liquid that would become solid, rather than sculpted with tools as other stones are. In doing so, Frederick Ransome’s various formulae contributed to the ‘modern' reinvention of concrete: an ancient technology lost to Western architecture since the time of the Romans (Courland, 2011, pp.135), but achieved again in the 1800s, albeit by different chemical routes.

Ernest Ransome emigrated to the west coast of the United States in the late 1860s (Hurd, 1996, pp.50), or maybe as late as 1870 (Mikesell, 2019, pp.80; Michelson, 2024). He settled in San Francisco and either established the ‘Pacific Stone Company’ in 1868 (Hurd, 1996, pp.50), or merely joining the pre-existing firm (Courland, 2011, pp.222). In either case, Ransome was soon conducting innovative concrete experiments of his own (Courland 2011). By 1884, he had developed a method for reinforcing concrete with ‘cold-twisted’ iron rebar (see Figure 2.xxxxi, below).


(No Model.)

E. L. RANSOME.

BUILDING CONSTRUCTION.

No. 305,226. Patented Sept. 16, 1884.

FIG. 1.

FIG. 2.

B

A

B

Figure 2.xxxxi. An illustration from Ransome's cold-twisted rebar patent (#305,226), 1884.

Twisting a square-section iron rod along its length gave it a spiralled, undulating form that prevented any movement of the bar within the poured concrete once the mix had solidified. Such twisted bars could neither rotate, nor move laterally, within the concrete itself: being effectively *bound* into it. Ransome later reported that the idea for twisting the iron rod came to him when he was absentmindedly twisting a rubber band that he had in his pocket (Ransome & Saurbrey, 2018, pp.3). Architectural engineers of the time were using smooth rods of iron for reinforcement, but, once set, there was comparatively little to anchor such smooth bars within the equally smooth cylindrical voids within which they were entombed. Iron straps and cables were also being experimented with at the time

(Courland, 2011) and many reinforcement designs required troublesome, time-consuming, and costly external fixings to secure them (Ransome & Saurbrey, 2018, pp.3).

In 1884, Ransome presented his ‘cold-twisted iron’ method for reinforcing concrete to the Technical Society of the Pacific Coast. He reports the incident in his 1912 book ‘Reinforced Concrete Buildings; A Treatise on the History, Patents, Design and Erection of the Principal Parts Entering Into a Modern Reinforced Concrete Building’, co-authored with Alexis Saurbrey: “the introduction of the twisted iron was no easy matter, and when I presented my new invention to the Technical society of California, *I was simply laughed down*, the consensus of opinion being that I injured the iron [author’s emphasis]” (Ransome & Saurbrey, 2018, pp.3).

Unfortunately, given that it was 1884, there is no video recording of this event, as there is for the Westwood and Ballmer incidents. We cannot therefore be sure of Ransome’s on-the-spot response to being “laughed down” (Ransome & Saurbrey, 2018, pp.3). However, one can recognise that this event was important enough to him for it to be recounted in his 1912 book, some twenty eight years later. Apparently galvanised by this experience, Ransome continues that: “all this criticism led to exhaustive tests and when the professors found that my samples stood up better than the plain bars, one even went so far as to suggest that I had doctored my samples. This lead me to twist half of each test rod only, and the superior strength of the the cold twisted iron was finally admitted, and in due time, when steel became common, even better results were had with cold twisted steel” (Ransome & Saurbrey, 2018, pp.3).

The first commercial application of Ransome's method was later recounted in a posthumous tribute to him in the 'Architect and Engineer of California' in 1917:

"It is related of Mr. Ransome that many years ago, when an architect in San Francisco wished to find a cheaper sidewalk 'roof' for a basement than one made of steel I-beams and brick arches, Mr. Ransome's advice was asked. Within a few hours Mr. Ransome had solved the problem, and in a characteristically novel fashion. For brick arches he substituted a concrete slab, and for steel l-beams he substituted steel rods bedded in the concrete, but, as he said, he feared that under the tension of a load the rods would slip in the concrete; so his first idea was to thread the ends of the rods and put nuts on the ends. Then it flashed upon him that he could make the entire rod into a 'threaded rod' and the entire concrete into a huge 'nut' threaded there on. Forthwith he took a rod of rectangular section and twisted it in a lathe, making what afterward became famous as the 'Ransome twisted bar reinforcement'. The first reinforced concrete slab was made, and a new era of building construction was initiated."

(Architect and Engineer of California,1917a, pp.101-102).

Other reinforced concrete structures soon followed: the 'fireproof' Arctic Oil Company Works in San Francisco, was completed in 1884; the Alford Lake Bridge (see Figure 2.xxxxii), also in San Francisco, was completed in 1887[154] and is currently the oldest surviving reinforced concrete structure in the world; The Bourn & Wise Winery building in St. Helena, 1888; the California Academy of Sciences display hall and offices in San Francisco, 1889; and the Sweeney Observatory in Golden Gate Park, San Francisco, completed in 1891 (Courland, 2011, pp.225-226) to name but a selection. Ransome's patented system was later employed in the World's first reinforced concrete skyscraper, the Ingalls Building (Prokopy, 2003, pp.27), in Cincinnati, Ohio. It was completed in 1903 (see Figure 2.xxxxiii) and, at sixteen storeys, it "remained the tallest reinforced-concrete skyscraper for 20 years" (Prokopy, 2003, pp.28).

[154] Often cited as the first ever reinforced concrete bridge, it was actually more of an arched pedestrian tunnel (Courland, 2011, pp.225).

Figure 2.xxxxii. The Alford Lake Bridge, Golden Gate Park, San Francisco.

Figure 2.xxxxiii. The Ingalls Building, Cincinnati.

Ransome relocated from San Fransisco to New York in 1897, or thereabouts (Mikesell, 2019, pp.82), leaving “for the east, thinking that his revolution of reinforced concrete would have a better chance out there” (Mars, 2013). This pan-American relocation took place around thirteen years after the Technical Society of the Pacific Coast incident, so it being a key contributing factor in the decision to relocate is probably less likely than if the move had been undertaken sooner.

The concrete reinforcement methods that Ransome invented were publicly vindicated by the infamous San Francisco earthquake of 1906. As is often the case with earthquakes in urban areas, the 1906 quake was accompanied by numerous serious fires that raged for a considerable time after the quake had abated. It was widely reported that reinforced concrete buildings, bridges, and other structures that employed Ransome's patented design fared the quake, and subsequent fires, remarkably better than comparative structures built using brick and mortar (Courland, 2011). For example, written over a decade later, in memoriam, this perspective was presented by 'The Architect and Engineer of California' in an obituary to Ransome:

> "We can bestow the greater credit and honour upon him for the courage and splendid mechanical and engineering ability which he displayed in undertaking the construction of steel concrete buildings of such magnitude in a country subject to earthquakes; and the value of his discoveries has been further accentuated by the fact that during the recent great earthquake in California all of the above structures came through the ordeal unscathed, where buildings of brick and stone in their immediate vicinity were entirely wrecked."
>
> (Architect and Engineer of California,1917b, pp.106.)

There is some scepticism regarding the performance of reinforced concrete structures in the 1906 quake and the fires that followed it. Robert Courland, author of 'Concrete Planet' describes a "propaganda campaign on concrete's behalf" (Courland, 2011, pp.314), drawing attention to several misrepresentations of how well reinforced concrete fared in the face of tremor and fire[155] and going so far as to assert that concrete

[155] Contemporary concrete is not flammable, but it is not strictly fireproof either, merely fire-resistant. Reinforced concrete is generally considered to retain integrity better in an earthquake than brick and mortar structures do. However, intense heat leads to concrete 'spalling' (crumbling in layers) which can be fatal to the integrity of a concrete structure (Courland, 2011). Brick is fireproof (because it has been kilned already), and, unsurprisingly, wooden buildings are a particularly dangerous place to found be during a serious fire: "You are far less likely to die or be seriously injured in a reinforced concrete building than a wooden structure" (Courland, 2011, pp.302).

lobbyists had “twisted the data” to prove the effectiveness of reinforced concrete (Courland, 2011, pp.305). Courland presents convincing evidence, concluding that geographical location, how ‘well’ structures were designed, and how ‘well’ they were constructed tended to have more of a bearing on their ability to withstand the quake and the subsequent fires than whether they were constructed from reinforced concrete, steel, brick, wood, or (as was typically the case) varying syntheses of all four (Courland, 2011).

Ultimately, Ransome’s simple-yet-powerful idea continues to be vindicated to this day in that variable-cross-section rebar continues to be used to reinforce trillions of dollars of concrete across the globe, whether for colossal architectural structures like commercial skyscrapers, factories, shopping malls, apartment complexes, and civil-engineering projects, or considerably smaller projects such as the ‘do-it-yourself’ retaining walls in domestic gardens, or remote livestock feeders, that feature at the other end of the scale.

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Chapter 3).

First Analysis of the Perceived Problem: Designerly Understandings of Humour and Laughter, as Responses to Design and Design Innovation, in Design Discourse and Practice.

- -

3.1). Humour, Laughter, and Designerly Intent.

This chapter continues the examination of the perceived problem of design being laughed at. It does this through a metaphorical lens that is employed to conduct a designerly analysis of the perceived problem. This 'lens' is informed by theories and discourses that concern design histories, design methods, designed artefacts, and design thinking, as well as representations of design and design artefacts in various media.

The chapter is broadly organised into two sections, the content being divided according to design intent, i.e. if the design was intended to be humorous, or not. The first section, 'Design That is Laughed *At:* Responses to Perceived Threats' (3.2), further extends the consideration of why design being laughed at has been perceived by designers to be a problem, and the eschewing of humour and laughter by design, that was introduced in Chapter 1, before performing a brief analysis of the three case studies described in Chapter 2, from a design perspective. The second section, 'Design That is Laughed *With*: How Designers Have Capitalised Upon Humour.' (3.3) examines the manner by which designers have developed, shared, and exploited designerly understandings of humour for their own

ends, for users and audiences, for the ends of capitalism and consumerism, and largely within the confines of the design logic described in Chapter 1.

Whilst segregating chapter content by 'designerly intent with regards to humour' is a rather convenient organisational device, it does pose a problem: in every case the question must be asked — how can one truly know the intent of the designer? If we take, for example, the gashapon[156] 'peanut sniper' illustrated in Figure 3.i. This object[157], whether created as a toy, or a collectable curio or a tiny gewgaw, was in any case designed and manufactured. A number of people decided to bring this little thing into material existence, decided that there was a market-led need or desire for it, decided how to produce it (materially, logistically, and economically), and decided what its exact form would ultimately be.

[156] Gashapon is a Japanese term for the hand-cranked 'pot luck' vending machines that can be found in retail locations throughout Japan. Customers pay money into the machine in exchange for a 'toy'. Unlike other vending machines that afford choice, each item is a random selection from a collectable 'set'. Each toy is delivered in an opaque plastic capsule that prolongs the mystery until it is cracked open. The term gashapon refers to both the machine and the toy: 'gasha' being the machine/mechanism and 'pon' being the capsule. The term is now also used in digital games that simulate these physical artefacts and interactions.

[157] I purchased this object by chance whilst on a tourist trip to Japan in 2008. I mean literally by chance: I put a coin in a gashapon outside a Tokyo Metro station and this object emerged. I only had one coin and there was a poole of ten possible objects depicted on the outside of the machine. This was the object that I wished for at the time, so it has a personal significance for me (but I did end up buying the whole set on eBay well over a decade later).

Figure 3.i. A sniper in a peanut, a small plastic gashapon from Takara Tomy Arts.

The designerly intent is arguably difficult to infer from mere analysis of the object. Is this a sombre or cynical warning, devoid of humorous intent? For those people with a serious nut allergy, the peanut is a spectre of death. A peanut, and/or its derivatives, may be hidden in food, or other products, and may ‘strike’ its victim with no warning and life-threatening effects: much like a sniper hidden on a battlefield or in a hostage crisis or police siege. The analogy seems convincing. Or is this object intended as an embodiment of a cruel design schadenfreude? The majority peanut consumers malicious amusement at the misfortune of the minority nut-allergy sufferers, brought to bear in this tiny plastic assemblage? Alternatively, the intent might be to evoke humour through whimsicality? Is the peanut sniper an artefact intended to delightfully materialise a sort of Dadaist/surrealist incongruity (Johnson, 2022) and in doing so evoke humour? The act of pairing diminutive

military personnel with indehiscent seeds appears to align with the tendency for incongruous pairings in some surrealist art: e.g. Dali's famous 'Lobster Telephone' or 'Mae West Lips Sofa' (see figure 3.ii.).

Figure 3.ii. (Left) Dali's Lobster Telephone (1938) and (right) Mae West Lips Sofa (1937).

Given that the other items in the set of ten[158] (to which the peanut sniper belongs) have nothing to do with nuts, other than the shared context of snacking and domestic consumer settings, and given that similarly incongruous sets of gashapon objects are also produced by Takara Tony Arts (who created these gashapon), and others, this latter explanation seems more likely: they do seem to be intentionally designed to be incongruous (and therefore humorous) 'collectable' oddities (see Figures 3.iii and 3.iv).

[158] Comprised of two sets of five.

Figure 3.iii. (Top left) The remaining ‘snipers’ in demi-set 1: a sniper in a single-serving milk carton; (top right) a sniper in a cherry tomato; (bottom left) a sniper in a pack of chewing gum; and (bottom right) a sniper in a wrapped sweet. Gashapon by Takara Tomy Arts.

Figure 3.iv. More incongruous gashapon: (top left) tempura battered construction vehicles; (top right) animals using human toilets and urinals; (bottom left) pets making press-conference apologies; and (bottom right) geometric seal pups (various manufacturers).

Ultimately, in every case, it is the author of this thesis who has interpreted designerly intent, based upon available and considered evidence, and decided where to allocate content according to the logic of the presentation of the arguments and material explored within this chapter.

3.2). Who is Laughing Anyway?

What do you call a user who does not use? Whilst this question might sound like the first half of a designerly joke[159], or even a thought experiment posed by a design philosopher, this question arose early in the design survey phase of this research because so much of the design that was identified, being presented as humorous, was just that: *presented* as humorous. It was not interacted with in the sense that design objects are often encountered: not touched, not held, not worn, not sat upon or in — just looked at in a publication or on a screen. There was no direct user experience, so the established design dyad of *designer* and *user* seemed inadequate to accommodate those who merely looked at design[160]. Much of this humorous design — for example, the design that is represented in this thesis — was shown to an audience, seemingly for their delectation, but not in the hope that that audience would ever be actually 'use' the design in question. The word *audience* seemed an adequate addition to make the designer/user dyad into a triad[161]. However, Tharp and Tharp have considered this issue and have developed a model that conflates user and audience together (see Figure 3.v).

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[159] According to Tharp and Tharp, the answer is 'an audience' (Tharp & Tharp, 2018, pp.241-243). Not very funny, sorry.

[160] Much design, of course, is primarily intended to be looked at: graphic design being a particularly good example. Graphic designers don't appear to have a problem with the word audience and typically only employ 'user' in the contexts of UX/UI/Web/App design. However, other design professions are less 'oculocentric' (Jones, 2005; Kranz, 2008, pp.94): product design being a particularly good example of a discipline that recognises the value of ergonomic and haptic factors in terms of user experience and design quality. I'm thinking of the difference between the experience of closing the door of a £100,000 car to that of a £10,000 car, for example.

[161] I very briefly courted the idea of employing the word '*usewer*', a neologistic portmanteau of the words user and viewer before (thankfully) discovering Tharp and Tharp's treatment of this user/audience problem. I may employ *usewer* outside of this thesis instead — it's a delightful new word.

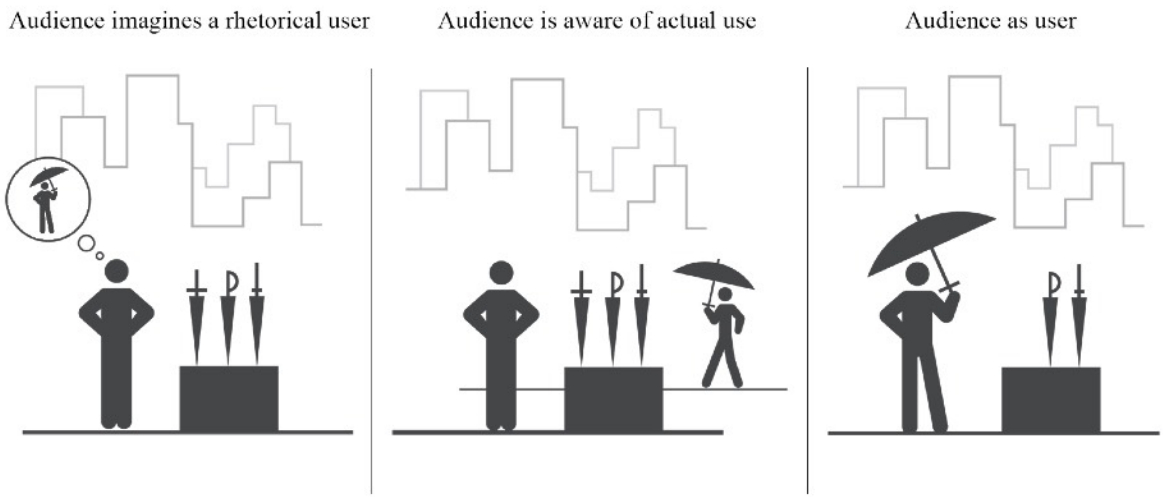

Figure 3.v. Tharp and Tharp's model of the user-as-audience (Tharp & Tharp, 2018, pp.241-243).

Tharp and Tharp's conception of the user involves three states, here illustrated with reference to example artefacts from Tharp and Tharp's 'Umbrellas for the Civil but Discontent Man[162]' project (Tharp & Tharp, 2009) — a selection of three umbrellas with pseudo-sword handles[163] that visually refer to an imaginary "masterful samurai, medieval barbarian, or triumphant cavalryman" (Tharp, 2024) (see Figure 3.vi).

[162] A reference to Freud's 'Civilization and Its Discontents' (Tharp & Tharp, 2009; Freud, 2002)

[163] Proving very popular as one-off discursive design artefacts, these umbrellas were commercially licensed to Kikkerland Design (Kikkerland, 2024) but the idea has been copied many times and sword-handle themed umbrellas are now widely available to the consumer.

Figure 3.vi. Tharp and Tharp's 'Umbrellas for the Civil but Discontent Man' (Tharp & Tharp, 2009).

3.3). Design that is laughed *at*: Perceived Threats and Designerly Responses.

The following sections consider designerly perspectives of moments when design is laughed at — moments when design, designing, designers, and design users are the so-called butt of the joke — and how designers have, or may have, responded to such moments.

3.3.1). Excising Laughter: Why is Design Being Laughed *At* Perceived to be a Problem?

Laughter is a vocal, audible, visible, bodily phenomenon that can be triggered by cognitive and physical stimulus (hearing a joke; seeing a slapstick pratfall[164]; being tickled; and so on). Whilst laughter is explored more fully in Chapter 4 (specifically in Section 4.2), at this stage a quick summary can be made in that laughter is often understood as a social signal and that it possesses a quality that seems to some to be almost *viral*; being commonly referred to as contagious. Whilst some laughter arises from playful and 'victimless' humour, laughter can accompany derision: people have the capacity to laugh at people that they feel superior to and/or things that they find to be incongruous, nonsensical, and/or ridiculous.

When designers *intend* to evoke humour, for various reasons and to various ends (explored in Section 3.3.1), and when audience responses to this intentionally-designed-to-be-humorous design is amusement, then all is good[165]: designer and audience find humour together — *with* one another — united in the appreciation of a shared 'joke', in whatever form it may take (see section 3.3.2 for some possible forms). Although this amusement may manifest for designer and audience at different times and places, and the designer and audience may never meet or otherwise communicate, the amusement is happening in the 'same direction': regardless of geotemporal location, the designer's sense of humour and the audience's senses of humour might be thought of as *aligned*. However, when the

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[164] A *pratfall* is a term imported from slapstick comedy to reference the moment that a comedic actor falls upon their backside for comic effect. According to the OED, a person's posterior has been referred to as their 'prat' (in English) since the 16th Century, but the term pratfall emerged in the comedic theatre of the 1930s. The word pratfall has now been extended, through metaphor, to include other types of mistake or blunder (OED, 2023c).

[165] I mean, not *all* good — not necessarily good in terms ecological, economic, social, cultural, physical, or psychological impacts, material culture, or design histories, but simply and only in terms of a designer setting out to do something (amuse people) and subsequently achieving it (people are amused), and specifically in terms of a personal satisfaction for the designer that such achievement might bring.

designer does not intend to illicit a humorous response to their practice, and it is nevertheless met with laughter, then this can be perceived, as the case studies in Chapter 2 illustrate, as a challenge to the authority of design strategies, methods, ideology, and artefacts, and to the authority of the designer as a professional. In such cases, the designer has presented some designed thing to the world, in all seriousness, and it has been met with amusement, coming back at the designer in the 'opposite direction', perhaps some time later, even quite some time later. In such circumstances, the designer's sense of humour and the audience's sense of humour might be thought of as *misaligned*. Again, this may be regardless of geotemporal location: one can laugh at Greek (e.g. Mitchell, 2012), Victorian, or 'mid-century[166]' (Bradbury, 2020) design artefacts, or any others for that matter, just as readily as contemporary artefacts from the 21st Century (as articulated in Chapter 2, Section 2.1.2).

Taking Derisive Humour Personally.

Given the pervasive nature of the problem solving model in design, and the positivist rationalism that underpins it, as fundamental underlying constructs of a certain design logic (as outlined in Chapter 1, Section 1.2), derisory laughter can be interpreted as a declaration that the design in question is irrational and/or illogical in terms of a design logic, and accompanying rhetoric, that insists that design provides linear and effective *solutions* to *problems* and that designers are, ergo, *problem solvers* (see Chapter 1, Section 1.2). Moments of derisory laughter may thereby present as moments of perturbation for designers: moments when the fundamental and foundational assumptions upon which the logic of their professional practice relies are visibly and publicly undermined. In such moments, professional authority has been perceived to have been lost and a symptom of

[166] Meaning, in design contexts, mid-20th Century, i.e. the 1950s or thereabouts (Bradbury, 2020).

this loss of authority is humour and laughter. In these moments, design's control over humour has been lost. Such perturbations may have consequences, especially if designers take steps to mitigate them, and these consequences may have implications for design and design innovation. Some consequences might even be more appropriately classed as *threats* to design and design innovation. Whilst not always the case, many designers are personally and intimately connected to their practice: the boundaries between a designer's sense of their personal self, their professional self, and the embodiment of both in the artefacts that they have designed may be fuzzy, fluid, undecided, or even altogether unconsidered. When questioned, designers regularly refer to "*my* work", "*my* practice", or "*my* project(s)" (See Arslan, 2008, pp.50; Bouroullec & Bouroullec, 2008, pp.78; Claesson, Koivisto & Rune, 2008, pp.90; Cobonpue, 2008, pp.96; Crasset, 2008, pp.106; Häberli, 2008, pp.224; Hadid, 2008, pp.230; Maurer, 2008, pp.368; Norguet, 2008, pp.406; Venlet, 2008, pp.522[167]), and/or "my approach [method]" (See Blaess, 2008, pp.74; Massaud, 2008, pp.352). The possessive 'my' indicates a strong personal connection between designers and their design practice: it is not just work, it is *their* work. It is not just design, it is *their* design. Laughter that is perceived as derisory, even if primarily directed at a designed artefact, may therefore be interpreted, and emotionally *felt*, by that artefact's designer(s) to be a personal attack. In the final case study detailed in Chapter 2 — Ransome's cold-twisted rebar — Ransome states: "when I presented *my* new invention to the Technical society of California, *I* was simply laughed down [author's emphasis on both counts]" (Ransome & Saurbrey, 2018, pp.3). Ransome clearly claims the design to be his — "*my"* — and identifies that it was he — "*I*" — that was laughed at, rather than his design or even *the* design being derided. This idea of personal possession is not just

[167] A few of the designers in this list were working collectively and therefore used the word 'our': the plural equivalent of the possessive 'my' — I therefore include them in this list with confidence.

volunteered by designers, it is also pushed-upon them: "*your* design", rather than '*the* design' being a common indicator of the perceived personal entanglement of the designer with *their* design[168], and the ways in which their design, and its successes and/or failures, are taken to be the successes or failures of the designer themselves. One might also look to Westwood in this instance, at the moment explored in the first case study of Chapter 2 (Section 2.2.1). In this moment, Westwood appears to be experiencing a personal emotional response to the laughter that is being directed at her[169] design (see Figure 3.vii).

Figure 3.vii. Vivienne Westwood reacts to her designs being laughed at on the BBC's 'Wogan' television show in 1988.

Designers on the 'receiving-end' of perceived derision, indicated by laughter, may make decisions to downplay or mediate such derision and/or to avoid or minimise the chances of derision in the future. It may be that case that such designers, for example Ransome in Chapter 2 (Section 2.2.3), seek vindication for their design(s) as metaphorical armour agains future derision. Ransome's response to being "laughed down" (Ransome & Saurbrey, 2018, pp.3) at the presentation of his 'cold-twisted iron' concrete reinforcement methods to the Technical Society of the Pacific Coast was to conduct exhaustive empirical tests upon his iron bars in order to better refute any future accusations of illegitimacy, with

[168] I am clearly just as guilty of this personalisation-by-language as anyone else.

[169] …and again.

accompanying derisory laughter, that might be levelled at his design. Other designers might not be willing or able to react as Ransome did: especially in circumstances where relatively simple and controlled experiments (such as twisting and load-testing a rod of square-section iron) cannot be conducted, or when results might be difficult to isolate and/or obtain, highly interpretative, and/or difficult to explain. Ransome's iron twisting experiments might be categorised as relatively *tame*, especially when compared to more '*wicked*' (Rittel & Webber, 1973; Buchanan, 1992) problem contexts in which designers might work: for example, measuring the relative success of an advertising campaign to improving sales (or failing to). In any case, even when the seeking of empirical proofs *is* possible, it might not occur to the designer in question to do so.

Self-censorship.

The previous chapter accounted for a number of ways in/through which design can be laughed at — but there are many more. The reality of multiple opportunities for laughter to be directed *at* design puts pressure upon designers: when releasing their creations into the world, they have to navigate an environment of potentially hostile derisory responses. Designers may chose to avoid the risk of derision by self-censoring avant-garde, innovative, and/or challenging ideas in favour of repeating previously successful and/or conservative design approaches drawn from established orthodoxies of practice. In this way, anticipation of, or *fear* of, derision and derisory laughter may have negative consequences for design innovation in terms of forestalling it. The consequences of this fear were apparent to Hiroki Asai, when he was head of Apple's Creative Design Studio[170]. Asai has stated that "Fear is the greatest killer of creativity" (Aaker & Bagdonas, 2020,

[170] Hiroki Asai left Apple in 2020, after 23 years. At time of writing, Asai is Chief Marketing Office for Airbnb, the international holiday rentals company.

pp.55). Such fear-driven risk aversion may manifest in personal decision making, but it may also propagate through design teams, and the hierarchies of commercial and non-commercial design organisations. The laughter that has been previously levelled at design, as illustrated in Chapter 2 (especially Section 2.1), may contributes to a state of unease amongst designers who do not wish to be laughed at, nor have their design laughed at, yet are aware that, thanks to the mechanisms of the media, and social media, this is a risk run by any designer whose work is in the public sphere.

Designers engaging in self-censorship present a significant problem for this research. As discussed in Chapter 1, design histories are histories of *things* as much as they are histories of people, often more so (see Section 1.1.3). Whatever the historiographical nuances of a particular design history, it will likely reference tangible, observable *things*: designed artefacts. Herein lies the problem: if a designer self-censors an idea for fear of derision, fear of being laughed at, it will not become an observable thing. Unless this decision is reported, or the abandoned idea is otherwise evidenced somehow, then such a self-censoring event will very likely remain inaccessible to design historians and other such researchers. In histories that give primacy to designed things, the gaps, the absences of things, especially if unevidenced, will consequentially be unaccounted for. This problem calls to mind Abraham Wald and so-called 'survivorship bias'. Wald's story has been widely reported (see especially: Lockwood, 2021[171], but also Wallis, 1980; Mangel & Samaniego, 1984; Casselman, 2016; and the greater, greyer media) largely because it presents a memorable and readily understandable parable that neatly demonstrates the fallacy of survivorship bias. Although suspected to be somewhat apocryphal (Casselman, 2016), accounts describe a situation in World War II whereby Allied forces began

[171] Wald features heavily in Lockwood's book: 'Fooled by Winners' (Lockwood, 2022).

recording the damage inflicted upon their bombers once they had returned from their missions to their airbases (see Figure 3.viii.). An idea was floated, at the time, to add extra armour to the plane's fuselage at points where projectile damage was recorded: the logic being that this would enhance survivability because it would reinforce locations that had been empirically proven to have been hit by projectiles and shrapnel. This logic appears, at first, to be sound.

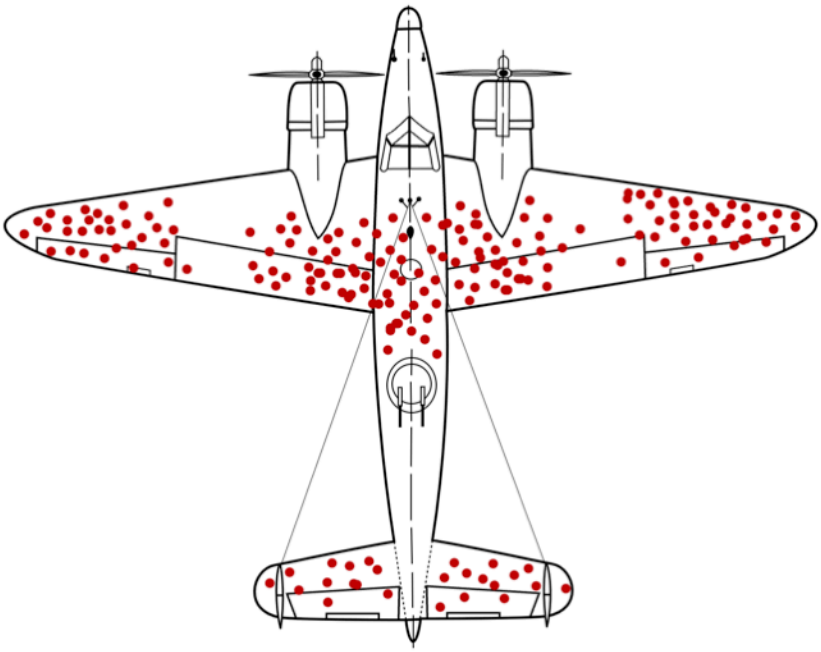

Figure 3.viii. A representation of a damage-log that aggregates damage-data from a number of individual aircraft, superimposing such data to illustrate patterns in the position of projectile holes in surviving bombers that have successfully flown their missions and returned to their airbases, despite being damaged.

At this time, and in light of the war effort, Abraham Wald, a Hungarian-born statistician then living in the USA and working for The Statistical Research Group at Columbia University (Wallis, 1980), was tasked with "the problem of armouring planes" (Casselman, 2016). Wald made a convincing alternative argument based upon the same

damage reports: proceeded from the insight that only the returning aircraft could be examined (Wald, 1943). He pointed out that the damage recorded from the returning aircraft was inherently *survivable,* inducing that the areas that were not recorded in the damage logs represented points where damage proved *unsurvivable* — namely the nose, the cockpit, the engines and engine housings, certain areas of the wings, and the tail section of the craft's body. Aeroplanes that sustained unsurvivable damage did not return to base to be assessed, and were therefore not represented in the damage-logs — hence the bias fell strongly to the *surviving* craft. Wald recommended the opposite course of action to the initial plan: to instead armour the apparently 'damage-free' areas indicated by the damage logs, to relocate "cooling and lubrication systems deeper into the wings and fuselage" (Lockwood, 2021, pp.78) and to employ the use of self sealing fuel tanks (Lockwood, 2021, pp.78). Wald's hope being to reduce unsurvivable damage to the level of survivable damage, and thereby improve the chances that more bombers would return home (this account paraphrased from Wald, 1943; Lockwood, 2021; Mangel & Samaniego, 1984; Casselman, 2016). Wald's insight in estimating the vulnerability of various parts of an aircraft (Wald, 1943), and his agile thinking, has left an impression upon history, and survivorship bias is a concept that is widely recognised for its value, being especially important to the fields of 'operational research' and 'statistical mathematics' (e.g. Mangel & Samaniego, 1984; Wallis, 1980; Casselman, 2024), design (e.g. Wise, 2022), medicine (e.g. Baum, 2022), and, of course, military fields — Wald's 1943 paper 'A Method of Estimating Plane Vulnerability Based on Damage of Survivors' (Wald, 1943) being declassified and "approved for public release" by the US Navy in 1980 (Defence Technical Information Center, 2024).

In this analogy, the designers' self-censored ideas are the missing aeroplanes and we can do no more than suspect their existence and muse upon their demise, whilst design histories continue to archive, account for, and analyse the *things* that eventually made it into the world: tangible, perceivable, design artefacts. This is a bias of design histories: important things, in the case of self-censored ideas and survivorship bias (pre-Wald at least), may be unseen, unmeasurable, undetected, and unaccounted for.

This is a different form of absence to design histories that ponder other 'missing' innovations: moments where things seemed to be 'in place' for an invention or innovation to emerge in design history, but it did not — at least according to available evidence. For example, since the discovery of Mesoamerican wheeled toys in the late 19th Century (see Figure.3.ix, below), various archaeologists, historians, anthropologists, and others, have asked 'why were these diminutive wheels not scaled-up to larger sizes? Why did they not enable the chariot for war, the barrow for labouring, the cart for commerce, the bicycle for commuting and leisure, and all of the other wheeled vehicles that we currently enjoy in the 21st Century?' (for a fascinating consideration of Mesoamerican wheeled toys, within which such questions are explored, see Urcid, 2017).

Figure 3.ix. A Mesoamerican wheeled toy, manufactured 700-800CE (Urcid, 2017).

Others have noted the invention of steam power in Classical Antiquity, again at a small scale and employed in the design of a toy-like object: a curio with no apparent applied function other than to delight and intrigue its audience (see Figure.3.x, below). This object is the ‘aeolipyle’, a radial steam turbine that is an invention attributed to a Grecian named Hero (sometimes Heron) who was living in Alexandria, Egypt, in 150-BCE (Al-Attar & Lambart, 2020). The aeolipyle[172] consists of a sealed metal chamber from which two pipes arise. The pipes are connected to a hollow metal sphere, supporting it, but in such a way that the sphere can rotate in one plane. The interior of the pipes connects to the interior of the sphere. Exiting the sphere are two directional nozzles, on opposite sides of the sphere to one another and facing in opposite directions along the line of the sphere’s rotation. When the lower chamber is filled with water, and heated with fire, steam travels

[172] Also known as an aeolipile, eolipile, Hero’s engine, or Heron’s engine.

up the pipes and collects in the sphere. As the internal atmospheric pressure of the sphere increases, steam exits the nozzles and the sphere begins to rotate. As the heat of the water in the chamber increases, so steam pressure increases, and the speed of the rotation increases. The results can be quite dramatic in terms of speed, steam, noise, and mechanical spectacle (see Figure 3.x again).

Figure 3.x. The aeolipyle: (left) a model at rest; (centre) a drawing; and (right) a model in use — the nozzles are blurred due to the speed of rotation[173].

Paul Keyser, and others, have asked why understandings of the aeolipyle, and related technologies[174], did not engender an industrial revolution in the Ancient World (Keyser, 1992), being as steam power was so central to the Industrial Revolution that began in the 1700s and so radically transformed Europe. Whilst Keyser's answers concerning imperatives of labour and distribution of knowledge are convincing, one cannot

[173] The model on the right can allegedly reach rotation speeds of 2400rpm and can produce up to 4w of power — the aeolipyle being a characteristically high-rev/low-torque device (Lewis, 2018).

[174] For example, cranks and connectors: "the Hierapolis sawmill, a Roman water-powered stone sawmill at Hieropolis, Asia Minor (modern-day Turkey), dating to the second half of the third century CE" (Hansen, Panwar & Vlosky, 2014, pp.42) was "the earliest known machine to combine a crank with a connecting rod" (Bruzzone & D'Addona, 2019, pp.580).

help but wonder what the 21st century would be like now, were the Industrial Revolution to have occurred two millennia earlier.

Mesopotamian wheeled toys, aeolipyles, and other such objects have been mentioned here because they tend to be presented as moments of missed opportunity rather than self-censorship: i.e. designers of the time did not *have* the 'big idea', rather than they had it and abandoned it of fear of derision. Although this interpretation is rather speculative in the face of a lack of evidence either way. Self-censorship, for fear of derision, has previously been recognised by designers as problematic. For example, international interaction design agency IDEO place "defer judgement" at the very top of their "Rules of Brainstorming" list[175] (IDEO, 2024). IDEO assert that "creative spaces are judgment-free zones — they let ideas flow" (IDEO, 2024) and appreciate that judgements forestall creative processes and threaten innovative design ideas. Fear of judgement engenders self-censorship, which impedes the flow of ideas, especially innovative, intellectually risky, or avant-garde ones and unspoken ideas cannot come to fruition in themselves or contribute to other ideas or projects.

Good or Bad Design?

Many designers, critics, and theorists have asserted definitions of 'good' design, effective design methods, and designerly best-practice (see Chapter 1 for some examples). These varied design ideologies, embodied in design artefacts, aesthetics, and tastes, and expressed through design discourses, have come to characterise key periods in design history: for example, the Art and Craft Movement's reverence for the forms of nature, the

[175] The other six being: 'encourage wild ideas'; 'build on the ideas of others'; 'stay focused on the topic'; 'one conversation at a time'; 'be visual'; and 'go for quantity' (IDEO, 2024).

organic undulations of Art Nouveaux, the geometric indulgences of Art Deco, the uncompromising minimalism of designers such as Dieter Rams, who has asserted that good design should be, amongst other things, “as little design as possible[176]” (Rams, 1989, 2017, 2020). Other definitions of good design are formulated in direct opposition to such assertions. Before Rams, and in many ways his precursor in terms of design aesthetics, Ludwig Mies van der Rohe was one of a number of people[177] to have declared that “less is more” (Colombo, 2017, pp.1267). Later, Robert Venturi’s response to van Der Rohe’s assertion was to proclaim that “less is a bore” (Costanzo, 2018, pp.284). These ideals are visually embodied in the work of both designers, see Figure 3.xi.

Figure 3.xi. (Top) Mies van der Rohe’s MR10 chair, designed in 1927, mass produced by Knoll in 1967; (bottom left to right) Venturi and Denise Scott Brown’s Queen Anne chairs:

[176] The characteristic functionality and aesthetic minimalism of Ram’s practice, and others like him, is still deeply enmeshed in contemporary Western ideals of good design, decades after his passing.

[177] But he is arguably the designer most well known for saying it.

‘Gothic Revival’, ‘Sheraton’, and with ‘Grandmother’ print, also for Knoll, in 1984.

There is a long-held Western belief that ‘good-looking’ people, and good-looking things, are somehow virtuous, and that ‘ugly-looking’ people and ugly-looking things are somehow less so, possibly the opposite: degenerate or debased (Eco, 2010, 2011). This formidable and pervasive idea can be traced back at least as far as the Ancient Greeks who also (as Chapter 4 demonstrates) conceived of humour and laughter as being directed at malformation or deviation from norms of appearance, belief, and/or action. By these rationales then, beautiful design is ‘good’, and ugly design is ‘bad’, but also — good design *is not* funny and ugly design *is* funny. In other words: *funny design must be bad design*. Any designer being confronted with unanticipated laughter, then, might understandably be concerned that their design practice is being judged to be ‘bad’.

Concern regarding unanticipated laughter does not stop at the designer, but can extend to other stakeholders in the success of the design in question. Being as the majority of design is strongly anchored to commercial markets, any design that is in danger of becoming a ‘laughing stock’ is going to trouble internal stakeholders from marketeers to mangers (within design firms), and also their external investors. Design history is littered with similar examples of design that has been interpreted as poor, ineffective, or otherwise distasteful, and derided through humour — often with costly results in terms of financial loss and reputational damage for the companies involved. For example, Chapter 2 (Section 2.1.1) mentions the Ford Edsel which is often described as a laughing stock car design and “Ford lost $350 million on the Edsel, equivalent to almost $3 billion in 2017 dollars” (Museum of Failure, 2024). The media, of course, has tremendous power to influence,

perpetuate, and exacerbate in such situations, as it did for the Edsel (Museum of Failure, 2024).

Novelty.

Design is typically a forward-focussed profession that is often concerned with new technologies, new aesthetic trends, and new materials. This preoccupation for novelty, fuelled somewhat by marketing and advertising, is shared by many users, consumers, and design audiences. In an episode of the popular animated comedy 'The Simpsons', where the characters Homer, Apu, Barney, and Principal Skinner decide to form a barbershop quartet, they soon encounter a problem: what to name their new singing group. Principal Skinner articulates this problem rather neatly, stating that: "We need a name that's witty at first, but that seems less funny each time you hear it" (The Simpsons, 1993). The joke here, of course, is that Skinner is misunderstanding a reality of much humour: that a joke often, but not always, feels 'funniest' the first time that it is heard, but progressively less so every time thereafter. Skinner appears to take this insight as a 'design brief' for the quartet's name, rather than a typical consequence of encountering, and repeatedly re-encountering, something that is designed to be humorous. In the end, the characters settle upon Apu's suggestion of 'The B-Sharps', which seems to satisfy Skinner's imagined brief (see Figure 3.xii, below).

Figure 3.xii. ‘The B-Sharps’ from left to right: Principal Skinner, Apu, Barney, (Nigel, a theatrical agent), and Homer. (The Simpsons, S05:E01, ‘Homer’s Barbershop Quartet’, 1993).

This animated scene might have a special resonance for the designer, particularly the designer of things that are intended to be funny. Principal Skinner draws attention to a common characteristic of the legacy of novelty: that the intensity of humour often diminishes with repeat exposure to the stimulus. Designers might perceive this to be a problem because, if a key attraction of certain design is its humorousness, and humorousness depreciates with repeated user interaction, then the attractiveness of the design is also depreciating with repeated user interaction — and likely at a different rate that that of aesthetic attraction. If an aim of design is to create attractive things (as is often suggested) then any perceived depreciation of attractiveness might be understood, by designers, to be a threat to the success-legacy of their design. Design research concerning user and consumer relationships to design artefacts tends to be short term, rather than longitudinal (Kujala et al, 2011; Wooley, 2003; Karapanos et al, 2009, 2010), and focussed very much upon the aesthetic appeal of design (Pol, Park & Reimann, 2012, pp.310). Unfortunately, and rather frustratingly for this research: “we know little to nothing about responses to humorous-looking designs” (Pol, Park & Reimann, 2012, pp.310). In the absence of conclusive research, one is forced to imagine that the initial attraction to a humorous design artefact will mature into *endearment,* i.e. a ‘love’, or at least a ‘fondness',

for the artefact as the intensity of the humour wains over time. In such cases, the positive experience of humour helps to endear the design to it's owner/user.

Taste and Status.

Materiality has a deep history of being related to social status with people of high status accruing, maintaining, and being identified by their material wealth: emperors and empresses, kings and queens, and other heads of state, religious leaders, heads of industry, tech CEOs, and the like owning land, architecture, the most advanced technologies, precious clothing and jewellery, and so on. At the other end of the scale, many struggle for rights to land and water, and for the funds to purchase basics such as food and clothing. Most people, of course, find themselves somewhere in between. Especially evident in capitalist cultures, many people 'chose' to express their social status through the design items that they surround themselves with, and choose to maintain and elevate their social status through the acquisition, maintenance, and/or consumption of designed things. Social status is, to a certain extent, given, depending on the circumstances one is born into, but where there are the freedoms to do so, status is negotiated within societies. The word 'choice' is used above, but this is somewhat illusory as social status is of course largely decided by the judgements of others, not the choices of individuals, and choices are often limited by factors such as spending power and social influence. This presents another concern for design (in the context of this research): if there is, at best, an air of triviality and superficiality surrounding humorous design, or, at worst, design that is found to be humorous has been considered bad design or undesirable design, then the usual drivers for the acquisition of designed things to maintain or advance status would dictate that humorous design should be avoided. To put it another way: if good/desirable design things

are ‘serious', and good/desirable design reflects positively upon its owner/user in terms of social status, then humorous design (the converse of the serious) is not good/desirable and reflects negatively upon its owner/user in terms of social status. People may want to own and use design that is laughed *with* (see Section 3.4) but are unlikely to aspire to own design that is laughed *at.* In the same way that designers take derisory humour and laughter that is directed at their design personally (Section 3.3.1), owners and users of design are likely to take derisory humour and laughter that is directed at *their* design personally. Users are likely to be as susceptible to ‘jeer pressure’ (Janes & Olson, 2000) as designers are. It is therefore of concern to market-led commercial designers to create design that is not laughed at (which is a potential risk to all design). The further that the design in question departs from affirmative design norms, the higher the chance that it will be found incongruous, and therefore humorous. For example, Balenciaga’s ‘Romeo’ collapsible-heel patent-leather loafers (Balenciaga, 2024) sport a dramatically extended toe-box which has led them to be found funny[178] (see Figure 3.xiii, below). Balenciaga’s business model is based on exclusivity, hence the comparative high cost/high value of their products. If the high value is threatened, for example by humour, then the high cost cannot be justified and maintained and the business model is threatened.

[178] The £745 price tag (at time of writing) seems to somehow heighten the humour by placing them out of the range most consumer’s ‘reasonable purchase’ budget.

Figure 3.xiii. Balenciaga's 'Romeo' collapsible-heel patent-leather loafers (Balenciaga, 2024).

3.3.2). Eschewing Laughter: Hesitancy, Caution, Distancing, and Denial.

In light of the reasons identified in Chapter 1 (Section 1.3), Chapter 2, and Section 3.3.1 above, and others identified below, many designers have shied away from humour and considered humorous dimensions to their practice to be disadvantageous. Many authors and theoreticians who write about humour have reported a perception that their efforts have been demeaned because their focus is humour — such efforts being considered somehow trivial rather than than 'serious' (see, for example, Provine, 2008; Morreall, 1983; and at least as far back as Francis Hutcheson in 1750 (Hutcheson, 2010)). There may be a similar perception in design.

Through his investigations of critical design, Matt Malpass is one of few writers who have questioned the roles of humour in critical design, and the perceptions of humour by critical designers. Malpass observes that "humour is an important element in critical

design practice" (Malpass, 2012, pp.104), but also expresses a concern that there is "danger of critical design practice being seen as a form of quasi art or as a form of design entertainment enjoyed for its humour or novelty rather than for its insight" (Malpass, 2012, pp.227). This concern is shared by Dunne and Raby who have stated that "a danger for critical design is that it ends up as a form of sophisticated design entertainment: 90% humour, 10% critique. It needs to avoid this situation by identifying and engaging with complex and challenging issues" (Dunne & Raby, 2007).

Malpass also reports that critical designers exhibit nuanced concerns for the specific nature of the humour employed in, and associated with, critical design practices, and how the humour of such practices is understood and categorised by audiences. For example, he points again to Dunne and Raby who recognise the value of satire, and designerly wit, but are concerned that certain forms of irony "can be jokey and too simplistic and one-linerish" (Malpass, 2012, pp.104). Elsewhere, Dunne and Raby have stated that:

> "humour is important but often misused. Satire is the goal. But often only parody and pastiche are achieved. These reduce the effectiveness in a number of ways. They are lazy and borrow existing formats, and they signal too clearly that it is ironic and so relieve some burden from the viewer. The viewer should experience a dilemma, is it serious or not? Real or not? For Critical design to be successful they need to make up their own mind."
>
> (Dunne & Raby, 2007).

Chindōgu.

Even a cursory search for 'funny design' is likely to turn up one or more curious artefacts known as 'chindōgu'. The term chindōgu was coined by journalist/inventor, founder and president of the 'International Chindōgu Society', Kenji Kawakami in 1985

(Kawakami, 1997, pp.5). Kawakami explains that ‘Dōgu’ is the Japanese word for tool and ‘chin’ might be best translated as ‘unusual’ (Kawakami, 1997, pp.5).

Chindōgu are described as “unuselessness” (Papia, 1998). According to Dan Papia, unuseless objects cannot strictly be deemed useless, however they cannot be labeled useful either: that is to say that their usefulness is vastly outweighed by the problems that they cause in use, or as a consequences of their use (Papia, 1998). Chindōgu tend to perform one function to the detriment of other important practical, social, temporal, and/or cognitive considerations: see Figure.3.xiv.

Figure.3.xiv. Two chindōgu: (left) ‘Contact Lens Protectors’ that are designed to catch a falling contact lens, but seriously impair eyesight; and (right) ‘Earring Safety Nets’ which catch expensive earrings should they fall from the ear but are quite impractical and, one imagines, rather cumbersome and uncomfortable (Kawakami, 1995).

In the context of chindōgu, Kawakami describes humour as a by-product of the design process, analogous with mineral slag heaps and industrial run-off (see ‘Appendix 5’ ‘The Ten Tenets of Chindōgu’ (12.5). He downplays the humorous dimension of chindōgu to such an extent that his ‘Ten Tenets of Chindōgu’, the guiding principles by which chindōgu are created and by which their embodied ideology is understood, include a stipulation that “Humour must not be the sole reason for creating a chindōgu. The creation of chindōgu is fundamentally a problem-solving activity. Humour is simply the by-product of finding an elaborate or unconventional solution to a problem that may not have been that pressing to begin with” (see ‘Appendix 5’ (12.5), Tenet 6). This tenet exists despite the fact that it is the propensity of chindōgu to amuse, and that this facility appears to drive their dissemination and popularity. Kawakami does not state that chindōgu should not, or cannot, be funny, likely because such a ruling would be impossible to guarantee or police, and difficult or unconvincing to justify. He only states that the humour should not be the sole reason for any chindōgu to be created. It is not a desirable or defining characteristic of chindōgu. Maybe this is part of a knowingly and shrewdly played game? Equivalent to a deadpan comedian such as Jack Dee, Leslie Nielsen, or Buster Keaton. The chindōgu are rendered funnier by their deadpan delivery (note that no one is laughing, or even smiling, in any of the scenario photos of chindōgu that are presented in this thesis). The deadpan delivery of the chindōgu somehow heightens the humour for the audience. In the context of critical design, which chindōgu arguably are, Dunne and Raby have noticed the effectiveness of such deadpan humour stating that of all the forms of humour “deadpan and black humour work best” (Dunne & Raby, 2007). Whilst the humorous potential of chindōgu appears to be played down by Kawakami, chindōgu do afford speculative and insightful comment upon the nature of life in contemporary Japan, and other parts of the world in which they are created.

3.4). Design That is Laughed *With*: How Designers Have Capitalised Upon Humour.

Notwithstanding the perceived threats that humour may present (i.e. the impression that may have been given by this thesis thus far, especially Chapter 2), design has not always shied away from humour. As design engineers have created combustion engines to exploit the energetic potentials of petrochemicals, similarly, some designers have recognised that there are potentials that might be exploited in making design that is found to be funny (laughed *with*, of course). As there are inherent risks and rewards in harnessing the explosive potential of gasoline, so there are inherent risks and rewards inherent in exploiting the potentials for designing humorous things, and they therefore need to be designed and managed conscientiously and attentively. This section considers how designers have capitalised upon potentials for the exploitation of humour to contribute to the achievement of designerly ends, whether commercial, personal, and/or social, and why designers might want to intentionally evoke laughter. A broadly Marxist understanding of Capitalism purports that it is a system of exploiting resources for capital gains (Marx, 2003). As any given design history demonstrates, designers have played important roles in such processes. Taking humour then as a potential resource, in the manner of a mineral seam, forest, or herd of prey animals, this section examines some ways in which design has harnessed the power of humour whilst attempting to maintain control over it.

3.4.1). Encouraging Laughter: If Humour is So Problematic, Then Why Do Some Designers Encourage It?

Humorous practice is not evenly spread across the fields of design. For example, advertising designers and graphic designers have a comparatively well established history of employing humour in their practice — some seminal texts on this history being Heller

and Anderson's 'Graphic Wit: The Art of Humor in Design' (Heller & Anderson, 1991) and Gulas and Weinberger's 'Humour in Advertising: a Comprehensive Analysis' (Gulas & Weinberger, 2006) — other designers, such as product designers, do so far less often, and engineers even less: humour being unmentioned in many books concerning other design disciplines and their histories, or textbooks intended for their teaching (for example[179] Martin and Hanington's 'Universal Methods of Design' (Martin and Hanington, 2012), or Webb's 'Design Principles' (Webb, 2010) which covers juxtaposition (pp.150-151) and incongruity (pp.152-153) but not their potential to give rise to humour). This is not unexpected, of course. Some key aims of advertising designers and graphic designers are to capture audience attention, to connect to people with a message, and for that message to be both memorable (Van Kuilenburg, De Jong & Van Rompay, 2011) and sharable — all things to which humour might make an active and valuable contribution. By contrast, engineering designers and product designers are typically driven to deliver functionally effective and reliable design artefacts, or at least these are the aims described in much design rhetoric (e.g. Garner & Evans, 2012). Ideally, this functional/reliable design being as aesthetically pleasing, in terms of form, as tastes dictate and is possible in production terms: usable, dependable, and desirable. It is therefore often the case that the advertising for a product, for example, is humorous in order to engage its audience and increase mind-share in marketing terms (Rath & Mohaptra, 2013, pp82; Slaughter, 2015, pp.20) — which influences purchasing decisions (Madden, 1991, pp.8) — but the product itself is not humorous at all: likely being designed according to well established principles of form and function that have developed iteratively since Sullivan introduced the idea (Sullivan, 1886), and that leave little to no room for humour to occur. For example, the comedian

[179] Singling out these two otherwise very useful and accomplished books as examples of the neglect of humour by design feels rather unfair — they are both excellent works — but I am trying to make a point that is important to this thesis: that many designers rarely consider humour, if at all.

Peter Kay appeared in a long-running anthology of comedic adverts for ‘John Smith’s’ ale in the UK between 2002 and 2010 under the banner ‘No Nonsense’. The adverts are funny, but the beverage is not: it is just ale served in a pint-sized glass or a metal can. In an unrelated example from 2020, the navigation app ‘Waze’ promoted itself through an extended ‘tragi-comedy’ commercial that featured a down-on-his-luck inflatable ‘air dancer’ (in this case a blue man), amongst a host of other costumed street-advertisers whose livelihoods have been threatened by location responsive smartphone apps. The advert was funny, but Waze is not: it is a navigation app that strives towards efficiency and reliability and *away* from incongruity. Another long-running and humorous advertising campaign, this time for Specsavers (a UK high-street opticians and spectacles store) consists of an anthology of humorous vignettes of people getting into regrettable situations due to their poor eyesight — a hotel guest, clad initially in a towel, mistaking a steamy kitchen for a sauna; an elderly couple mistaking a rollercoaster for a bus; a vampiric Count Dracula mistaking a tanning bed for his coffin, with disastrous consequences for him, etc: all accompanied by the tagline ‘Should’ve gone to Specsavers’ (see Figure 3.xv, below). The adverts are funny, but the spectacles are not — likely being designed to strike a balance between utilitarian performance and aesthetic taste — and neither is the commercial experience of purchasing them.

Figure 3.xv. (Left) still images from Waze's 'air dancer' advertisement and (right) from an advert in the 'Should've Gone To Specsavers' anthology campaign, featuring a cameo appearance by celebrity chef Gordon Ramsay.

Differentiation and 'Personality'.

Rather than employing humour to advertise non-humorous design, many designers have designed things that are intended to be humorous in and of themselves, typically in response to market-led wants, needs, and/or opportunities. Articulating well-established late-Modernist inspired ideals that are tenacious and pervasive within design, especially product design, famous product designer Dieter Rams offers advice in his 'Ten Guiding Principles for Good Design' (Rams, 2017). Principles Five and Ten state that: "5. Good Design is unobtrusive: products fulfilling a purpose are like tools. They are neither decorative objects nor works of of art. Their design should therefore be both neutral and restrained, to leave room for the user's self-expression" (Rams, 2017, pp.88), and "10. Good design is as little design as possible: less but better – because it concentrates on the essential aspects, and the products are not burdened with non-essentials. Back to purity, back to simplicity!" (Rams, 2017, pp.89). In searching for an approximation of a 'good' drinking vessel in Rams' design terms: minimalist in terms of form and colour, inexpensive, unobtrusive, true to materials, etc. and given to contemporary manufacturing

methods that can churn out such items in their millions, such ideals might be seen to be exemplified in, for example, the design of IKEA's latest iteration of their 'Dinera' mug (see Figure 3.xvi). Rams, being somewhat aligned with Adolf Loos (Loos, 1997) in his rejection of ornament[180], does not to expand upon how an unobtrusive minimalist mug might "leave room for the user's self-expression" (Rams, 2017, pp.88), unless the self that they want to express is similarly plain and unobtrusive.

Humour offers important opportunities in the form of differentiating one mug *design* from another (i.e. in terms of different mug 'models'), one *individual* mug from another (e.g. when many mugs are together on a kitchen shelf), but also one *owner/user* from another (people expressing their personal sense of humour through their designed things). This can be observed, for example, through the well-established (but rarely studied) category of design artefact: the 'funny mug'. Figure 3.xvi presents two such funny mugs in reference to IKEA's Dinera mug: a widely available 'freak in the sheets' mug that puns a sexual reference in an office context, or rather an *Office* context as it visually references the 'Excel' software that is an important part of the Microsoft Office software-suite, and the original, now variously copied, 'Knuckle Duster Mug' from British design brand 'Thabto[181]' who specialised in designing, producing, and selling "unconventional gifts, lifestyle items and home accessories that delight and inspire" (Thabto, 2024) — often by being intentionally humorous in some way.

[180] Meaning ornamentation/decoration (Loos, 1997).

[181] A design double-act consisting of Steven Smith & James Wosiek: Thabto (Two Heads Are Better Than One) was established in 2008 and expanded and rebranded as Pikkii in 2020 (Thabto, 2024).

Figure 3.xvi. Three mugs: (left) IKEA's 'Dinera' mug, (centre) a generic 'freak in the sheets' mug, and (right) Thabto's 'Knuckle Duster Mug'.

The freak in the sheets mug and the knuckle duster mug are presented here because they illustrate two designerly approaches to 'humourising' objects: *application* and *alteration*. The freak in the sheets mug has an image of a visual joke *applied* to what is essentially a relatively typical mug form. The mug is thereby reduced to a mere canvas for something humorous. The material form of the mug, its design affordances (Norman, 2000; Davis, 2020), and the way that it is interacted with in terms of being held, filled, and supped, remain unaffected by the addition of the humorous decoration. A plain undecorated version of the freak in the sheets mug would be relatively indistinguishable from IKEA's Dinera mug. Whilst the form remains unaffected (other than through the application of two-dimensional decoration) the humorous image *does* change the mug in terms of design semantics (see Sudjic, 2009; Demirbilek & Sener, 2003). It now *means* something different to the Dinera mug. Conversely, the knuckle duster mug has a visual joke integrated into its form through a process of *alteration*: in this case the usual C-shaped mug handle has been morphed into a representation of a so-called 'knuckle duster' (an offensive hand weapon). The *form* of the mug has been changed. It is the incongruity of this surreal "assemblage" (Hamilakis & Jones, 2016) that likely gives rise to the object's humour — infused with the

fact that the knuckle duster neither presents, nor represents, an actual threat[182]. Whilst the alteration is to the form, again, there is a profound semantic shift in the object (see again Sudjic, 2009; Demirbilek & Sener, 2003). Application and alteration approaches are not exclusive: design artefacts can be subject to both alteration and application for the sake of humour.

Both humorous mugs retain their utilitarian value: they are useful drinking vessels, as IKEA's Dinera mug is, but the humorous mugs have an additional layer of value superimposed onto them: for some users at least — they are also funny. These *application* and *alteration* approaches to a '*humourisation* through design' feature in other design artefacts that differ from mugs, to a lesser or greater extent, whilst the general principles still apply (see Figure 3.xvii, and Figure 3.xviii, below).

[182] This idea is more fully explored in the discussion of Benign Violation Theory (McGraw & Warren, 2010, 2015a) in Chapter 4).

Figure 3.xvii. Design artefacts humourised through the *application* of humorous decoration: (top left) a ‘Thinking Cap’ from Poketo; (top centre) David Shrigley’s ‘Heroin and Cocaine’ salt and pepper shakers, 2000; (top right) a ‘Cereal Killer’ spoon handmade by Ashijewelers; (bottom left) some rolls of ‘Sushi Tape’ designed by Rosie Upright for Suck UK; and (bottom right) a Star Wars ‘Millennium Falcon cockpit’ themed car windscreen sun shield from Plasticolor.

Figure 3.xviii. Design artefacts humourised through the *alteration* of their form: (left) a hairdryer in the caricature form of a .357 Magnum handgun from Jerdon Industries Inc., 1981; (top centre-left) the 'Titanic' table-lamp by Charles Trevelyan, 2005; (top centre-right) the 'Stool Dollar' from Kare Design, 1981; (top right) the 'Sister' lamp by José Manuel Ferrero for {H} Bespoke; (bottom centre-left) a spiked dog bowl by Ginori 1735 for Balenciaga, 2022; (bottom centre) a lightning inspired power socket extension from Kikkerland B.V; (bottom centre-right) a Lego-hair bicycle helmet by Higby & Prior, 2017; and (bottom right) an 'enter' doormat designed by Vladimir Pavlenko in 2012.

As mentioned above, design engineers have created combustion engines to exploit the energetic potentials of petrochemicals. They have done this whilst being mindful of the explosive dangers inherent in the use of such substances. So too, there are inherent dangers present in the use of humour. Due to the subjective nature of humour, it is far from a guaranteed method for adding value. The phrase "for some users at least", employed above in the context of enhanced value, indicates that for some other users this is not the case (a

specific humourisation does not enhance perceived value), and may even have the opposite effect (a specific humourisation reduces perceived value). As with the flammability and explosive potential of petrol, designers have had to remain mindful of the dangers inherent in the employment and deployment of humour.

As well as differentiating individual artefacts, differentiation by humour may be manifest in other ways too. It may differentiate artefacts from others of similar kind, as in the case of the artefacts above, but it may also differentiate commercial brands from one another, and even designers themselves. Humour can create 'traction' in terms of self-promotion because humorous design can be memorable, enjoyable, clever, and sharable. For these reasons, many designers have employed humour to 'get noticed'. This is apparent in discursive design projects whose raison d'être is to attract attention and promote debate, but it is also apparent in the case of emerging designers, for example student designers eager to create memorable portfolios that demonstrates their intellectual and technical acuities and to stand out from their peers (e.g. see Figure 3.xiv).

Figure 3.xiv. Zach Gardner's '*App*ocalypse' (Gardner, 2021) which renames the apps in a stock iPhone image, e.g. 'Instagram' becomes 'Be Fake', 'Tinder' becomes 'Die Alone', and 'Pokemon Go' becomes 'Grow Up'; Sarah Alexander's 'Frugal Wine-Glass' —

appropriate for times of austerity (Alexander, 2023); and James Whitaker's 'This Type is Kerned Well' (Whitaker 2021).

Several successful designers have recognised that people enjoy funny things, seek out funny things, and share funny things with other people who they value. Such designers have employed humour to gain recognition, especially early in their careers, making funny design for self-promotion: building reputation and recognition. As explored in Chapter 4, being humorous demonstrates intelligence, so refined and considered humour can give the impression of a certain design 'cleverness': what might be referred to as design wit (Heller & Anderson, 1991). For example, Dominic Wilcox' design practice is consistently and intentionally whimsical and humorous. His book 'Variations on Normal' is full of delightful cartoon-esque design sketches for curious, sometimes chindōgu-like, devices that demonstrate his designerly insight, creativity, and humour — see Figure 3.xx.

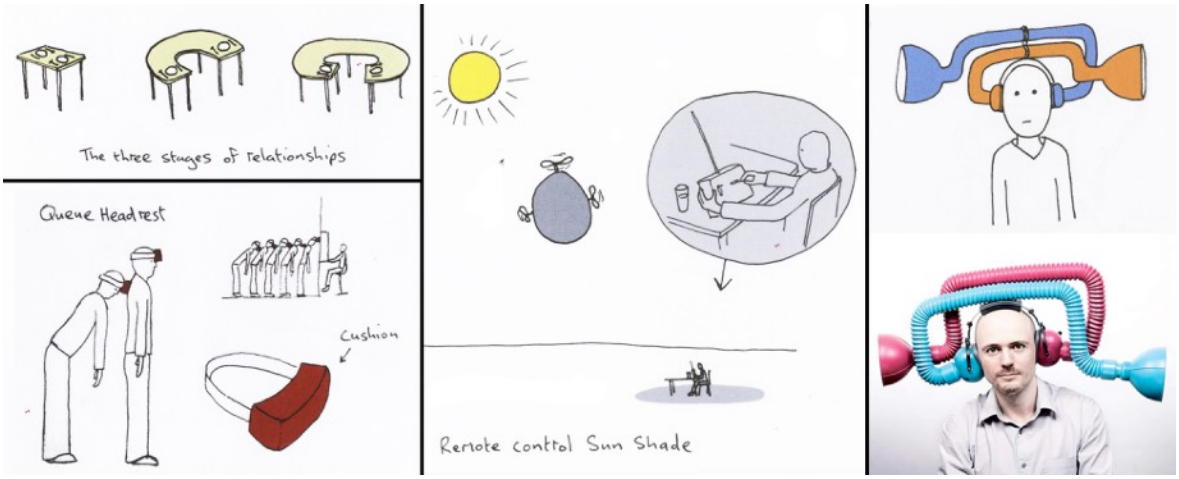

Figure 3.xx. Four of Wilcox' designs: (top left) 'The Three Stages of Relationships' table; (bottom left) 'Queue Headrest'; (centre) Remote Control Sun Shade'; and (right) 'Reverse Listening Device: Hear Sounds on Your Right, Through Your Left Ear and Vice Versa' —

the original sketch from ‘Variations of Normal’, and a physical model worn by Wilcox himself (Wilcox, 2015, pages unnumbered).

Wilcox’ practice has been consistently humorous and idiosyncratic, and has now matured to the extent that he has a well-established design platform. He current employs the power of this platform for playful work that addresses serious issues: such as ‘Little Inventors’, a “creative education organisation that inspires imagination by taking children’s amazing ideas seriously” (Little Inventors, 2024). This international project takes children’s design sketches and realises them through the production of physical prototypes and software renders: celebrating children’s inventiveness, empowering them with confidence, teaching design skills, and making their ideas more tangible to audiences and themselves.

Designer Thomas Thwaites employs humour in a practice that deals with serious issues such as climate change. The humour is not intended to trivialise such issues, but to promote engagement with difficult ideas by making them more approachable and accessible. For example, his attempt to make a ‘Harmless Car’ highlights the difficulty of trying to do no harm, whilst experimenting with genuinely environmentally sustainable design practices (Thwaites, 2024). The chassis is made from coppiced willow (see Figure 3.xxi, below) and the tires — which he hopes to eventually produce from dandelion rubber — will be so under-inflated as to not crush a snail should the driver accidentally run one over. Thwaites describes the vehicle as “an impossible work in progress” (Thwaites, 2024).

Figure 3.xxi. Thomas Thwaites' 'Harmless Car' (Thwaites, 2024).

Many other designers knowingly employ humour for the benefits that it can bring: for example Sebastian Errazuriz or Maywa Denki. Errazuriz' objects blend domestic design artefacts, such as electric lamps and fans, with taxidermies and are unsettling to some, funny to others, and often both (see Figure 3.xxii) and Nobumichi Tosa heads 'Maywa Denki' whose business model is to create humorous and incongruous commercial product designs in order to facilitate 'product demonstrations' (instrumental performances), see Figure 3.xxiii.

Figure 3.xxii. Three of Errazuriz' designs: (left) 'Duck Fan' (2010); (top right) 'Athena Lemnia' and 'Meleager' stools (2018); and (bottom right) 'Duck Lamp' (2004).

Figure 3.xxiii. Maywa Denki designs: (left) a USB cable in the form of a fish skeleton; (centre) ‘Knock Man’, a clockwork character that knocks his own drum-shaped head; and (right) Nobumichi Tosa with a selection of musical design artefacts.

A critique of Corbusier, is that his oft quoted “machine for living in” (Corbusier, 1986, pp.95) — his conceptualisation of a domestic setting — is rather impersonal. The most efficient and spartan environment and structured experience of living is at odds with many people’s instincts for personalisation, personal expression, and non-conformity. People express their identity through the artefacts and environments that they have designerly control over, for example the interior of their home, but this extends to include clothing, jewellery, tattoos, and so on. It is uncontroversial to claim that people’s sense of humour varies (as have Martin and Lefcourt in their “Quantitative Measure of Sense of Humour” (Martin & Lefcourt, 1984)). In light of these ideas: some people choose to

express their sense of humour through the design artefacts that they surround themselves with. Designers have recognised that people display 'funny things' to give insight into their *sense* of humour and have long capitalised upon this fact: creating designs from sophisticated irony to base vulgarity and everything in between. This is design employing humour for attraction, not attractive design in the typical designerly sense (refined and beauteous in form and function), but attractive for what it represents, and presents, about its owner. Whilst the owner of a humorous design artefact may find it decreasingly humorous over time, the humour is not enjoyed solely *by* its owner. As discussed above, many humorous design artefacts are displayed to represent the sense of humour of their owner. When new visitors to the home encounter a funny designed thing, or a new person in the street sees someone's funny t-shirt, the owner of either may derive some satisfaction from this novel encounter if the humour is shared, see, for example, the design artefacts in Figure 3.xxiv (below) which bring humour to their owner, but are also *displayed* so as to present something of an impression of the owner's sense of humour, and to share this humour with others.

Figure 3.xxiv. (left) a print by Jan Basarab (2023) displayed in the author's bathroom amongst a personal collection of other 'funny things', and (right) an anthropomorphic toilet roll holder shared by the UglyDesign Instagram account (Nyffenegger & Mathys, 2021) — these artefacts *say something* about their owner's sense of humour to the 'captive' bathroom audience: they *project* it.

Considering the prevalence of the comedic car window or bumper sticker, or humorously graffitied road sign, the person expressing the humour does not appear to need to witness the appreciation of the humour in others to derive satisfaction from this (somewhat dislocated) interaction (see Figure 3.xxv).

Figure.3.xxv. (left) A classic ‘My other car is a Porsche’ car window sticker and (right) some humorous graffiti that references MC Hammer’s catchphrase ‘Stop… Hammer time’ from the 1990 single ‘U Can’t Touch This’.

People evidently enjoy humour, and enjoy sharing in humour with others. Designers have capitalised upon this fact by offering people the opportunity to own designed things that they find to be humorous (such as the artefacts in Figures 3.xxii, 3.xxiii, and 3.xxiv, above), but also to give the gift of humour to others, and to employ designed things to enable them to *be* humorous (‘joke products’). There is an entire market sector in design that is constructed around humorous gifts: given as expressions of love or fondness, or even for want of a better idea. Some design artefacts even enable users to *be* funny or to create funny things, see Figure 3.xxvi, below.

Figure 3.xxvi. Three novelty items: (left) a bar of soap that looks very much like a hot dog; (centre) fridge magnets in amusing shapes for altering photographs; and (right) the 'Wrongulator', a calculator that gives incorrect answers.

Sometimes the joke is bound up in a designed artefact that is only promised, but does not even exist. The packaging conveys the humour and the 'gift' is the humour, not the artefact itself, see Figure 3.xxvii.

Figure 3.xxvii. A selection of 'gag gifts': (Left) A 'home vasectomy kit'; (centre left) a 'travel hair dryer'; (centre right) Bernard's 'Dehydrated Water'; and (right) "The World's Most Famous Thought Experiment" — 'Schrödinger's Cat' in a box.

Employing Humour's Social Power for Design.

When Steve Jobs introduced the iPhone to the public for the first time, at a 'Macworld' event in January 2007 (as detailed in Chapter 2, Section 2.2.2: 'Ballmer on the iPhone'), two moments stood out as being particularly important to this thesis. The first was that Jobs built up the 'big reveal' of the iPhone for over three minutes before finally presenting an image of a ridiculous fake iPhone — a visual joke, unexpected by his audience. This gelastic iPhone image featured an iPod with a rotary phone dial grafted onto it where the 'jog-dial'[183] should be, see Figure 3.xxviii.

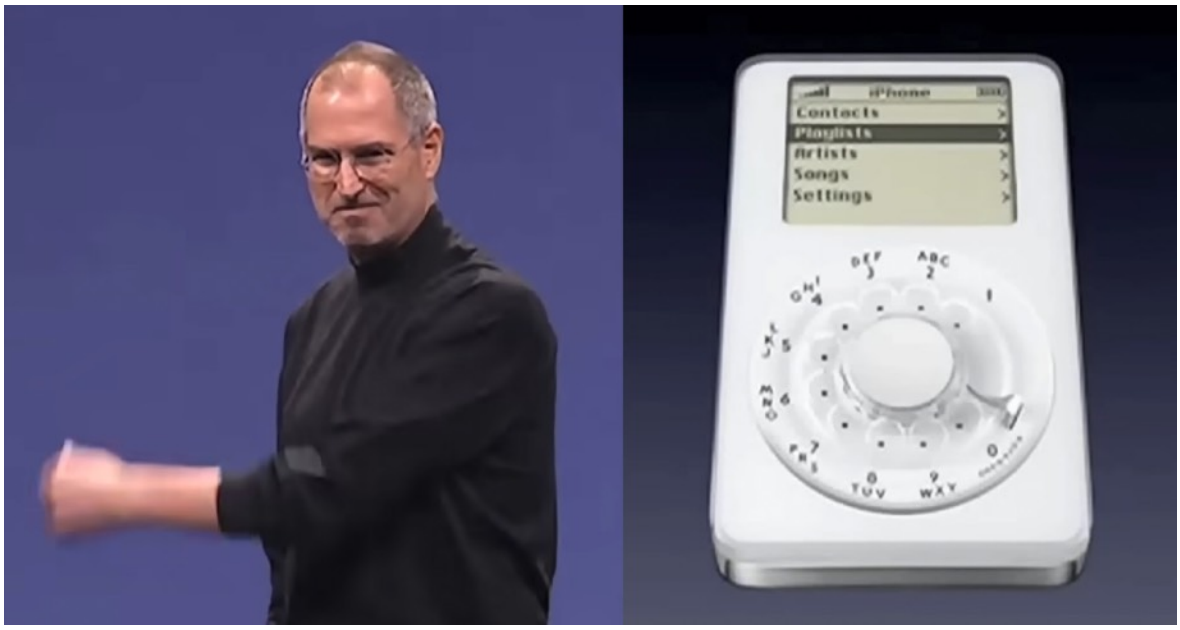

Figure 3.xxviii. Jobs smiles as he introduces Apple's phoney[184] iPhone design.

Jobs' appreciative audience laughed and cheered, seemingly with delight, at the incongruous Apple product before them, and in recognition of his adept comedic delivery. The actual iPhone reveal was made another three minutes later, and rather incidentally,

[183] The 'jog-dial' was a haptic input control for Apple's iPod media players. It was celebrated at the time for an 'intuitive' operation that enable one to scroll down through a category list with a clockwise motion of the thumb, or up through it with an anticlockwise motion. A press, confirmed by a haptic 'click', would allow selection of either a sub-category or a category item (acting as a play/pause button in the case of music items).

[184] Pun intended.

with far less pomp and bravado. The joke was the important moment, it powerfully connected Jobs to his audience (Aten, 2020), and enabled him to reveal the true iPhone with a blasé confidence that they would interpret, one imagines, as ‘cool’.

The second moment, occurring only a little later in the presentation, was when Jobs made the first ever publicly observed telephone call using an iPhone[185]. This was another opportunity for humour. Jobs used the Google Maps application on his demonstration iPhone to locate the closest Starbucks coffee shop to the Moscone Centre auditorium, where he was presenting, and then brought up the address and telephone number of the store (an act that was rather revolutionary at the time). Jobs then tapped the number on the screen and initiated a prank call that appears to have been genuine (Heisler, 2013; Carr, 2013; Aten, 2020). As Yoni Heisler reports, and as video of the presentation attests (Jobs, 2007), the conversation went as follows: ““Good morning” answered the polite voice of [Starbucks] employee Ying Hang ‘Hannah’ Zhang. "How may I help you?”, “Yes, I'd like to order 4,000 lattes to go, please," Jobs said, grinning. "No, just kidding. Wrong number. Goodbye!” (Heisler, 2013). Aten comments as follows:

“In front of 4,000 people [and a live-stream audience], Steve Jobs prank called a Starbucks. The CEO of what would become the most profitable company in the U.S., during the launch of its most important product ever, made a prank phone call. One of the most brilliant aspects of Jobs's presentation was an acute understanding of his audience. He knew how to capture their attention, how to connect with what they cared about, and how to make them laugh. That particular skill happens to be dramatically underrated.” (Aten, 2020),

Aten continues that, “I’m not suggesting that great leaders should necessarily start making prank phone calls. I will say that I absolutely think that laughter is the most effective way

[185] Technically this was the second call as he made a conference call to Jony Ive and Phil Schiller just prior. But this was well scripted. The call to Starbucks was planned, of course, but, importantly, the Starbucks employee was not aware of it beforehand.

to connect with an audience and get them to care about what you're saying. As a leader, that is, after all, the greatest gift" (Aten, 2020).

Jobs' famous reveal of the iPhone demonstrates that, in addition to capitalising upon the potentials of humour for differentiation (both in terms of humour differentiating one design from another, and differentiating the owners of funny things in terms of their personal identity), designers, and design managers, have capitalised upon the power of humour to 'connect' design, designer, and user/audience. If design, as described by author and graphic designer, David Barringer, is "a hug at a distance" (Barringer, 2009, pp.17) then that distance my be somewhat reduced by humour. A hug has been described as "one of the best ways to feel socially supported" (Dueren, Vafeiadou, Edgar & Banissy, 2021), and is so socially and emotionally significant that attempts have been made to enable robots to hug people, and for people to enjoy that experience (Block, Christen, Gassert, Hilliges & Kuchenbecker, 2021; Block, Seifi, Hilliges, Gassert & Kuchenbecker, 2021). Barringer neither explains, nor expands upon their comment, but we might interpret it as referring to design providing 'social support at a distance' — a distance one supposes between the designer and the user/audience. This distance may be geographical, as the word is typically used, temporal, or cultural. The designer of a thing might research and/or imagine the needs, problems, or desires of a user and then design a thing to supporting their needs, solve their problems, and/or satisfy their desires. Whether addressing need, solving problems and/or sating desire, the designer may exist in a completely different geographical location, at a significantly different time, or in a completely different culture to the user of their design. We might refer to this as design humour for humanising: a designed thing acting as a conduit to facilitate human connection at a distance — Barringer's hug (Barringer, 2009, pp.17).

This perceived connection may, in some way, account for the value people find in owning artefacts designed by so-called celebrity designers: a Philippe Starck citrus squeezer[186]; a glass Alvar Aalto vase; a Charles and Ray Eames chair; a Vivienne Westwood corset; and so on (see Figure 3.xxix.).

Figure 3.xxix. (Left) Starck's 'Juicy Salif' citrus squeezer for Alessi in 1990; (centre top) Aalto's glass 'Savoy' vase[187], designed in 1936, but manufactured by Iittala Lasitehdas in 1960; (centre bottom) Eames 'Lounge Chair and Ottoman' for Herman Miller Furniture in 1956; and (right) a Westwood corset from her 'Portrait Collection' 1990.

[186] Our 'Juicy Salif' sits alone on a bespoke display shelf in our toilet.

[187] Also know as the 'Aalto', after its designer, and 'The Paris Object' after being selected as an object to be included in the 'Swedish Pavilion' at the 1937 'Exposition Universelle' in Paris — despite Aalto, and his vase, being Finnish (The Metropolitan Museum of Art, 2024).

‘A Problem Laughed, is a Problem Halved’

Marketing and advertising designers have also recognised the connective, humanising power of humour and have used humour as a way to alleviate the effects of a crisis. For example, following the subprime banking crisis in 2007/2008, and the collapse of several major financial institutions (Mishkin, 2011), the banks, and the bankers, were blamed by the media, and the public, for their greed-fuelled risk-taking and the ensuing economic turmoil that accompanied these events. In the years that have followed, some banks and financial institutions have adopted an advertising strategy that employs comedians, for example, Susan Calman, Stephen Merchant, Maisie Adam[188], and various types of humour (Pryor, 2022) in order to ‘re-humanise’ the banks to their customers: to connect them, and to give customers the impression that the banks are their friends, not merely service providers (at best, or at worst: profiteers). Again reminiscent of Barringer’s hug (Barringer, 2009, pp.17), Victor Borge has suggested that “Laughter is the closest distance between two people” (Borge, 2014) and the strategy here appears to draw customers metaphorically *closer*.

In a similar vein, UK advertising agency ‘Mother’ employed an objectively risky-looking strategy to aid popular fast food chain ‘Kentucky Fried Chicken’ (KFC) during their 2018 ‘#ChickenCrisis’. In the UK, until the end of 2017, KFC had worked with Bidvest Logistics to ensure that they had the necessary ingredients in every outlet, especially the all important chicken. In late 2017/early 2018, KFC switched to Quick Service Logistics and Deutsche Post-owned DHL for their ingredient deliveries and this is where severe problems occurred: referencing the popular Joke, contributing editor to

[188] Susan Calman, Bank of Scotland; Stephen Merchant, Barclays Bank; Maisie Adam, Nationwide Building Society.

‘Campaign[189]’, Alex Brownsell, reported that “The chicken wasn’t even leaving the depot, let alone crossing the road[190]” (Brownsell, 2018). In a potentially disastrous situation for KFC, fridges in its nine-hundred UK ‘restaurants’ quickly emptied and, unreplenished, they closed to customers. In stepped ‘Mother’ at this point and, rather than the positive spin and ‘downplaying’ that one might expect, proposed an open and honest campaign that capitalised upon (as described by Ed Steele, Senior Strategist at marketing agency ‘CreativeRace’) ‘the pratfall effect’, whereby “quite irrationally, highly competent people become more likeable if they are seen to make an everyday mistake[191]” (Steele, 2022). The most memorable image of the campaign, seen by up to six million ‘Sun’ and ‘Metro’ readers can be seen in Figure 3.xxx: a KFC chicken bucket reading ‘FCK’, lying empty on a dirty and damaged floor. The campaign was widely regarded as successful, winning several prestigious marketing awards[192] and, importantly, evidence shows that it averted a public relations crisis for KFC (Brownsell, 2018).

[189] The self-proclaimed “World’s leading business media brand serving the marketing, advertising and media communities” (Campaign, 2024).

[190] Also reporting that the situation was “a clucking nightmare” (Brownsell, 2018).

[191] An effect famously exploited by UK politicians such as Boris Johnson and, less famously, Ed Davey.

[192] Including four Gold Lions at Cannes, the Grand Prix for ‘Campaign of the Year’ at the ‘Marketing New Thinking Awards 2018’ (Brownsell, 2018), and a ‘D&AD’ ‘Yellow Pencil’ award (D&AD, 2018).

Figure 3.xxx. The key visual element of Mother's restorative KFC campaign: an empty KFC chicken bucket displaying some cheeky wordplay (Mother London, UK, 2018).

Wackaging and Banter Marketing.

Another example of designers capitalising upon the connective power of humour can be observed in the strategies of 'wackaging' and 'banter marketing'. Wackaging, a portmanteau of the words 'wacky' and 'packaging', began as the 'sneaking in' of

incongruous and seemingly superfluous textual or visual jokes into what would otherwise be relatively unremarkable packaging design[193], see Figure 3.xxxi.

Figure 3.xxxi. Examples of Wackaging: (top left) a bottle label, once peeled back, reveals an image of a sloth saying "You found me! Okay now you hide. 1…2…3…"; (top centre) a sweet packet that states "You're a curious one. I like you" on its base; (top right) a bottle of shower gel that recommends "How to use: if you really don't know how, then we suggest you find someone you really like and invite them into the shower with you to demonstrate"; (bottom left) a smoothie carton that insists "Stop looking at my bottom"; and (bottom right) an 'Aunt Gina' cookie that contains "brown cane suga', cane suga', shit ton of buttah, unbleached flour" and advises that "If you're srsly concerned about calorie

[193] I remember my first encounter with wackaging, sometime in the very early 2000s, I noticing a small asterisk appended to the phrase 'some separation may occur' on the packaging of an Innocent smoothie. I looked all over for the corresponding asterisk and, upon eventually locating it in a rather hidden spot, discovered that it read '*But Mummy still loves Daddy". I do remember smiling and thinking, "oh, that's new". As I clearly remember the incident over two decades later, it evidently made an impression that has lasted.

count… just step away. Contains: wheat (sry.), milk (sry.), eggs (sry.), and soy (sry.). May contain traces of nuts. Sorrrrryyy".

Here, in 2024, wackaging has developed to the point whereby it is commonplace (in the UK at least) for products to appear to *speak* to consumers, in the first person and in a familiar manner, through 'banter marketing' messages printed on their packaging — reminding consumers to 'Wash me', 'Defrost me thoroughly', 'shake me up', or 'Enjoy me with…'[194]. The design strategy of making interaction with objects more informal, conversational, and humorous, has been employed in the context of electronic devices too. In the morning, a Fitbit[195] may greet its wearer with a peppy "you rock!", and an Apple Watch mentions that "Yesterday your move ring didn't get enough love. Let's close it today Theo"[196]. This humanising strategy is also employed for user interactions with personal digital assistants such as Amazon's 'Alexa', Google's 'Hey Google', and Apple's 'Siri' — When 'difficult' questions are asked of these services, ones that their service providers cannot answer, or cannot answer in good countenance, humour is often employed to deflect such questions, whilst hopefully minimising frustrations and/or disappointments on the part of the user.

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[194] Invitations, especially on food packaging, that are reminiscent of the unsettling talking-cow-alien in Douglas Adams' 'Restaurant at the End of the Universe'. The creature had been bred to meet-and-greet diners, and to discuss, in enthusiastic detail, the merits of eating various parts of its own body (Adams, 1980, pp.94-96).

[195] A popular wrist-worn digital pedometer and heart rate monitor.

[196] My watch is not very supportive of my PhD — at least not the sedentary nature of the research and writing.

‘Many a True Word is Said in Jest’

The phrase ‘many a true word said in jest’ has a fine pedigree, being arguably attributable to Geoffrey Chaucer in his 1390 prologue to ‘The Cook's Tale’, “A man may seye full sooth in game and pley[197] [sic]” (Chaucer, 2008, pp.85, line 4355), and/or William Shakespeare’s ‘King Lear’ in 1605, “Jesters do oft prove prophets” (Act 5, Scene 3, Line 71 — Shakespeare, 1909, pp.876). Regardless of the origin of this idea, humour has a permissive quality by which people may pass comment upon the world about them, especially when such comments might be problematic if made in all seriousness. Discursive designers are particularly adept at this use of humour. For example, to return to chindōgu, which exist to explore and critique the nature of contemporary consumer life: “when we find ourselves sucked into the modern world’s ever-swelling commercial culture, chindōgu provide the antithesis” (Kawakami, 1997, pp.6). There are chindōgu that critique the pressures of overpopulation and the unenviable practice of commuting for work (e.g. a one-legged stool that fits between metro passengers to create another tier of seating balanced above the first, but that makes everyone more uncomfortable, or spectacles that magnify tiny apartments, but disorientate the wearer); the drive for ever increased efficiency (e.g. five nail-clippers linked together so that one lever press cuts all finger/toenails at once, but badly; a double-bristled toothbrush (facing up and down) that brushes the teeth in half the time, but poorly; or a gigantic ‘Swiss Army knife’, sporting a selection of full-size gardening tools, that is far too heavy and cumbersome to use); the loss of connection to environments and each other (e.g. sole-less shoes so that one can present a ‘respectable’ appearance whilst still feeling the ground beneath their feet, but have no protection from it; or a ‘practice hand’ for new lovers (who are anxious in each other’s

[197] A man may speak truth when playing games

company) to gain confidence about physical contact, whilst not actually providing any); and many others, all of which are likely to be found funny (see Figure 3.xxxii.).

Figure 3.xxxii. A selection of chindōgu: (left) a ‘Portable Commuter Seat’; (centre left) ‘Wide Angle Glasses’ “for making apartments into Castles” (Kawakami, 2004b, pp.173); (centre right) ‘One Cut Clippers’ and a Swiss-army-knife style ‘Ten-in-One Gardening Tool’; and (right) efficiency doubling ‘Up/Down Toothbrush’, and ‘Nature Lovers’ Footwear’ (Kawakami, 1995-2004).

The chindōgu approach, coheres with other creatives and critical designers. For example, the practices of Alan Wexler, or Jaques Carelman (see Figure 3.xxxiii), or the author of this thesis (see Figure 3.xxxiv, below).

Figure 3.xxxiii. (Left) Alan Wexler's 'Hearing Aid' (Wexler, 2016); (top right) Jaques Carelman's design illustration for a 'Charitable Fly Swatter' that, being "pierced with a hole, gives the insect a chance!" (Carelman, 1977, pp.141); and (bottom right) a physical Carelman object — 'Enclume de Voyage' ('Travel Anvil') (Carelman, 1977, pp.170).

Figure 3.xxxiv. Three of the author's own 'chindōgu inspired' design projects: (left) an 'iPhork', a stainless steel smartphone accessory that enables one to shovel food into their mouth whilst viewing social media feeds on their smartphone, uninterrupted (Humphries, 2016); (centre) a toothbrush mounted upon a washing machine — at the peak of the spin cycle the vibrations from the washing machine provide a really deep-clean (Humphries 2018); and (right) 'Data Iron: Unlosable USB Stick' (Humphries, 2014), (authors's own images, 2016, 2018, and 2014).

Rube Goldberg also employed a similar approach: his illustrative cartoons are essentially chindōgu by ink rather than object. For example, see Figure 3.xxxv (below).

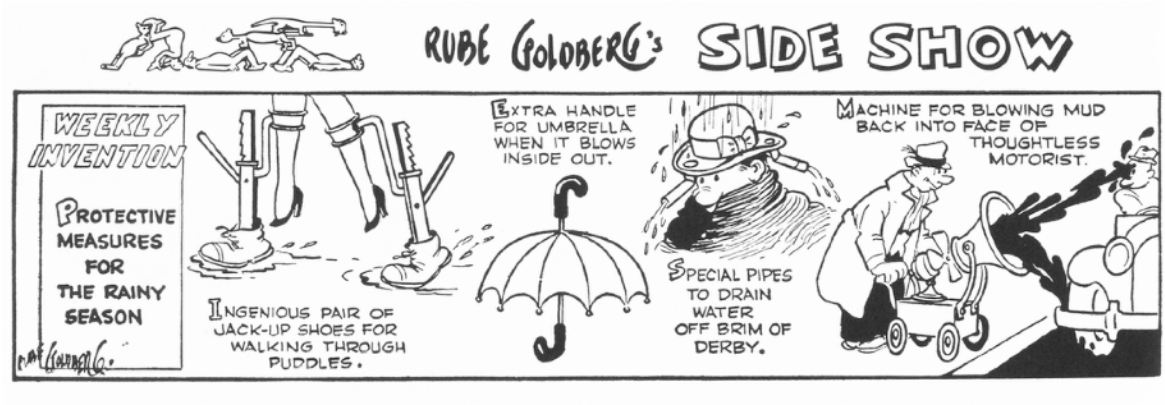

Figure 3.xxxv. 'Protective methods for the rainy season' (Goldberg & Garner, 1983, pp.86).

Again, Tharp and Tharp's model of the user-as-audience is important in understanding that these designs exist not to be used, but to be *imagined* in-use.

3.4.2). Evoking Laughter: Methods and Manners — Making Funny Design.

Designers have developed a number of successful strategies for evoking humour and laughter through their practice. One might compare the breadth of these 'funny design' strategies to the breadth of strategies that comedians have developed to evoke humour and laughter in their audiences. Design might be provocative in the manner of Joan Rivers and Frankie Boyle; disarming and then dark like Sarah Silverman and Jimmy Carr; cerebral, reflective, and meta-analytical like Stewart Lee; lowbrow like Roy Chubby Brown; slapstick like Lee Evans, observational like Jerry Seinfeld and Michael McIntyre, political like Mark Thomas or Tom Walker's character 'Jonathan Pie', absurdist/surrealist like Vic Reeves & Bob Mortimer, Spencer Jones, or Noel Fielding (see Figure 3.xxxvi); pun-filled

and wordplayful[198] like Milton Jones, Tim Vine, or Stewart Francis; and in many more ways.

Figure 3.xxxvi. Absurdist/surrealist comedians Bob Mortimer & Vic Reeves playing characters Mulligan and O'Hare (top row), Spencer Jones (bottom left), and Noel Fielding (bottom right). Such comedians often employ designed artefacts in their comedy.

Incongruity.

One of the more readily obvious methods for evoking humour and laughter through design is through incongruity: when some aspect of the appearance, materials, size, use, and/or imagined-use of the design is unusual and unexpected. The relationship between incongruity and humour has a long history that can be traced back to Aristotle (see Chapter

[198] Pun intended, and possibly word invented too.

4, Section 4.3.2) but recognition of this relationship is often cited as originating with philosophers such as Kant and Beattie in the 1700s, and later with Schopenhauer and Kierkegaard (see Chapter 4, Section 4.3.4). Incongruity theories have been reported to be the current dominant theory of humour in the fields of philosophy and psychology (Morreall, 2020). In the context of design, humour might be evoked by the incongruous use of size and scale (see Figure 3.xxxvii), unexpected material properties (see Figure 3.xxxviii), by colliding contexts (see Figure 3.xxxix), and so on: anything that might engender a pleasant surprise in users/audiences, but, importantly, a surprise without threat.

Figure 3.xxxvii. Intentionally incongruous design that plays with size, scale, and proportion: (left) ‘Light Soy’ pendant light by Heliograf (Angus Ware and Jeffrey Simpson), 2020; (centre) Lila Jang’s voluptuous ‘Narrow Chair’, 2013; and (right) Swatch’s ‘Maxi Lemon Time’ wall clock, 2011.

Figure 3.xxxviii Intentionally incongruous design that plays with materials: (left) ‘Soft Cabinet Small’[199], a foam cabinet by Dewi van de Klomp, 2013; (centre) ‘Glass Zipper Bag’ — a glass jar that looks like a plastic ‘Ziplock’ bag — by American Metalcraft; and (right) one of Tim Kowalczyk’s ceramic mugs that looks remarkably like it is made from battered packaging cardboard, 2016.

[199] Fascinating work, but disappointed that they didn’t call this project ‘soft furnishings’…

Figure 3.xxxix. Intentionally incongruous design that mixes contexts: (top left) ‘Horse’ floor lamp by Front design studio for Moooi, 2006. The audience recognises horses and understands the contexts in which horses are encountered (field, farm, racecourse, TV programme, etc.), and recognises floor lamps and the contexts in which they are encountered (home, office, etc.). The incongruity arises when design collides these contexts and the result is a full size horse that is also a floor lamp; ‘Bootbag’ — a children’s Wellington boot recontextualised as a handbag — by Vlaemsch, 2004; ‘Sarcophagus’ a plastic dumpster-style bin by Recycle Group, 2019; and a slickly clever and understated advert for Amsterdam’s Van Gogh Museum Café, 2013.

Dutch design consultancy Droog are famous for surprising and incongruous design that sets them apart from other designers on the world stage (Antonelli, 1998) and demonstrates their unique designerly humour, as embodied in artefacts such as their chest of drawers designed by Tejo Remy in 1991 and their 'Tree Trunk Bench' designed by Jurgen Bey in 1991, see Figure 3.xxxx. Droog's humour is an ironic and self-referential 'designerly' humour.

Figure 3.xxxx. Remy's 'Chest of Drawers' (1991), and Bey's 'Tree Trunk Bench' (1999) for Droog (Ramakers & Bakker, 2006, pp.27 and pp.40-41 respectively).

Materialised Jokes, Puns and Wordplay.

Some design artefacts might be described as materialised jokes or puns, or may otherwise engage in a kind of materialised wordplay. Such artefacts demonstrate archetypal 'joke characteristics' (Carr & Greeves 2007, Krichtafovitch 2008, Holt 2008) but these characteristics are expressed through the material qualities of the objects themselves, rather

than through oral or written language – as jokes have been traditionally propagated (Cohen, 1999). In such cases, the humour — the 'joke' — emerges in a "semiotic analysis" (Sudjic, 2009) of the artefact itself. For example, Kao's 'Seven-Year-Itch' ring features a diminutive silver 'scratcher' attached to it. The ring plays on the phrase popularised by Billy Wilder's romantic comedy film of the same name, staring Marilyn Monroe[200] (Wilder, 1955), see Fig 3.xxxxi.

Figure 3.xxxxi. The 'Seven-Year-Itch' ring (2003) by Kao (Van, 2004).

[200] The same romantic comedy in which a gust of wind from a subway train famously lifts her skirt.

Other approaches are even more direct, for example Guido Ooms and Karin Van Lieshout's 'USB Sticks' are exactly that: the result of implanting USB flash drives into real wooden sticks (see Fig 3.xxxxii), but play a visual/material pun on the colloquial term 'USB stick' that is employed to describe self-contained low-volume USB flash drives.

Figure 3.xxxxii. 'USB Sticks' (2006) by 'Oooms' (Guido Ooms) and Karin Van Lieshout (Wong, 2007, pp.90-91).

In a similar vein, Buro Vormkrijgers' 'Woofers' — designed for 'Cultivate' in 2006 — make a pun out of the fact that both bass speakers and dogs can be referred to as *woofers*, see figure 3.xxxxiii.

Figure.3.xxxxiii. 'Woofers', designed by Buro Vormkrijgers, 2006, (in Wong, 2007, pp.44).

Design objects have also given rise to humour because of a deliberate subversion of their function by their designer, for example: Robert Wechsler's Circular Bike (Wechsler, 2003), see figure 3.xxxiv. As a *bicycle*, it is almost entirely useless, being that it only transports its passengers around a three or four metre circle. However, as a *fun-generation machine*, it is highly successful: the riders can be seen smiling, laughing, and mimicking aeroplane wings with their arms (Wechsler, 2021).

Figure 3.xxxxiv. Wechsler's Circular Bicycle, 2003.

3.4.3). Educating for laughter: Pedagogy of Funny Design.

There are numerous texts available that advise how to write 'jokes' and/or how to deliver them as a comedian (e.g. Aaker & Bagdonas, 2020; Holloway, 2010; Vorhaus, 1994; Mishon, 2003; Wright, 2007), and a growing body of research that investigates the pros and cons of employing humour in teaching (e.g. Bakar, 2020; Nesi, 2012). However, there appears to be a scarcity of literature that describes methods for designers to design artefacts in a manner that might generate humour, or — importantly for this research — considers why a designer might want to do such a thing, and how and why design audiences might be laughing. As previously mentioned, literature concerning gelastic

design appears to be overwhelmingly focused in the areas of graphic design and the emerging graphic designer might consult publications such as Bradley's 'Design Funny: A Graphic Designer's Guide to Humor' (Bradley, 2015) which provides a number of methods for making funny design. Other publications, such as McAlhone and Stuart's 'A Smile in the Mind' (McAlhone & Stuart, 1996); or Heller & Anderson's 'Graphic Wit' (Heller & Anderson, 1991) tend to gather together varied examples of humorous graphic design so that they might be studied and general rules for the creation of humorous design might be deduced — such collections being both inspirational and aspirational, one imagines. Others have covered humour with a lighter touch as part of more holistic approaches to teaching graphic design (e.g. Ambrose & Harris in their book 'Design Th!nking' (Ambrose & Harris, 2010, pp.96-97).

3.4.4). Exploring Laughter: Design Research Investigates Humour and Laughter.

The literature review and design survey for this research indicated that designers who design humorous design (i.e. designers who create funny things) tend to do so intuitively — drawing from their experiences of designing and of humour. At least this is inferred from the scarcity of writing to suggest otherwise. Despite this observation, a small number of design researchers have focussed their attention upon humour in the context of design.

As previously mentioned: the study of humour and laughter in design contexts is dominated by graphic design and advertising design (and marketing), but such research can be useful to a much broader spectrum of design disciplines, and to anthropology, and other cultural studies research. 'Marketing' is in parentheses above because it is not, strictly

speaking, usually understood as design, but marketing research is such a key source of research for commercially linked design (which most design is) that it is included here. Publications such as Marc Weinberger and Charles Gulas' 'The Impact of Humor in Advertising' (Weinberger & Gulas, 1992); Harlan Spotts, Marc Weinberger, and Amy Parsons' 'Assessing the Use and Impact of Humor on Advertising Effectiveness' (Spotts, Weinberger & Parsons, 1997); and Dana Alden, Ashesh Mukherjee & Wayne Hoyer's 'The Effects of Incongruity, Surprise and Positive Moderators on Perceived Humor in Television Advertising' (Alden, Mukherjee & Hoyer, 2000) have all helped to build a picture of the impacts and effectiveness of employing humour, for various ends, in visual and material culture. In addition, Paul van Kuilenburg, Menno de Jong, and Thomas van Rompay have questioned whether humour in advertising really delivers tangible benefits in terms of, for example, brand mind-share. Paul Speck has developed a useful and influential framework for the study of humorous advertisements in his 'Humorous Message Taxonomy' (Speck, 1991), which deals with broad themes such as the multidimensionality of humour and the relationship between play and humour — "humor is a particular expression of play, and playfulness is a general precondition for humor" (Speck, 1991, pp.4) — that provide valuable insights for designers and other audiences that are interested in humour and design. Speck's taxonomy has become somewhat of a benchmark method and has been used by other researchers to investigate humour in advertising, e.g. Leonidas, Christina and Yorgos, (2009).

Research from other design disciplines, such as UX/UI design, service design, industrial design, product design, and jewellery design, have also made valuable contributions in terms of understanding humour in the context of design. For example, Deborah Fels, Alethea Blackler, and Kristina Niedderer have explored the difficulties for

designers in trying to reliably communicate humour through product aesthetics and product semantics (Fels, Blackler & Niedderer, 2021) using Niederrerer's 'soma-semiotic framework' from the discipline of jewellery design (Niedderer, 2012).

Danielle Wilde has explored the use of humour in UX/UI design in the context of 'wearable' technologies through her 'hipDisk' project (see Figure 3.xxxxv), which involved the creation of a wearable dance interface that responds to body movements, especially that of the belly and hips (Wilde, 2008). She has described, when presenting her device, "either live or through video footage – the laughter has, in some instances, become completely hysterical", finding "the strength of people's reactions surprising" (Wilde, 2008, pp.21).

Figure 3.xxxxv. People wearing Wilde's HipDisk. When they dance, the HipDisk acts as an interface for the creation of music.

In a very different type of interaction design research, Willemijn van Dolen, Ko de Ruyter, and Sandra Streukens have studied the effects of humour in electronic service encounters that are mediated through websites and other online means (van Dolen, Ruyter & Streukens, 2007). They found that humour was a complicated facet of interactions between employees and customers that could sometimes yield benefits in terms of customer satisfaction when processes went well, but received "negative customer evaluations" (van Dolen, Ruyter & Streukens, 2007, pp.160) when things went badly (in terms of the processes and outcomes). Speaking very generally, and as Chapter 4 will demonstrate, humour has historically been viewed negatively in philosophical and religious terms[201], in Europe at least, whereas it currently enjoys being broadly viewed as positive. This van Dolen-et-al paper is interesting for this thesis because it suggests that when things are going well, humour can be a positive, but when things are going badly, humour assumes the counter position. In a related investigation, but beyond the boundaries of design research and into marketing, Christine Mathies, Tung Moi Chiew, and Michael Kleinaltenkamp have also considered humour in service contexts. However their assessment of the antecedents and consequences of humour is more positive: that affable humour makes a good interactions better, and improves poor ones (Mathies, Chiew & Kleinaltenkamp, 2016). The findings of these last two papers demonstrate a key difficulty with researching humour, in the context of design or otherwise: humour is a complex and inconsistent specimen for analysis.

Yeonsu Yu and Tek-Jin Nam recognise, as this thesis does, that "the design process for creating humorous products remains poorly understood, including the improvement and

[201] But positively by medical communities.

development of ideas with respect to materials, the creation of new ideas, and user-product interactions" (Yu & Nam, 2017, pp.79). In order to address this lacuna in designerly understanding, Yu and Tam have developed, tested, and refined a set of design principles for humorous products which they refer to as their 'Giggle Popper' (Yu & Nam, 2014; Yu & Nam, 2017). Their set of nine principles are summarised in the following table, see Figure 3.xxxvi (following page).

Principles	*Guidelines*	*Representative Case*
Shape incongruity	• Copy other objects • Break original scale • Break general proportions	
Unconventional use	• Use a familiar shape for an inconsistent purpose • Use a product for purposes different from the stated purpose	
Unexpected function	• Create brand-new functions that cannot be predicted from the product's appearance	
Zoomorphism	• Use a small-sized animal or human shape • Make users recognize the shape as fragile and alive	
Self-deprecation	• Represent the funny appearance of the user • Make the user share his/her amusement with others	
Abused product	• Use an anthropomorphized object • Make products do a demanding job	
Visualization of taboo	• Use shapes or messages that are banned • Destroy norms	
Bizarre consequences	• Generate bizarre situations with user participation • Display outrageous situations	
Destructive play	• Involve the user in play to break social rules • Perform an act or create a situation that one cannot possibly engage in under ordinary circumstances	

Figure 3.xxxxvi. Yu and Tam's nine principles for humorous products (Yu & Tam, 2017, pp.81).

Whilst Yu & Tam's principles are not complete and exhaustive, in the absence of a plethora of alternatives, they do provide a solid set of principles for designers and design students who seek to design funny design.

Despite Yu and Tam's observation that designing humorous products is still "poorly understood" (Yu & Tam, 2017, pp.79), and perhaps in response to this shortcoming, there is a small-but-growing field of research in design theory and discourse within which designers are researching humorous design in order to make more well-informed design decisions. For example, Shivani Mohan tests her ideas concerning humour and design through a process of increasingly exaggerating product features (e.g. teapot handles) and measuring the effects of their incongruity upon users. In related research, Geke Ludden, Hendrick Schifferstein, Paul Hekkert, and Barry Kudrowitz have also experiment with product features and humour in their exploration of sensory metaphors and visual-tactile incongruities (Ludden, Schifferstein & Hekkert, 2007, 2008, 2012; Ludden, Kudrowitz Schifferstein & Hekkert, 2012) lending further support to the idea that "humour is a phenomenon that relies on incongruity […] However, not all forms of incongruity lead to humor and/or amusement." (Ludden, Kudrowitz Schifferstein & Hekkert, 2012, pp.286) and that incongruity alone is not a sufficient condition for amusement (also explored independently by Kudrowitz (Kudrowitz, 2010)). Pursuing a slightly different path, Gratiana Pol, C.W. Park, Martin Reimann have pitched design humour against design aesthetics and investigated whether users are more 'proud' to own aesthetically pleasing design or funny design. They concluded that "two hedonic types of product design — aesthetically appealing versus humorous-looking designs — differ in the level of

ownership pride they evoke (with aesthetic designs being more effective), along with the mechanism through which they create such pride (with aesthetic designs signalling good taste, and humorous-looking designs signalling uniqueness)" (Pol, Park & Reimann, 2012, pp.308). Whilst Pol et al found that humorous-looking design evoked less prideful feelings in its owners, humour performs many other functions unrelated to pride. Chia-Chen Lu considers humour in the context of product-pleasure: to paraphrase, exploring both the positive and negative effects of humour upon product-pleasure and the extent to which humour has subtle and overt dimensions that design might respond to and capitalise upon (Lu, 2020). Similarly, to return to the work of Tek-Jin Nam (but this time working with Changwon Kim), Nam and Kim have explored the "ludic value" (Nam & Kim, 2011) of product design in an effort to make designed things, in this case immaterial/digital things more meaningful by the use of "tangible stories" (Nam & Kim, 2011, pp.85) to enhance ludic value. Tangentially related to Nam and Kim's notion of tangible stories is research by Karey Helms and Ylva Fernaeus which forefronts the power of humour to aid storytelling, specifically humour's role in engendering belief, and suspending disbelief, in the context of design fictions (Helms & Fernaeus, 2018). They find yet more evidence of humour's capacity to be a metaphorical double edged sword[202]: "humor can incite empathy and understanding, it can also lead to alienation and disengagement" (Helms & Fernaeus, 2018, pp.1).

[202] A colloquial term for something that has both positive and negative attributes — simultaneously alleviating and exacerbating problems.

3.4.5). Embracing Laughter: Purposely Making Design*ing* Funny

The majority of design artefacts referenced or presented in this thesis are either laughed *at* or *with*: the artefact and the designer being the foci of attention. However, a number of design researchers have instead shifted their focus to humour in the act of design*ing* rather than in the interpretation of finished design outcomes — recognising the value of humour in creative processes and/or as a rhetorical strategy for design development, whether design outcomes are intended to be humorous or not. For example, Chelsey Delaney develops a "humour-centred design[203]" process that uses "humour as a rhetorical approach in design" (Delaney, 2011, pp.1). She develops 'HumourMob' — "a tool to empower designers and non-designers to better understand humor's function in design and to encourage the use of humor as a rhetorical device to undertake social problems" (Delaney, 2011, pp.1), testing this tool in the context of politics, specifically the design of rally placards.

Mark Blythe, Kristina Andersen, Rachel Clarke, and Peter Wright have embraced humour in their exploration of alternatives to "solutionism" through the development of "seriously silly design fiction" (Blythe, Andersen, Clarke, Wright, 2016, pp.4968). Recognising that humour has the potential to engender creativity, Blythe et al conduct a number of workshops that involve the creation of 'magic machines'. In these workshops, "participants are encouraged to reject realistic premises for possible technological interventions and create absurd propositions from lo-fi materials" (Blythe, Andersen, Clarke, Wright, 2016, pp.4968), see Figure 3.xxxvii.

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[203] It was whilst reading Delany's exceptional dissertation 'Humor-Centered Design: Using Humor as a Rhetorical Approach in Design' (Delaney, 2011) that I first encountered the delightful pun 'humour-centred design', a phrase that is at once a joke and a deeply serious matter for consideration. This phrase has had a profound effect upon my research and is the term in this thesis that I am most disappointed not to have thought of myself.

Figure 3.xxxxvii. Magic machines from Blythe et al's anti-solutionist workshops (Blythe et al, 2016, pp.4975)

Mohan, in her studies of incongruous design, also makes strong connections between humour and creative thinking, claiming that "humor has the same intrinsic ingredients as modern notions of creative thinking. In fact design thinking methods and frameworks can be developed by deconstructing the notion of humor and its techniques" (Mohan, 2009, pp.1). In related research, Barry Kudrowitz compares the performance of designers to 'improv'[204] comedians — both roles involving creative quick-thinking. In his experiments, Kudrowitz invites designers and comedians to undertake a selection of creative design tasks, finding that improvisational comedians appear more proficient – in terms of generating new design ideas – than established product designers (Kudrowitz, 2010).

[204] The term 'improv' is shorthand for improvisation or improvisational. It is a theatrical term for performers who work without a script: making everything up as they go along (Robson, Pitt, Berthon, 2015).

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Chapter 4).

Second Analysis of the Perceived Problem: Perspectives from Humour Theory and discourse.

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4.1). Taking Humour Seriously.

"*Explaining a joke is like dissecting a frog. Nobody laughs and the frog always dies*".

E. B. White[205]

Figure 4.i. Crochet Frog Dissection by Cottontail & Whiskers.

Despite E.B. White's observation, people have persisted in trying to explain jokes, humour, and laughter, for a very long time. This thesis has been written with a high

[205] I have read this quote written a multitude of ways (e.g. Carr & Greeves, 2007, pp.84; Wild, et al, 2003, pp.2121; Kallio & Masoodian, 2019, pp.1; Attardo, 2014, pp.xxx (i.e. pp.30 of the introduction) and *many* more). This is my favourite version.

confidence that its readers will bring to the reading a lifetime of personal experiences of humour and laughter. The commonplace experience of humour has, thus far, afforded a discussion that has repeatedly mentioned humour and laughter without really defining or explaining them in any great depth. Previous chapters have considered how humour has been understood by design but this chapter takes opportunities to somewhat invert that approach, instead considering how design has/might be understood by humour theory. The intention here is not to present a history of humour itself, nor of humorous artefacts, rather the intention is to outline and discuss a history of the *study and theorisation* of humour. Whilst the more chronological section of this chapter begins with reference to attempts made to speculate upon the nature of Palaeolithic humour and to find the oldest recorded jokes, these references are made to highlight the inherent difficulties encountered when looking for evidence of ancient conceptualisations and/or theorisations of humour, rather than to begin to illustrate a history of humour itself, and/or its associated artefacts. Following a broad initial discussion of humour — its etymology, its ability to be a potential, a process, an attribute, and more — and of some closely related terms such as amusement and laughter, this chapter employs both chronological and thematic approaches in its handling of humour theory. Some of this theory is organised in a loose chronology, largely as a response to the difficulties that would arise from a thematic organisation. Broad generalisations can be made regarding the dominance of the so called Superiority Theories from their formulation in Ancient Greece until the emergence of the Incongruity Theories of the Enlightenment, and the latter 19th Century can be acknowledged for the rise of the Release Theories, but the fuzziness, coterminousness, and disagreement concerning taxonomies of humour theory means that a specific and detailed thematic categorisation of humour theory would be unwieldy and exceptionally difficult here. It appears more straightforward to take a chronological ‘who said what, and when’ approach,

initially at least, rather than to attempt to identify (or logically formulate and then argue) thematic groupings for the plethora of humour theories that borrow from and blur into one another. This point is only magnified when considering the comparative proliferation of documented humour theory in recent years. That said, thematic groups (often by field) are employed when dealing with latter 20th Century and 21st Century humor theory. This is due to the abundance of humour studies undertaken in these two centuries, the sheer number of which might make a chronological account feel disjointed: confusing the appreciation of intimately related ideas and consensus amongst academic communities.

Some humour theory can appear to be rather abstract and esoteric in nature. For example, ideas explored below include Henri Bergson's notions of humour as "something mechanical encrusted upon the living" (Bergson, 2008, pp.22), Spinosa's theological considerations of laughter as a spiritually "pure" expression of joy (Amir, 2020), and Simon Critchley's assertion that "humour functions by exploiting the gap between being a body and having a body, between – let us say – the physical and metaphysical aspects of being human" (Critchley, 2002, pp.43), or, as he later, and rather wittily puts it: "between our souls, and arseholes" (Critchley, 2002, pp.50). In order to better ground humour theory in design discourse and designer's experience, so that designers might more readily connect with it, the strategy here is to start with the humour theory, but accompany it with design artefacts that might better anchor theories of humour into our "designed world" (Buchanan, Doordan & Margolin, 2010). This collection of 'funny things' are designed artefacts that have either been *designed* to be funny (laughed with) or *found* to be funny (laughed at). The aim here is not to present an anthology of object biographies, these artefacts are instead presented that they might serve as illustrative, predictive, or explicative examples of humour theory in action, application, and/or analysis. This 'theory-

plus-example' approach has been inspired somewhat by that of Dalsgaard & Dindler who employ 'bridging concepts' to meaningfully connect design theory to example instances of design practice. They propose that "bridging concepts are are composed of three constituents: a theoretical grounding, a series of design articulations, and a set of exemplars that embody the properties of the concept, reflecting the span from theory and practice" (Dalsgaard & Dindler, 2014, pp.1636). In the case of this chapter, the 'theoretical grounding' is the humour theory, whilst the 'articulations' and 'exemplars' are selected design artefacts. This method of 'presenting examples' is also a common tactic employed by theoreticians of humour, utilised in order to explain various theoretical models and test them in humorous contexts. However, examples given are typically in the form of textual jokes (see: Kant, 1911; Freud, 1976; Rapp, 1951; Gruner, 1978; Hurley et al, 2011) or humorous anecdotes (see: Aaker & Bagdonas, 2020) rather than design artefacts. Such example jokes are present amongst humour theory that is located in fields as diverse as humour pedagogy (teaching people to be funny) (e.g. Aaker & Bagdonas, 2020; Holloway 2010; Vorhaus 1994; Mishon, 2003; Wright, 2007), philosophy (e.g. Critchley, 2002, 2005), literature and linguistics (e.g. Raskin, 2008), and psychology (e.g. McGraw and Warren 2010), amongst many others. Example jokes are presented in different ways. Sometimes they are set forth in the manner of specimens for vivisection[206]: as cohesive whole entities which are then metaphorically dissected in order to study their constituent parts, their 'workings', and their morphology (for example, see Nilsen & Nilsen, 2019). At other times they are presented as living specimens, considered as metaphorically alive and 'in the wild': spreading, spawning, mutating — leading 'lives' in metaphorical ecosystems that we know as human cultures (for example, see Bergson, 2008, pp.65). In addition to these 'example artefacts', this chapter — indeed this thesis — also employs textual jokes

[206] As considered by E. B. White at the beginning of this chapter.

as the writers above have done: to support, explain, and illustrate humour theory whilst simultaneously enriching the text in hedonical terms[207].

There are a considerable number of theories of humour that together constitute a complex ecology of ideas. The range of fields within which humour is studied, and from which theories of humour emerge, is both multitudinous and diverse. This is reflected in the comparatively broad breadth of fields from which this thesis draws humour theory: from philosophy (e.g. Žižek, 2018; Parsons, 2015) to design (e.g. Yu and Tam, 2014, 2017), from evolutionary biology (e.g. Ramachandran, 1998) to theatrical performance (e.g. Wilde, 2008), from psychology (e.g. Wood & Niedenthal, 2018) to art (e.g. Klein, 2007), from sociology (e.g. Kuipers, 2014) to computer science (e.g. Chandrasekaran et al, 2016; Nilsen & Nilsen, 2019), from archaeology (e.g. Egypt Museum, 2024) to law (e.g. Adriaensen et al, 2023; Nilsen & Nilsen, 2019) from sports studies (e.g. Snyder, 1991; Nilsen & Nilsen, 2019) to politics (Sanders, 1995), and many more diverse and intersecting spectra. Whilst Chapman and Foot remind us that "the elusive and ephemeral nature of humour and laughter demands that we retain a broad-based methodology if research is to remain fruitful" (2004, pp.xxix), there is a risk that one might wander through the metaphorical fields of humour study ad infinitum. In order to keep the discussion of humour relevant to this thesis and its intended audience (designers, and those interested in design), the bias here is towards theories of humour that have particular relevance to the analysis and understanding of design artefacts that are laughed 'at', or 'with'. Theories of humour are less likely to be mentioned below the less they have been judged relevant to the theory and practice of design. For example, neuroscientific studies of humour

[207] With the intended audience of this thesis in mind (see Section 0.7 for explanation of the intended audience for this thesis), I tried to pick jokes that sat comfortably in the context of design, e.g: 'I designed and built my own car. It's OK, but it can't go backwards — I guess I'm no good at reverse engineering' (Anon). (…you're welcome).

phenomena are mainly explored through the use of Functional Magnetic Resonance Imaging (FMRI) in medical settings such as hospitals and research laboratories. Whilst such studies might be fascinating, the minutiae concerning whether or not the analytic recognition of humour takes place in the same location of the brain to the experiential pleasure of humour (Campbell et al, 2015) makes less difference to the lay-designer's understanding of laughter as a response to design than other, more generalised and applicable theories of humour might, and is therefore not explored in detail. That said, some theories of humour that may not seem immediately obvious in their relevance to design have been included here because their presence makes a meaningful contribution to a more complete presentation of a history of humour theory: their omission would leave conspicuous holes in the metaphoric fabric of this chapter. Others, that may not initially seem overly relevant, are meaningfully connected later in this text.

Many texts that present humour theory, and concern the study of humour, begin by acknowledging that humour has, seemingly paradoxically, been historically marginalised[208] (in the West at least). This marginalisation is presented here as paradoxical because declarations of marginalisation are often paired with the fact that a great many famous scholars — the vast majority of whom are well-known for theorising something else — have considered humour at some point in their careers. As Nilsen and Nilsen observe: "Humour scholars in various universities are most often assigned to an academic area such as Anthropology, Art, Business, Education, Health, History, Law Linguistics, Literature,

[208] At time of writing, the top return for articles containing the words 'design' and 'humour' in Cardiff Metropolitan University Library's academic database (MetSearch) has nothing to do with humour in the sense of funniness. It is entitled 'L C-Tandem Mass Spectrometry for Quantifying Three Drugs Simultaneously Utilized for Treating Chlamydia Trachomatis Infection in Rabbit's Aqueous Humor: Experimental Central Composite Aided Design Augmented Lean Six Sigma' (El-Attar, Mohamed, Hasan, & Abdel-Raoof, 2021). Clearly, a scientific study of bacterial infection in rabbit's eyeballs is considered, in terms of this particular search algorithm at least, of greater academic interest and importance than any treatment of humour and design in the context of finding design funny.

Medicine, Music, Philosophy, Politics, Psychology, Religion, Sociology, [etc.]. Then within their particular field they specialise in humour studies […]. The field of humour studies is different from other academic areas in that it is typically a secondary consideration." Nilsen & Nilsen, 2019, pp.1). That said, Bergson has claimed: "The greatest of thinkers, from Aristotle downwards, has tackled this little problem [specifically laughter], which has a knack of baffling every effort, of slipping away and escaping only to bob up again, a pert challenge flung at philosophic speculation" (Bergson, 2008, pp.1). It appears that this marginalisation of humour study is being eroded by a steady growth in the number of academics that have sought to take the study of humour seriously. These academics have capitalised upon both the distribution potential of the Internet, and the declining relative cost and logistical botheration of printing physical media, to disseminate their research to audiences around the globe. Recognising some impacts of the increased recognition of humour theory, and the continued building of distributed academic networks of humour study, has prompted Chapman and Foot to assert that humour research has finally "'found' its academic community" (Chapman and Foot, 2004, pp.xxvii). Chapman and Foot hosted the first international academic conference concerning humour (Nilsen & Nilsen, 2919, pp.ix). It took place in Cardiff, UK, in 1976[209]. This international conference was followed by others (to summarise Nilsen & Nilsen's list: Mindess and Joy, California, 1979; Browning, Mintz & Cummings, 1982; Ziv, Tel Aviv, 1984; McHale, Cork, Ireland, 1985 (Nilsen & Nilsen, 2019, pp.ix). There are now also a small number of international journals that are focussed upon humour, for example, 'HUMOUR, the International Journal of Humour Study' and 'The European Journal of Humour Research'. Academic papers concerning humour have also made their way into important international journals

[209] Tony Chapman went on to become Pro-Vice Chancellor of Cardiff Metropolitan University between and 1998 and 2016. Cardiff School of Art & Design is one of five schools that constitute this university and is where much of this thesis was written four or five decades after the 1976 conference — continuing a tradition of humour study in Cardiff.

such as ‘Nature’ (e.g. Markowitz, 2023; Tregoning, 2021; and Fried et al, 1998). The majority of academic papers concerning humour that have been explored as part of this research project have been sourced from journals that are principally concerned with fields such as psychology, marketing, and literature/linguistics. That said, humour is frequently used as a means by which to investigate other aspects of the human condition, for example: cognitive development (McGhee, 1980); evolution (Darwin, 1999); perception and comprehension (Derks, Staley & Haselton, 1998); medicinal therapy (MacDonald, 2004); conflict (Norrick & Spitz, 2008); gender (Hay, 1995; Lampert & Ervin-Tripp, 1998; Schwarz, Hoffmann & Hunter, 2015; Yoon & Lee, 2019; Nilsen & Nilsen, 2019; Tsai et al, 2015); epistemic predicaments (Hurley, Dennett & Adams, 2011); and so on. The approach of using humour to investigate ‘something else’ resonates with this thesis in that humour is, in some ways, used herein as a test ground for an investigation into the entangled nature of design.

Academic, and humour theoretician, John Morreall, has noted that “until a few years ago, the study of laughter was treated in academic circles as frivolous. Because laughter is not a serious activity, the unstated argument seemed to run, it is not possible to take a serious interest in it; and so anyone proclaiming an interest in studying laughter probably just wants to goof off[210]”. This sentiment is echoed by Provine (Provine, 2008, pp.3) and many others. Despite the evident importance of humour, culturally and individually (comedians fill stadia when performing their routines, comedy films and television programmes are the outputs of a multi-billion dollar industry, and humour and laughter are key facets of many interpersonal relationships, especially valued ones), *and* despite the fact that a significant number of important and influential European

[210] a colloquial term meaning to avoid work and/or to waste time.

philosophers from Aristotle (Halliwell, 2008) to Žižek (Žižek, 2018) have ‘had a go’ at humour, the study of humour appears to some more ‘serious’ academics to lack the gravitas to be taken ‘seriously’ as a topic for academic investigation. At least as far back as Hutcheson’s ‘Reflections on Humour’, first published in 1750 (Hutcheson, 2010), the study of humour has been on the periphery of both science and philosophy, in the West at least. It appears as though humour has not been considered to be a serious (no pun intended) subject for analysis. Trumble, in his ‘History of the Smile’ (Trumble, 2004), describes the representation of humour as something generally understood – with notable exceptions – to be absent from great art (meaning painting and sculpture) and, along with many others who have made the point, famous comedic actor and former Monty Python, John Cleese, has reiterated the popular observation that “Charlie Chaplin never got an Oscar” (Cleese, 2021). Robert Provine – whilst he does undertake a scientific enquiry of laughter – recognises that his research “raised eyebrows among his colleagues” since “in the world of serious science, laughter is seen as a lightweight topic – an area lacking in clout and prestige” (Provine, 2008, pp.3). The fact that this statement appears so early in Provine’s text, is not unusual. An apology of some form or other appears in many serious and accomplished texts concerning humour and laughter.

4.1.1). The Word ‘Humour’.

This thesis is primarily concerned with understandings of humour that are directly related to amusement and laughter. In addition to funniness, the word humour can be used to describe one’s general state of being (good or bad) and it can also be used to describe an act undertaken to placate someone (to humour them). Whilst the meaning of the word humour is different in these cases, these meanings are intimately related to one’s sense of

being: one's wellbeing. The word 'humour' possesses a rather unexpected etymology, arising, as it appears to have done, from a sense of 'moisture': one might wonder why the origin of the word humour is rooted in wetness. The Oxford English Dictionary relates that the etymology of the word humour is from the latin word 'humor' meaning:

> "moisture', from humere (see humid). The original sense was 'bodily fluid' (surviving in aqueous humour and vitreous humour [of the eye]); it was used specifically for any of the cardinal humours [the Hippocratic/Galenic humours explored below], whence 'mental disposition' (thought to be caused by the relative proportions of the humours). This led, in the 16th century, to the senses 'mood' (humour (sense 2 of the noun)) and 'whim', hence to humour someone 'to indulge a person's whim'. humour (sense 1 of the noun) dates from the late 16th century"
>
> (OED, 2023(a)).

As the OED infers, the word humour is recognised to have been drawn from ancient medical theories of 'humourism' that have a deep history. Humourism (also humorism, humoralism, and/or humoural/humoral theory,) is, of course, distinct from the 'humour theory' and 'theories of humour' that are referred to throughout this thesis and that are concerned primarily with amusement and laughter.

Humoural theories postulate a model of the body within which four liquids reside: the four 'humours'. Whilst these four humours (sometimes referred to as the 'cardinal humours') were known by various names, they are typically labeled as bile (chole), black bile (melanchole), blood (sanguis), and phlegm (flegma) (list adapted from that of Stelmack & Stalikas (1991, pp.255)). In the ancient world, each of the four humours were attributed characteristics such as wetness/dryness and hotness/coldness and these characteristics were proposed to be intimately connected to both a person's character and wellbeing. The proportions of the humours were thought to be subject to fluctuation, so being in, or of, good humour was thought to be dependent upon a state of equilibrium

within the body that afforded good health and wellbeing. Being in, or of, bad humour meant that the mix of humours was unbalanced, typically through a surplus or a scarcity of one or more of the humoural liquids. Disease, and other ailments, were similarly thought to be attributable to the imbalance of one's humours.

A key player in the history of humoural theory is Hippocrates of Kos (460–377 BCE). Hippocrates now stands, somewhat, for the foundation of the profession of Western medicine and is frequently claimed by the medical profession to be the 'father' of medical professionalism (e.g. Goldberg, 2006) as his broadly diagnostic and symptomatic approach to medical understanding, treatment, and care, still dominates, even in this scientific era. Hippocrates is claimed to be the originator of many familiar medical terms and modes of operation, being a staunch advocate for the need for diagnostic medicine, informed by detailed case study (Lloyd in Hippocrates, 1987, pp.31), and comparison of patient symptoms (Hippocrates, 1987; Goldberg, 2006; Arikha, 2007). Indeed, the Hippocratic Oath, that many doctors swear, bears his name in homage (Arikha, 2007, pp.6). Hippocrates cannot easily be written out of medical history, though, of course, the humoural theory that he has been credited with conceiving has been rendered somewhat naïve by science. Regardless, there can be little doubt that the foundational insight of the classical physicians has shaped the Western medical-scientific profession for over two millennia. Although principally concerned with the humoural ideas of Galen of Pergamon (c.129–c.199/217 CE), (another key figure in histories of the humours and one who considerably strengthens the ties between the humours and personal temperament in the Western medical mind (Kagan, 1994)), Stelmack and Stalikas attribute the multi-millennial longevity of the humoural model to "an elegant theoretical structure, reasonable empirical evidence and the absence of compelling alternatives" (1991, pp.262). Whilst Hippocrates

remains an important figure in medical history, there is much contention as to the authorial provenance of the Hippocratic corpus. Treatises such as 'On the Nature of Man' (Hippocrates, 1984), are often attributed to Hippocrates but are held by some, such as Timken-Zinkann, to be "[…] attributed erroneously by the ancients to Hippocrates, but very probably written by Polybos, the son-in-law of Hippocrates" (Timken-Zinkann, 1968, pp.289). This view is shared by Arika (2007, pp.8). Lloyd takes the entire Hippocratic corpus to be "evidently the work of a large number of medical writers, belonging to different groups or schools and representing in many cases quite opposed viewpoints, not only on such questions as the aetiology of diseases and the methods of treatment, but also on the methods and aims of medicine as a whole" (Lloyd in Hippocrates, 1987, pp.10). Regardless of whether Hippocrates authored the corpus that bears his name, Stelmack and Stalikas refer to Smith in his assertion that "the humours were considered to be causes of illness in a long medical tradition that preceded Hippocrates" (1991, pp.257). This "long medical tradition" is traced by Kagan as far back as Ancient Chinese conceptions of reality that pre-date Hippocrates, Polybos, and their contemporaries by another two thousand years (Kagan, 1994, pp.4). Whilst these contentions regarding the provenance of Hippocrates and the exact origins of humoural theory may be a concern for some, they do not present a problem for this thesis. Whether one author, or many, compiled the Hippocratic corpus, or whether indeed Hippocrates originally conceived the model of the four humours, does not undermine the central tenet of the ideas that they represent, nor their relation to the word humour, about which this thesis is concerned. The aim here is not to construct an irrefutable history, or a new historiography, but rather to establish a sense of a persistent idea: that health, equilibrium, and wellbeing underpin amusement to such an extent that a proto-scientific theorisation of these ideas lent the English language a word for it: humour.

In keeping with the European proclivity for binary opposites, the four humours were attributed certain qualities that were construed in opposition to one another. The intention, of course, was that opposing humours would be perpetually locked in opposition, maintaining balance in the human system. Humoural attributes in binary form include temperature (hot/cold) and humidity (wet/dry) (Hippocrates, 1984). The humours were also associated with four fundamental elements that were thought by Ancient Greek natural philosophers, such as Empedocles (c.493–c.433 BCE), to constitute a tetrad of irreducible, but intermixed, elements that made up the material universe: earth, air, fire, and water (Stelmack & Stalikas, 1991, pp.254). To briefly describe a Hippocratic understanding of the humours: blood was categorised as warm and moist and was associated with air; yellow bile was categorised as warm and dry and was associated with fire; black bile was categorised as cold and dry and was associated with earth; and phlegm was categorised as cold & moist and was associated with water (Hippocrates, 1984, pp.260-270). Notions of tension and balance inherent in the opposing nature of the four humours might be better understood with reference to a simple diagram, (see Figure 4.ii). There were also seasonal associations (blood and spring; yellow bile and summer; black bile and autumn; phlegm and winter (Stelmack & Stalikas, 1991, pp.258)), and associations of gender, and of age (blood and child; yellow bile and young adult; black bile and middle age; phlegm and old age (Hippocrates, 1984) that increased the mutable compositional elements within the humoural model and therefore enabled increasingly subtle and dynamic conceptualisations of diseases and diagnoses.

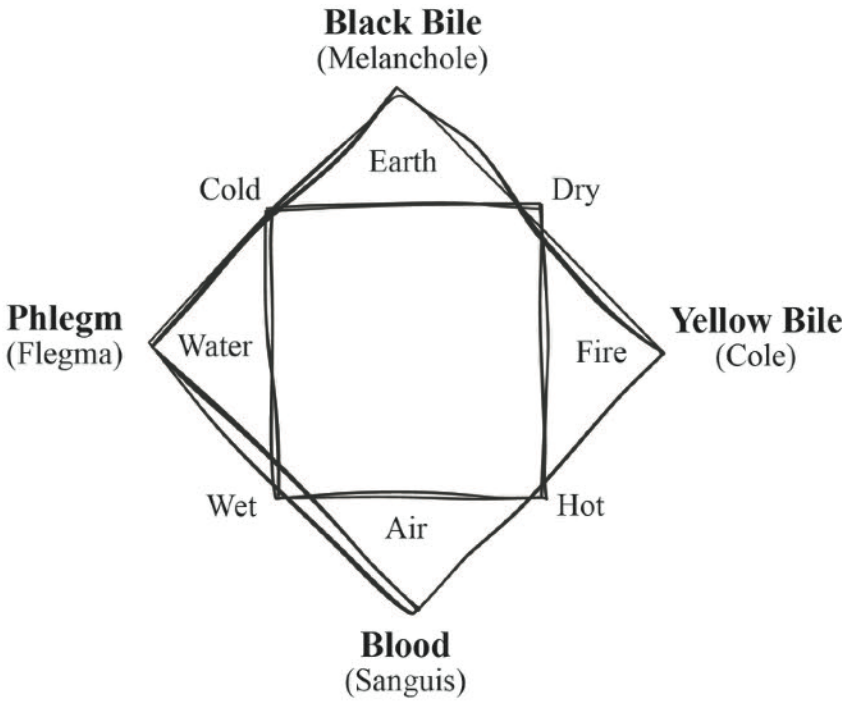

Figure 4.ii. "The relation between the four cosmic elements, the four qualities of the elements and the four humours" (author's own diagram based upon a model by Stelmack & Stalikas, 1991, pp.258).

For Hippocratic physicians, the balance of the humours was known as "krasis", it gave rise to good health and to good mood, while a condition of humoural imbalance — 'krisis' or "dyskrasia" — resulted in ill health and poor mood (Porter, 1930, pp.182). The notion that good health and good mood arise from a system in balance was reflected in the use of medical treatments whose function was to redress imbalance. As Lloyd highlights in his prolegomenon to the Hippocratic treatise 'The Nature of Man', the corpus states that: "Diseases caused by over-eating are cured by fasting; those caused by starvation are cured by feeding-up. Diseases caused by exertion are cured by rest; those caused by indolence are cured by exertion. To put it briefly: the physician should treat disease by the principle

of opposition to the cause of the disease according to its form […]" (Lloyd in Hippocrates, 1984, p. 33; Hippocrates, 1984, pp.266).

The Hippocratic corpus was predated, and appears to be influenced by, a set of ideas that are commonly attributed to Pythagoras (c.570–c.495 BCE):

> "The Pythagoreans […] reasoned that the harmony of the universe also depended on number. In their numerology, the number four was of special (even sacred) significance; every material body was an expression of the number four. Since the importance of the number four was considered to be foundational in the material Universe of classical scholarship (Copelston, 1946), the logical consistency of their study and the impressive demonstrations that they made, such as the renowned Pythagorean theorem, earned widespread and longstanding acceptance of many of their principles."
>
> (Stelmack & Stalikas, 1991, pp.257).

"The Greeks assumed that the universe was symmetrical; hence, nature would not have constructed human personality asymmetrically" (Kagan, 1994, pp.7). It is of little surprise then that, given the presence of the Empedoclean tetrad (earth, wind, fire, water), and the sacred Pythagorean 'material' number four, there should also be four humours, and that these humours had attributes that resonated in our material universe. Nor is it surprising that the relationship between these attributes would be strictly defined by the thinkers of the time.

The Hippocratic balance of the bodily humours, a critical factor in deciding both one's health and one's mood, is a form of regulation through the influence of a field of contingencies which, over time, and with the increasingly reductive influence of scientific understanding has transformed the idea of the 'somatic condition' (Thompson, 2008) to be formed through a conjectural balance of humours into a more objectively provable, mechanistic consequence of the fluctuating levels of various biological substances. In the contemporary medical body, the condition of being is, to some extent, regulated by a

plethora of neurochemicals, hormones, enzymes, and other related compounds, and these can be seen as the scientific descendants of the liquid humours; an ancient means of understanding being, and wellbeing, as conditions dependent upon the material. As Kagan proposes: “Galen’s bold inferences [regarding the humours] were not seriously different contemporary speculations that schizophrenics have an excess of dopamine and that depressives have insufficient norepinephrine” (1994, pp.8). Thus important humoural notions of balance and equilibrium underpinning wellness continue to pervade contemporary understandings of the body, albeit through mutable concepts and their associated terminologies.

4.1.2). Defining Humour.

As a foundational step, a typical dictionary definition of the humour of amusement is “the ability to find things funny, the way in which people see that some things are funny, or the quality of being funny” (Cambridge, 2024). This neat definition references the fact that the word humour can be attributed to a potential, a process, and/or an attribute — a fact which exacerbates some confusions about the term that are explored below. This thesis takes *funniness* to be a quotient measure of the strength of a humorous response to a stimulus: i.e. a measure of the *funniness* of anything, or any *thing.* This is, of course, a subjective measure dependent upon individual senses of humour, context, etc., and not a quality that can be objectively measured — although it can be conjectured, anticipated and analysed. Some writers have used the words humour and comedy rather synonymously (e.g. Eagleton, 2019, pp.36), while others have attempted to define these terms as distinct from one another.

The literature review and design survey for this research revealed a number of key insights regarding humour:

a). Humour is Anywhere.

As Dr. Seuss observed, "from there to here, and here to there, funny things are everywhere" (Seuss, 2020. Pp.09). Every contemporary human culture has humour (Hinde, 1974; Martin & Ford, 2018), and there appears to be convincing historical evidence that ancient cultures – e.g. Greek (Mitchell, 2012), Roman (Bremmer & Roodenberg 2008), Egyptian (Andrews, 2012), and others – also enjoyed humour and embodied their humour into the objects, jokes, plays, stories, and other designed artefacts of their culture, as people continue to do in here the 21st Century. Some have even conjectured as to the humour of our prehistoric ancestors, whether by the deductive reasoning of evolutionary psychologists (e.g. Polimeni & Reiss, 2006) or by even more imaginative means (e.g. Will, 2008).

b). Humour is Anything.

This thesis will not claim anything, or any *thing,* to be definitely or definitively funny. The design artefacts that fill these pages are presented as examples that have been subjectively selected by the author, for the purpose of illustration and demonstration, rather than to establish definitive exemplars in a proposed categorisation of funny design. The evolutionary psychologist Alistair Clarke has stated that humour demonstrates the potential to emerge in any situation, and may be contingent upon any stimulus or circumstance (Clarke, 2008) and this view is shared by others (e.g. Lynch, 2002). It is the subjectivity of humour makes categorisation of humour stimuli particularly difficult. This thesis attends to funny things because they currently sit outside much design analysis, but people have the

capacity to find humour in anything (Clarke, 2008). From Clarke's perspective, all one might say for sure is that some things are funny to some people at some times and in some contexts. A consequence of this fact is that research that asks exactly why individual people might laugh at any particular designed artefact might not be seem to be particularly useful — a researcher could ask people what they found funny, but with only a limited range of participants from among eight billion individuals, and with reference to any number of social and cultural situations, only very generalised claims could be generated, and these might be quickly outmoded. However, just because anything *might* be humorous, that does not mean that everything is *equally* humorous. General rules and patterns can be observed in the manner and frequency with which things are found humorous and these can be used to both anticipate humour and design to encourage or discourage it.

c). Humour is Complex (and its theorisation is complicated).

Many of the texts encountered through this research state that humour, and its study, are complex matters (e.g. McGhee, 1980, pp.45). This complexity is sometimes offered as a justification for a certain method or approach, and is at other times offered as an excuse for shortcomings in theoretical models or research practices, inaccurate predictions, or indefinite answers. Historically, a way to manage the complexity of humour study appears to have been to focus upon a fractional aspect of humour in detail (linguistic humour, visual humour, etc.). However, a result of this approach appears to be that no one unified theory emerges; instead a multiplex of competing and varying theories develop, each managing to account for only a fraction of humour – the hearing of a joke, the reading of a subtle political satire, the cruelty of the school-yard, being physically tickled, or a great number of other specific and diverse instances of varied connectedness to one another. Most writers encountered through this research treat humour to be a process of

cognition. However, some use the word to refer to humorous things that traditionally are though to sit 'outside' of individual consciousnesses, such things being more or less material or immaterial in their nature. For example, the oft cited Bremmer and Roodenburg have defined humour as "Any message, transmitted in action, speech, writing, images or music - intended to produce a smile or a laugh". This conceptualisation is almost McLuhanian, (McLuhan, 2005): the humour *is* the message.

d). Humour is experiential and resistant to analysis.

Humour presents as a rather "tacit" (Polanyi 2009, Peck 2007, Reber 1996) experience in the world giving rise to another paradox: toddlers and teenagers readily demonstrate their appetite and capacity for humour, laughing often, but our most accomplished and tenacious scientists and philosophers cannot adequately explain it. Clearly "Humour is a hard problem" (Hurley, Dennett & Adams, 2011. Pp.7) and has also been described as "a nicely impossible object for a philosopher" (Critchley, 2002, pp.2). Possibly in response to humour's resistance to analysis, those who study humour have attempted to attack it from many angles at once, i.e. many different theories have been authored, from many different fields, in the hope that one might convincingly penetrate this perceived resistance and explain humour, at least partially. This has resulted in the proliferation of a multitude of theories that are either too specific to address the breadth of humour phenomena, or too generalised to be overly useful, and yet each new theory also contributes to the overall confusion regarding the subject of humour.

e). Humour is Temporal.

Humour is fleeting, and laughter is a temporal event. Humour has ephemeral qualities: the longer an instance of humour is analysed, the less funny it appears. Also,

one's response to humour is mutable: the same person may respond to similar humour stimulus in rather different ways depending upon contextual factors and once a humour stimulus has been encountered, future encounters will likely not evoke the same response: many things are 'only funny the first time'.

4.1.3). Humour and Context.

Humour is highly dependent upon context: one's potential to find something funny or to 'get' a joke is often dependent upon certain contextual knowledge. For example, take the following joke:

> The other day, I applied for a job designing parallax layers...
>
> …Failed the background test.
>
> (Anon).

A web designer, UX/UI designer, game designer, graphic designer, or someone else au fait with the jargon of 'motion graphics' would probably comprehend the humour in this joke[211], being that they would be likely know what the pivotal term 'parallax layers' means[212]. Someone who does not know the meaning of this term would be much less likely to find this joke comprehensible and therefore far less likely to find it funny[213]. The importance of context is not restricted to jokes, but to all forms of humour. For example,

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[211] I cannot say whether they would find it funny or not.

[212] In some websites and video games, the backgrounds are constructed from stacked 2-dimensional 'layers' know as parallax layers. When animated, these parallax layers move at different speeds, relative to one another. 'Further away' equals slower, and 'nearer' equals faster. This give an impression of three-dimensionality by two-dimensional layering, especially when scrolling or moving the cursor at speed.

[213] They might still laugh though — maybe at the incongruity of the incomprehensible words, maybe to save face if they 'should' get it, maybe because others are laughing and laughter has an infectious quality, and so on. Humour can be very difficult to conclusively analyse.

John Cleese, discussing British television's famous situational comedy 'Fawlty Towers' states that:

> "people know how hotels 'work', you see. If you set something in something as obvious and boring as a hotel, the huge advantage is the audience has a pretty good idea how it is supposed to work, so they therefore know when things are going wrong. Whereas, if you set it in an undertakers, you've got to explain how an undertakers work before you can be funny about it."
>
> (Cleese, 2021).

4.2). Humour and Laughter are Not Synonymous: A Focus Upon Laughter.

For many, humour and laughter appear essentially synonymous — laughter being simply a bodily expression of humour. However, Robert Provine, an authority on laughter and its study, and author of 'Laughter: A Scientific Investigation' (Provine, 2000) insists that "most laughter is not a response to jokes or other formal attempts at humour" (Provine, 2000, pp.42) and this observation has been echoed by others (e.g. Beard, 2014, pp.6). This thesis, therefore, is written from the perspective that humour and laughter are, categorically, not the same thing, although they evidently have an intimate relationship and have historically often been theorised together (a tradition upheld by this thesis).

A difficulty with studying laughter, is that the term 'laughter' is employed to refer to a broad range of bodily phenomena from a slight smile or sardonic sneer with accompanying audible exhalation at one end of the spectrum to profound and protracted muscle spasms that doubling one up or over, loud vocal exhalations, tears, breathlessness, giddiness, and a general loss of executive control over ones faculties — and very occasionally even a loss of bladder control[214] (San, Barnes & Caldwell, 2021). As Simon

[214] Hence the phrase to 'piss oneself' with laughter.

Critchley has noted: “As a bodily phenomenon, laughter invites comparison with similar convulsive phenomena like orgasm and weeping […]. In laughing violently, I lose self-control in a way that is akin to the moments of radical corporeal exposure that follow an orgasm or when crying turns to uncontrollable sobbing” (Critchley, 2002, pp.8). Critchley continues that laughter is often understood to be a physical manifestation of humour: “It [humour] is practically enacted theory” (Critchley, 2002, pp.18), i.e. we find something funny, conceptually, and we laugh, bodily. Bergson too, noticed the relationship between the perceptual, cognitive, and visceral aspects of humour and laughter: “this particular logical relation, as soon as it is perceived, contracts, expands, and shakes our limbs, whilst all other relations leave the body unaffected” (Bergson, 2008, pp.3).

Much as the word humour encompasses a broad range of meanings, so too does laughter. Provine and Yong have described laughter as “a stereotyped human vocalization” (Provine & Yong, 1991), but, within this definition, one might cackle, cachinnate, chortle, chuckle, crow, gibe, giggle, guffaw, howl, peal, roar, shriek, snigger, snicker, snort, swoon, tee-hee, titter, whoop, yock, and yuck in any laughing episode. Miquel Mascaró, Francisco Seró, Francisco Perales, Javier Varona, and Ramon Mas have developed a taxonomy for laughing and smiling, for use in computer science contexts to enhance the fidelity of virtual characters (Mascaró et al, 2021), see figure 4.iii. Mascaró et al’s physical/visual taxonomy is complimented by Chiara Mazzocconi, Ye Tian, and Jonathan Ginzburg's “taxonomy of the pragmatic functions of laughter” (Mazzocconi, Tian & Ginzburg, 2022), developed from their recognition that there was, hitherto, “no consensual approach […] for classifying laughter” (Mazzocconi, Tian & Ginzburg, 2022, pp.1302). Research such as this goes some way to addressing the confusion concerning laughter, or at least highlights its varied nature and lack of study.

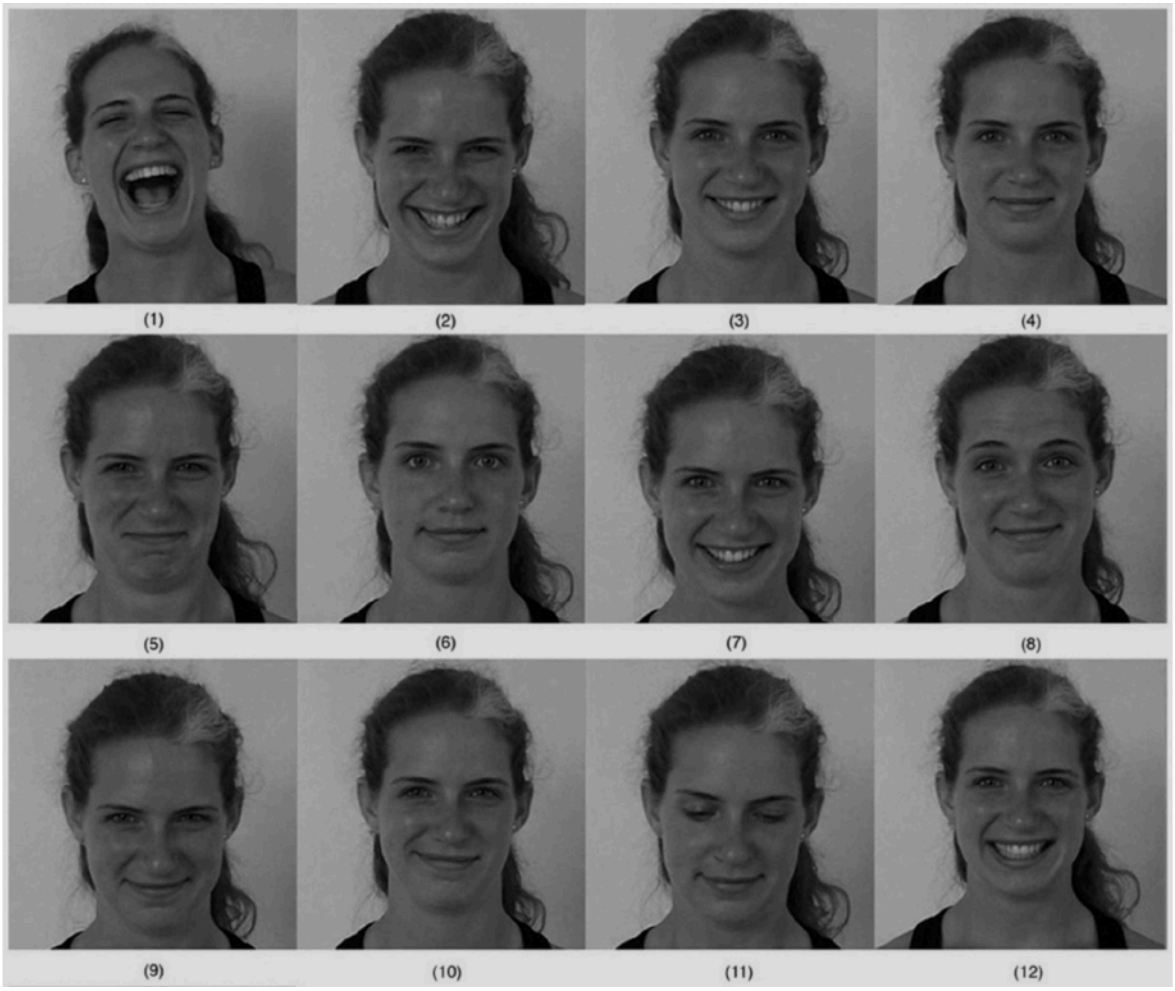

Figure 4.iii. “Laugh and smile taxonomy based on the different expressions of joy” (Mascaró et al, 2021, pp.4.).

Ginzburg, Mazzocconi, and Tian have also written on another important facet of laughter: “laughter as language” (Ginzburg, Mazzocconi, and Tian, 2020, pp.1). Many researchers have commented upon the function of laughter as a social signal (e.g. Clarke, 2008; Oevis, 2016, Ramachandran, 1998), but Ginzburg, Mazzocconi, and Tian imbue laughter with more nuance and range: referring to it as a form of non-verbal communication that can convey propositional content.

Of humour and laughter, evolutionary psychologist Alistair Clarke, has stated “Humour is a process of cognition, and the associated humorous repose of neurophysiological chemical

release is a reward for the achievement of that cognition, simultaneously communicated via the overt signal of laughter." (Clarke, 2008. Pp 18). Despite the commonly held understanding of a strong causal connection between laughter and humour (i.e. people laugh when they find something humorous), many theorists have made a distinction between two types of laughter: humorous laughter and non-humorous laughter. Humorous laughter being a consequence of an appreciation of something humorous, like hearing a joke, or seeing something funny. Non-humorous laughter being a consequence of either an appreciation of something non-humorous (e.g. fear or relief), or an accompaniment to a physical experience such as being tickled or even certain types of medical seizures known as 'gelastic'. The neurosurgeon Itzhak Fried and his colleagues at the University of California have induced laughter through electrical cortex stimulation (Fried et al, 1998; Ramachandran, 2005, pp.291), and it appeared to 'feel' humorous, although sort of back-to-front: whereas humorous laughter usually happens in the order of perception, comprehension, laughter, the conscious patient found herself laughing and, presumably rather confused, looked around for a humorous stimulus, eventually settling upon the researchers and declaring "you guys are so funny — standing around" (Browne, 1998, pp.2).

Although focussing upon of smiles (which are intimately related to laughter and "semantically similar" (Wood, Sieverty & Martin, pp.2)), Wood, Martin & Niedenthal, have recently asserted that the physicality of smiles "accomplish[es] three tasks fundamental to human social living: rewarding behavior, establishing and managing affiliative bonds, and negotiating social status" (Wood, Martin & Niedenthal, 2017, pp.1). The latter point, the social dimension of laughter, has also been explored by Christopher

Oveis, Aleksandr Spectre, Pamela Smith, Mary Liu, and Dacher Keltner, who confirmed in 2016, that “laughter conveys status” (Oveis et al, 2016).

4.3). A History of Key Humour Theory: Pre-20th Century.

This section looks back, as far as one reasonable can, not primarily for funny things (although several are mentioned) but for the earliest evidenced theorisation of humor.

4.3.1). Can We Know a Prehistoric Humour?

It makes chronological sense to begin a history of humour theory by looking as far back in time as one reasonably might. However, it is extremely difficult to research the deep histories of humour: the thoughts, words, and laughter of our ancient ancestors being lost to deep time. It is ambitious enough to ask ‘what might a Palaeolithic sense of humour be like?’, let alone to ask ‘how might our Palaeolithic ancestors have conceived of humour theoretically?’ or even to try to ascertain whether they actually made such considerations. Any proposed answers would likely be difficult to defend due to a persistent lack of material evidence.

In contemplation, Fredric Will has asked “Can we retrace our steps to the humor of the Palaeolithic?” (Will, 2008, pp.6), “Can we reconstruct the sensibility of prehistoric humans [and] can we recover the humor of the prehistoric artist?” (Will, 2008, pp.7). Will acknowledges the difficulties inherent in ambitions to “get back to the sense-wiring and artistic sensibility of an era distant from us […]” (Will, 2008, pp.2) which he attempts through “imaginative gymnastics” (Will, 2008, pp.2) using ‘word-dramatisations’ in an attempt to “try putting myself inside the life-way (Lebenswesen) of prehistoric humans”

(Will, 2008, pp.4). Will has analysed ‘Le Sorcier’ (The Sorcerer, see figure 4.iv), a Palaeolithic painting on the wall of ‘Le Sanctuaire’ (The Sanctuary), a cavern in ‘Les Trois Freres’ (The Three Brothers) cave in the Montesquieu-Avantès region of France. The Sorcerer is a therianthropic figure[215], in this case being part man, part stag, and has been estimated to have been painted during the mid-Magdalenian Period, making it approximately 14,000 to 15,000 years old (Britannica, 2024).

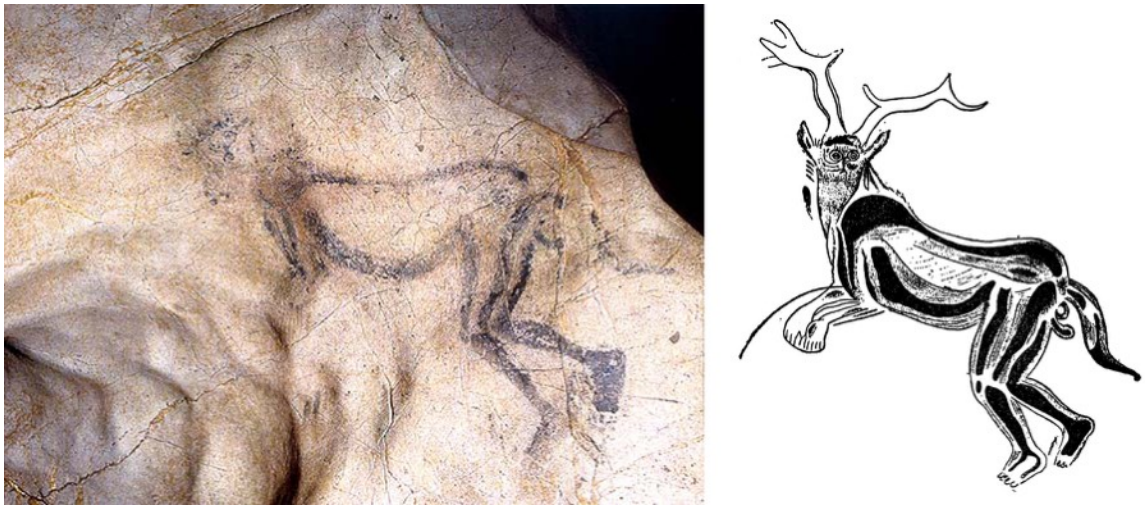

Figure 4.iv. (Left) ‘Le Sorcier’ in its original execution (Universita Degli studi Di Torino, 2023). (Right) ‘Le Sorcier’ through the sketch interpretation of George Bataille in 1952 (Universita Degli studi Di Torino, 2023).

Inspired by George Bataille’s sketched interpretation of the Le Sorcerer (see figure 4.iv), Will utilises “the discovery power of imagination” (Will, 2008, pp.9) to make speculative deductions regarding some potentially humorous dimensions to the cave painting. He concedes that “The identification of humour is difficult at best, and when it comes to the humour of the past the matter is increasingly hard” (Will, 2008, pp.6). Ultimately, he admits that “I have no way to evaluate my haul[216]. Was I singing in the

[215] Therianthrope: an amalgam of human and animal, especially in the case of a deity.

[216] The word “haul” here is presumed to reference the ‘haul’ of insights and revelations gathered from the creation of his life-way word-dramatisations, perhaps the word-dramatisations themselves, or both.

dark? Any effort to justify a discovery, in this instance, would have to rely on a rightness embedded in the presumption that ontogeny recapitulates phylogeny, that we too, you and I, have that archaic sensitivity in us." (Will, 2008, pp.10). Whilst there is some convincing evidence that ontogeny indeed recapitulates phylogeny (for example skull/brain-pan size), Will appears to acknowledge that the considerable evidence gaps here are addressed with equally considerable speculations on his part.

Whilst we may not be sure of the exact nature of prehistoric humour, many have speculated upon its emergence in evolutionary history and its persistence as a human characteristic (for example: Polimeni & Reiss, 2006; Clarke, 2008), and, arguably, as a characteristic of some other vertebrates too (see, for example, studies of kea birds (Burke, 2017); Chimpanzees (Darwin, 1999; Davila-Ross, 2011) or rats (Burgdorf & Panksepp, 2001; Panksepp & Burgdorf, 2003; Panksepp, 2007)). These ideas are explored later in this chapter, but it seems pertinent now to consider some evidence of the antecedent nature of a capacity for humour in human prehistory. Polimeni and Reiss present more traditionally convincing evidence than Will's imaginative speculations, having stated that:

> "Using two pieces of available evidence, a minimum figure for the age of humor can be proposed. First, humorous conversation has been observed by the pioneering anthropologists in first contact with Australian aboriginals (Chewings, 1936; Schulze, 1891). Second, it appears that Australian aboriginals have been essentially genetically isolated for at least 35,000 years (O'Connell and Allen, 1998). If genetic factors dictate the fundamental ability to perceive or produce humor (and barring convergent evolution), then 35,000 years may reflect a minimum age for humor in Homo sapiens."
>
> (Polimeni & Reiss, 2006. Pp.348)

This 'minimum age' more than doubles the age of Will's example in The Sorcerer, but comes with the caveat that convergent evolution may be responsible for the

pervasiveness of humour across all known human cultures (a pervasiveness attested by Hinde, 1974; Martin & Ford, 2018; and others).

For about as long as there has been writing, humorous texts have been written — and these texts have been studied, interpreted, and conjectured upon (see, for example, Jana Matuszak's 'Humour in Sumerian Didactic Literature' (Matuszak, 2018)). In 2008, Dr. Paul McDonald led a Wolverhampton University study, funded by UK television company Dave[217], to find the world's oldest recorded joke (Pilastro, 2023). 'The Dave Historical Humour Study', as the research project was entitled, worked with the constraint that a joke was defined as "having a clear set-up and punch line structure" (University of Wolverhampton, 2008). At the end of a lengthy search, the research team concluded that the following proverbial joke was the oldest recorded example in human history. It was written in cuneiform on a clay tablet during the Old Babylonian Empire, making it between 3,900 and 4,300 years old. It reads as follows:

"Something which has never occurred since time immemorial;

a young woman did not fart in her husband's lap"

(University of Wolverhampton, 2008)

Demonstrating the deep history of misogynistic humour, and scatological dimensions to joke-making — the key components of the joke, as defined by McDonald, are clearly present.

[217] Dave, a television channel that proclaims itself to be 'the home of witty banter', is famous for its comedic content.

Thanks to Polimeni & Reiss (and others detailed elsewhere in this chapter), one can be confident that humour is an ancient human characteristic, and thanks to McDonald and The Dave Historical Humour Study one can also be confident that joking is an ancient embodiment of that humour. However, humour scholars do not have any record of how prehistoric peoples might have thought about how or why things might be found to be funny: we have, as yet, little to no concrete insight into the prehistoric theorisation of humour.

Ancient Egypt is largely neglected from histories of humour and humour theory, of which the vast majority tend to begin in either Ancient Greece or much later. Historians have access to a significant amount of humorous Ancient Egyptian literature (Attardo & Ergül, 2015, pp.28), and a multitude of Ancient Egyptian artefacts that have been interpreted as humorous, including sculptures, wall carvings, and stone ostraca[218] (Attardo & Ergül, 2015, pp.29).

[218] Ostraca are stone fragments that were written and/or drawn upon. They are not fragments of larger decorative pieces but more like the pages of a sketchbook. They feature drawings, lists, reminders, quotations, etc. (Egypt Museum, 2024).

Figure 4.v. ‘Ostracon of a cat waiting upon a mouse’ — an incongruous inverted power structure: likely a satirical cartoon (Egypt Museum, 2024).

Figure 4.v. presents a painted limestone ostracon from the Ramesseide Period, 19th-20th Dynasty, ~1290-1070 BCE, that was discovered at Deir el-Medina in Egypt. It depicts a scene in which “a cat funerary priest approaches a mouse with offerings. The mouse wears a lotus flower on its head, sits on a chair, sniffs a flower, and holds out a cup to be filled. The cat, standing on his hind legs, fans the mouse and offers a roasted duck and a piece of linen […]. A cat serving a mouse might represent a humorous satire or illustrate a now-lost story […], perhaps a satire of the royal family” (Egypt Museum, Cairo, 2024). As with the Babylonian tablet identified by Macdonald and his team (University of Wolverhampton, 2008), these Ancient Egyptian writings and artefacts give us high confidence in the existence of an Ancient Egyptian sense of humour and that such humour was mediated through the design and creation of humorous things. Attardo & Ergül have stated that “the consensus is that the ancient Egyptians had a sense of humor and some of it is surprisingly modern” (Attardo & Ergül, 2015, pp.28.) and that “literary

humor was […] abundant in ancient Egypt" (Attardo & Ergül, 2015, pp.29.). They refer to Waltraud Guglielmi who has documented "the presence of some of the rhetorical figures and linguistic mechanisms we are accustomed to finding in modern literary humor: paronomasia, hyperbole, zeugma, oxymoron, synecdoche, nonsense, stylistic clash (high/ low varieties; dialectal; linguistic, as in code- switching; and diachronic, as in archaisms), and irony" (Attardo & Ergül, 2015, pp.29.). Whilst this demonstrates the sophistication of Ancient Egyptian humour, this research has found no mention of convincing evidence of an Ancient Egyptian *theorisation* of humour: only designed artefacts that embody an Ancient Egyptian *sense* of humour.

4.3.2). Classical Antiquity and the Earliest Documented Theorisation of Humour.

For the earliest known examples of humour theory, the histories analysed for this research tend to begin in Classical Antiquity (for example, see Eagleton, 2019; Stott, 2005; Bremmer & Roodenburg, 1997; Morreal, 1983 & 1986), often starting with Plato and then moving to Aristotle, and a cadre of other Ancient Greek philosophers — typically identifying Democritus, the so-called 'laughing philosopher', along the way. Ancient Greek cultures are famous for the comedies of playwrights such as Aristophanes and Menander (Ewans, 2015) symbolised by the twin masks of Thalia, the muse of comedy, and Melpomene, the muse of tragedy, that continue to represent performance theatre to this day (in Western cultures at least). Whilst no Ancient Greek masks have survived, being made of stiffened linen (British Museum, 2024), we do have evidence of their appearance in the form of descriptions, illustrations, and artefacts. One such artefact is the model of a Greek theatre mask presented in Figure vi: a terracotta model of an 'Old Man' mask, complete with bald head, wreath and furrowed brow (British Museum, 2024). This object,

and others like it, evidence that designed artefacts were both reflecting, and contributing to, the performative comedy of the stage.

Figure 4.vi.‘Terracotta model of a Greek theatre mask (‘old man’ character)’ (British Museum, 2024).

Archetypical characters, behaving in expected ways, were central to Ancient Greek (and later, Roman) theatre and the masks and costumes that performers wore aided audiences in the recognition of these character archetypes. Masks and costumes assisted audiences in ‘suspending their disbelief’ (Tindemans, 2012) regarding the individualism of the actors on stage. Actors would typically play several ‘parts’ each, representing characters of differing ages, manners, and genders through a process of exchanging masks and costumes (Ewans, 2015), a practice that continues in theatre today. Designed artefacts, in the theatre of the ancient world, were contributing to the construction of what Diderot

would later identify (in the Eighteenth Century) as ‘the forth wall’, an imagined ‘curtain’ between performer and audience that encourages actors to focus upon their performance and audiences to believe in it (Tindemans, 2012).

At this time, other designed artefacts, beyond the realm of the stage, embodied Ancient Greek humour. For example, the ceramic vessel presented in Figure 4.vii (below). The Ancient Greeks can also claim the worlds oldest surviving joke book: The Philogelos[219], also known as ‘The Jests of Hierocles and Philagrius’ (although there is evidence of older collections, long since lost). Written in Greek, the Philogelos is a collection of 265 jokes that, like the comedic plays, rely heavily upon archetypal characters, often ethnic or professional stereotypes, playing out stories and scenarios. These stories are easily recognised as jokes when read today, for example, Joke 88: “An idiot is returning home from a foreign trip, and is absolutely amazed to find himself climbing a steep hill. “When I first came this way,” he says to himself, “it was a nice downhill stroll. How can it have transformed into such a steep climb on my way back?” (Cai, 2008).

[219] The title Philogelos translates as ‘The Laughter Lover’ or ‘The Joker’.

Figure 4.vii. A dog defecating under a cup handle — unknown artist, 540-525 BCE. (Mitchell, 2012, pp.44).

Amongst this seemingly rich culture of humour, and its associated material artefacts, the Ancient Greeks speculated upon the nature of humour and, thanks to surviving writings, there is for the first time in this chronology, evidence of a *theorisation* of humour. As Morreall states: “In Western thought, the earliest documents that describe and evaluate humour were written by Plato in the 4th Century BCE” (Morreall, 2015, pp.566). Given the presiding positive view of humour in 21st Century Western culture, it is

perhaps surprising, to readers in the 21st Century at least, that Plato, and those he influenced, presented understandings of humour and laughter in what now seems a comparatively negative light. Roeckelein reports that "Plato asserted that laughter originates in malice and we laugh at what is ridiculous in others […] we feel delight rather than pain when we see others in misfortune" (Roeckelein , 2015, pp.341). As Stephen Halliwell reports in his exhaustive (but rather unwieldy) consideration of Ancient Greek humour "It is undeniable that the Platonic dialogues contain a number of passages where laughter is expressly deplored or censored" (Halliwell, 2008, pp.277), regardless of whether one were to "disregard the (pseudo-)bibliographical traditions that Plato himself avoided laughter (at least in his youth) and established regulations against it in the Academy [his philosophical school]" (Halliwell, 2008, pp.277). Plato conflated humour and laughter into an emotion (Nilsen & Nilsen, pp.258). In doing so, humour "fell under his general objection to emotions, which can override rationality and self control" (Nilsen & Nilsen, pp.258). Plato's writings reveal that he considered that humour and laughter should be repressed and/or regulated for several reasons: that laughter leads to violence — disagreements that begin in two parties laughing at each other invariably lead to emotional hurt, escalation, violence, and (albeit in extreme cases) murder; that laughter and humour undermine The State (Provine, 2000, pp.2) by challenging the hierarchies of power that it reinforces and relies upon (Sanders, 1995, pp.91-92); and that, whilst Plato appeared to tolerate certain controlled forms of wit, he warned against unrestrained humour, declaring that 'buffoonery' should be left to "slaves and hired aliens" (Bremmer, 1997, pp.19).

Aristotle, as Plato before him, understood humour and laughter as "basically a form of derision" (Morreall, 1983 pp.5). Whilst "Aristotle's *On Comedy* has unfortunately not survived" (Bremmer, 1997, pp.20), we do have access to other works, for example his

‘Nicomachean Ethics’, which also explore humor. “Aristotle maintained that comedy is an imitation of those who are worse off than the average person” (Roeckelein , 2015, pp.341), stemming “from people who are somehow inferior […], being unseemly or distorted” (Nilsen & Nilsen, 2019, pp.259). This has lead to a widely held opinion that “both Plato and Aristotle argued that people find humour in the foibles and weaknesses of others, and that laughter is an expression of derision or malice” (Martin & Ford, 2018, pp.47). Plato and Aristotle were wary of laughter, warned against it, and appear to have been uncomfortable with the way that laughing people seem to be beyond the limits of their rational control in terms of their bodies, and their emotions (Sanders, 1995, pp.101-10).

Ancient Greek concepts of humour are important for this research because they provide evidence of a long history of a culturally identified relationship between humour and derision, and indicate that people were laughed *at*. These ideas are evidently at play in the case studies examined in Chapter 2: Westwood appearing on Wogan in 1988, Ballmer regarding the iPhone in 2007, and Ransome’s cold twisted rebar in 1884. Ancient Greek conceptualisations of humour as malicious or derisive may clearly be employed to frame contemporary design that is laughed at. If we look for the ‘grotesque’ in design contexts we might alight upon a product such as that presented in Figure 4.viii. The object is a piece of ‘cat furniture’, featuring an elevated ‘cradle’ bed, a tunnel bed, two platforms, a dedicated scratch post, and a ‘Roswellesque’ extra-terrestrial themed artificial fur-fabric covering complete with ‘grey alien’ faces, figures, and symbols.

Figure 4.viii. The ‘Roswell Cradle Tree’, part of the ‘Alien Cat Furniture’ range by Hollywood Kitty Company (Hollywood Kitty Company, 2018).

This item featured in the Instagram feed of ‘@UglyDesign’ (16th July 2019) and was presented as a funny object[220]. It is, of course, up to Ugly Design’s audience to decide whether they are laughing at the design, the designer, the consumer, or the price tag, sequentially: in the order that such things are comprehended, or at all of those things at once (perhaps at a repeat viewing). The design aesthetic might be interpreted as an unexpected departure from the widely held conventions of Western interior design, underpinned by the modernist ideologies explored in Chapter 1. These are not the previously mentioned minimalist design aesthetics of Mies Van Der Roe or Dieter Rams, and the slime green fake fur and rather low brow outsider iconography of the grey alien is not executed with the considered colour pallet of Sottsass or pattern design of Marimeko. One might be laughing at the object, or at its conception in the mind of the designer, asking

[220] Although I do not doubt that, for some people, this is not a funny object at all: rather it is perceived as a desirable object to purchase for their pet cat(s), as part of their home.

‘why would someone bring this ‘unseemly’ and ‘distorted’ thing into the world?’. One might be laughing at the consumer, and this may be where the feeling of superiority can be most readily appreciated: ‘what kind of tasteless individual would want this in their home?! My house would never contain such an object, at least not unironically’. The Roswell Cradle Tree also does not appear to abide by the conventions of kitsch which might excuse it somewhat. Finally, the price point: $1,199.00 at time of writing, may lead to a re-appreciation or re-evaluation of the matters above[221].

Whilst strongly associated with Plato and the so-called Superiority theories of humour (explored in more detail later in this chapter), Aristotle has also been identified for his insight that *expectation* and *surprise* can be important factors in finding something humorous (Nilsen & Nilsen, 2019, pp.259). This has lead to some people (e.g: Ruch, 2008, pp.24; Provine, 2000, pp.14) awarding him a certain amount of credit in originating the Incongruity theories of humour (again, explored in more detail later), although his treatment of incongruity was not very fully explored or particularly systematic (Morreall, 1983, pp.16).

The Roman comedic plays have much in common with their Greek forebears, as did their humour. One can ask ‘What did Ancient Romans laugh at?’ But, as with the Ancient Greeks, we have a rather narrow demographic to draw evidence from. As historian Mary Beard has pointed out, given the surviving evidence, we can only really hope to ask “What prompted urban elite male Romans to laugh?”. She continues, “For we have almost no access to the laughter of the poor, of the peasants, of slaves, or of women — except in

[221] Explaining why this object might be considered funny really feels like describing the network of splayed organs oozing from E. B. White’s metaphorically vivisected frog.

the descriptions that urban elite males give" (Beard, 2014. Pp.4). This is a common and difficult problem to resolve: that of the missing perspectives in the history of humour study. Before Provine (2000), empirical studies of humour and laughter are rare, and argued, if available at all. The majority of pre-20th Century humour theory engaged with in this research appears to stem forth from analysis of personal humour experiences and anecdotal observations of humour, largely relying upon informal evidence and subjective conjecture. As with any historical consideration, one can, to some extent, only work with what one has.

Like Aristotle, the Roman orator and author Cicero recognised the important roles of expectation and surprise in humour (Nilsen & Nilsen, 2019, pp.259) but did not go so far as to theorise this connection. In his Institutio Oratoria, Quintilian references the number of thinkers who have considered humour, and some of the previously mentioned difficulties presented by the phenomenon of laughter. He also predicted that an explanation of laughter might even be beyond human capacity:

> "I do not think that anybody can give an adequate explanation, though many have attempted to do so, of the cause of laughter, which is excited not merely by words or deeds, but sometimes even by touch. Moreover, there is great variety in the things which raise a laugh, since we laugh not merely at those words or actions which are smart or witty, but also at those which reveal folly, anger or fear. Consequently, the cause of laughter is uncertain, since laughter is never far removed from derision"
>
> (Quintilian, 2009, Bk.VI, Ch.3, 7.).

The prophetic implication of Quintilian's statement remains legitimate: nearly two millennia later, and no one appears to have given an adequate explanation for the cause of laughter. The presiding conceptualisation of humour that has been passed down from Classical Antiquity appears to be one of a malicious delight in superiority over others less

fortunate than oneself. One might then suppose that humour would be viewed as cruel, possibly even as sinful — as other cruelties may be. However, Seneca (an advisor to the Roman Emperor Nero) counselled: "Bear yourself with wit, lest you be regarded as sour or despised as dull," and that "Those who lack playfulness are sinful" (Nilsen & Nilsen, 2019, pp.259). The social value of humour, then, was clearly recognised and continues to be to this day: Seneca's advice to Nero seems apt justification for Jobs' gelastic iPhone mock-up (see Chapter 3, Figure 3.xxviii) and subsequent prank-call to Starbucks described in Chapter 3, Section 3.4.1.

4.3.3 Suppressed but not Forgotten: Medieval Festivals, Fools and Follies.

In the context of medicine, the previously described humoural model of the four humours appears to welcome humour as being symptomatic of a healthy and balanced physiology, good humour — cheerfulness — being a positively viewed attribute of a healthy (albeit idealised) human being. In philosophy, however, overtly negative views of humour, espoused by the Ancient Greeks and Romans, seems to have become entrenched: dominating Western philosophy for the next two millennia, or thereabouts, and, as argued by this thesis, underpinning design's reticence to engage with humour, and its study, as much as it might.

Religion, in the West at least, like philosophy, appears to have treated humour with a combination of skepticism and caution and consequentially attempted to individually and culturally repress overt humorous expression. That said, and with another allusion to Freud and the so-called 'release' theories of humour (see Section 4.5.5) there were moments in Medieval Europe where humour and incongruity were permitted and even celebrated (e.g.

All Fools Day (April Fools Day)). A number of festivals involved incongruous practices such as role reversals (servant and master exchange places for a day, rich and poor exchange places for the day, ugliness is celebrated over beauty for a day, and so on).

Whilst his philosophical predecessors took mockery and derision to be the roots of humour and laughter, Benedict Spinoza "differentiates between mockery and laughter, denounces the former as evil, and characterises the latter as "pure joy" (Amir, 2020, pp.500), continuing that "not only is Spinoza's view original, but it is an important source of the Eighteenth-Century notions of good-natured laughter and good humour through a more than probable influence on their proponent, the Earl of Shaftesbury" (Amir, 2020, pp.500). In refutation of Morreall's interpretation of Spinosa (Amir, 2020, pp.503), Amir has asserted that Spinoza wrote "the most important defence of laughter ever formulated" (Amir, 2020, pp.501): "Joking and laughter are 'pure joy'; thus, when we indulge in them we are partaking in God's perfection" (Amir, 2020, pp.502). However, Spinoza's ideas in this regard were not widely held and Medieval European Christianity rejected laughter for its *unworthiness* (Amir, 2020, pp.501), having a term for "illegitimate, forbidden laughter" (Le Goff, 1997, pp.49) — *risus monasticus*.

4.3.4). Light and Laughter: The Enlightenment and Incongruity.

Thomas Hobbes, did not address humour at great length in his famous 'Leviathan' or 'Elements of Law' although the short statements that he made had profound impact and are still often referred to (Ewin, 2001). For example, his claim that: "The Passion of laughter is nothyng else but a suddaine Glory arising from suddaine Conception of some Eminency in our selves by Comparison with the Infirmityes of others [sic]" (Hobbes, 1969,

pp.42) has forever marked him as a stalwart of the *aggression* understandings of humour. (Black 2020). Another author of note was Anthony Cooper, Earl of Shaftesbury, who is often cited for publishing the first use of the word humour, in 1709 (Cooper, 2011), in its contemporary *humorous* sense (Morreall, 1986). Writing over a century after Hobbes, Immanuel Kant claimed that the comic is "the sudden transformation of a strained expectation into nothing" (Kant, 1911, pp.133) and is thus considered by many to have fathered the first theory of incongruity in its relation to humour (Scruton, 2001). Kant was latter joined by Schopenhauer, Kierkegaard, and Wittgenstein as the idea of incongruity gained momentum (Kramer, 2015).

4.3.5). A Relief for a Modern Age: Humour Theory after the Industrial Revolution.

According to Critchley: Freud and Bergson exerted the greatest influence over 20th Century understandings of humour (Critchley, 2002, pp.55). Freud, and Herbert Spencer, are best known in the context of humour research for their contribution to the *release* or *relief* theories of humour (Weeks, 2007). Although Freud and Spencer disagree upon the pseudo-mechanical details, their theories deal with the concept of psychic energy and its release, through humour, as a form of relief mechanism, similar to the pressure release valve of a steam system.

In his 1901 publication, 'Laughter, An Essay on the Meaning of the Comic' (Bergson, 2008), Henri Bergson explored incongruity through notions of the 'living' and 'mechanical', stating that:

"The comic does not exist outside of the pale of what is strictly HUMAN [Bergson's emphasis]. A landscape maybe beautiful, charming and sublime, or insignificant and ugly; it will never be laughable. You may laugh at an animal, but only because you

have detected in it some human attitude or expression. You may laugh at a hat, but what you are making fun of, in this case, is not the piece of felt or straw, but the shape that men have given it, — the human caprice whose mould it has assumed. It is strange that so important a fact, and such a simple one too, has not attracted to a greater degree the attention of philosophers. Several have described man as "the animal who laughs". They might equally well have described him as an animal which is laughed at; for if any other animal, or some lifeless object, produces the same effect, it is always because of some resemblance to man, of the stamp he gives it, or the use he puts it to."

(Bergson, 2008, pp.2).

Bergson is supported in this by Plessner, who has stated that: ""Eigentlich komisch ist nur der Mensch" — 'Really, only the human being is comical'" (in Critchley, 2002, pp.55). Support for this idea can be readily seen in design artefacts"[222], for example those presented in Figure 4.ix.

Figure 4.ix. A nose-shaped mains angle adapter and a fish skin hat — according to Bergson, the first is funny because it resembles a human nose, rather than a designed device, the second is funny because it is a fish fashioned into a human hat.[223]

[222] However, during lectures on 'humour in the context of art & design', I have previously presented this quote to students and challenged them to 'prove Bergson wrong' — in an attempt to embolden them to critique academic arguments. After a few minutes of intellectual grappling, and intensive Googling, many identify research that asserts proofs of humour in the wider animal kingdom, beyond "the pale of what is strictly human" (Bergson, 2008, pp.22), for example, the work of (Burke, 2017; Darwin, 1999; Davila-Ross, 2011; Burgdorf & Panksepp, 2001; Panksepp & Burgdorf, 2003; Panksepp, 2007; and many others).

[223] In late autumn, 2023, I encountered this hat hanging on a neighbour's gate post, whilst walking my daughter to her school. My local community has an established practice of putting things 'out on the wall', i.e. unwanted items are left on one's front garden wall for others to take. I now deeply regret that I did not take this hat, despite the fact that water-logging from heavy overnight rain had transformed much of it from cured fish-leather back into putrefying fish.

Referring to ideas of incongruity, Bergson also draws an interesting analytical comparison between the mechanical jack-in-a-box and the mechanism of humour as conceived in the mind: “IN A COMIC REPETITION OF WORDS WE GENERALLY FIND TWO TERMS: A REPRESSED FEELING WHICH GOES OFF LIKE A SPRING, AND A NEW IDEA THAT DELIGHTS IN REPRESSING THE FEELING ANEW [Bergson chose to capitalise this statement for emphasis]” (Bergson, 2008, pp.3).

4.4). A History of Key Humour Theory: 20th Century to Now.

The presentation of humour theory has been hitherto chronological in this chapter. In a reflection of the metaphorical explosion of late 20th/early 21st century humour and laughter theory and analysis, this section (4.4) is orchestrated thematically: grouping ideas by field and discourse, rather than sequentially along a timeline.

4.4.1). Contemporary Philosophies of Humour.

“Wittgenstein once said that a serious and good philosophical work could be written that would consist entirely of jokes” (Malcolm & Wittgenstein, 2001, pp.28). A number of authors have taken up this challenge, or at least have been inspired to address its implied point — that jokes have to potential to be both succinct and philosophically profound. Some notable efforts would be those of Thomas Cathcart and Daniel Klein who published ‘Plato and a Platypus Walk into a Bar... Understanding Philosophy Through Jokes’ in 2007 (Cathcart & Klein, 2007), following it up with ‘Heidegger and a Hippo Walk Through Those Pearly Gates: Using Philosophy (and Jokes!) to Explain Life, Death,

the Afterlife, and Everything in Between' in 2009 (Cathcart & Klein, 2009); and Ted Cohen who published 'Jokes: Philosophical Thoughts on Joking Matters' in 1999 (Cohen, 1999). In some ways, it might feel that the 'golden age' of humour philosophy has passed. However, this is not indicative of a downturn in the consideration of humour and laughter: more humour-centred material is being published than ever before. Instead, as the natural philosophy of the Ancient World has matured into the sciences of physics, chemistry, biology, and psychology, the slice of the metaphorical intellectual pie assigned to philosophy has also matured and changed. Simply put, as 'natural philosophy' gave way to the scientific revolution of the enlightenment — a few centuries of specialisation and differentiation has resulted in fewer people, as a *percentage* of people engaged in such pursuits, identify as philosophers. Historically, many of the ideas below would have been corralled and categorised as philosophy, but now they are not. In the tradition of Freud, jokes and joking continue to be a focus of contemporary philosophers with Critchley observing that "jokes tear holes in our usual predictions about the empirical world" (Critchley, 2002, pp.1), and Olivier (2020) and McDonald (2012) who are similarly focussed.

4.4.2). Humour in the Humanities.

As language is an important component of, and/or medium for, much humour, it is unsurprising that many theories of humour begun life in the study of literature and linguistics. For example, Raskin's 'Script-Based Semantic Theory of Humour' and, later, his 'General Theory of Verbal Humour' (developed with Salvatore Attardo) — which later still evolved into Nirenburg and Raskin's theory of 'Ontological Semantics' (Raskin, 2008, pp.7) and Nilsen and Nilsen's comprehensive 'Language of Humour' (Nilsen & Nilsen,

— have been widely influential and are often cited in fields beyond that of linguistics. Ginzburg, Mazzocconi, and Tian's previously mentioned concepts of 'laughter as language' (Ginzburg, Mazzocconi & Tian, 2020) also hails from this field.

In 1978, Gruner proclaimed that "anyone interested in empirical evidence of the communicative impact of wit and humour can find it only in scattered professional journal articles written in academic language" (Gruner, 1978, pp.vii). At the turn of the second millennium, developmental neuroscientist, Robert Provine, addressed this issue with his book 'Laughter: A Scientific Investigation' which he declared was "the first work to consider laughter as a topic of scientific worth" (Provine, 2000). Provine justified his approach through the claim that "one by one, as the scientific disciplines matured, they arose from their philosophical armchairs to set out on their own as the empirical sciences of physics, chemistry, biology, and most recently, psychology. But much of the literature about laughter is still mired in its prescientific phase where logic and anecdote, not empirical data, reign" (Provine, 2000, pp.11). Provine's empirical study of laughter revealed a number of unexpected and counterintuitive findings: the most important of which being that "most laughter is not a response to jokes or other formal attempts at humour" (Provine, 2000, pp.42), (as mentioned mentioned in Section 4.2). Beyond fore-fronting empirical approaches to humour study, which have arguably supported similar experimentation in the study of design, or at least not impeded it, another important contribution from sociology has been the consideration of the social aspects of humour and laughter (e.g. Scott et al, 2014; Kuipers, 2014; Manninen, et al, 2017). Related fields, such as communications research and persuasion research have also yielded valuable contributions, e.g. those of Lynch, 2002 and Saucier & Walter, 2021, respectively.

4.4.3). Humour, Science and Medicine.

"Laughter is the best medicine… unless you have diarrhoea."

(Anon).

Despite the joke above, the overwhelming medical consensus is that humour and laughter have benefits for people in terms of physiology, psychology, and a holistic synthesis of the two: what we might think of as 'general wellbeing'. Whilst it is a widely reported truism that 'laughter is the best medicine' — the medical community, in general, do agree with this sentiment. Humour has been 'prescribed' for the alleviation of serious and specific bodily issues such as chronic pain (e.g. see Dunbar et al's 'Social Laughter is Correlated with an Elevated Pain Threshold', 2011) and cancer (e.g. see Penson, 2005).

More commonly, positive humour is recommended for generalised improvement to health and wellbeing (e.g. Cheng et al, 2018; Bloom, 2022; Penson et al, 2005; Petrov & Marchalik, 2023; Ikeda et al, 2021; MacDonald, 2004; Dionigi & Goldberg, 2020; Savage et al, 2017; and Van Der Wal & Kok, 2019) and specifically in the context of the global Covid pandemic that began in 2019 (e.g. Tregoning, 2021). For the Last two millennia, medicine appears to have been the champion of humour and laughter: from the humoural theories of Ancient Greece and Rome to contemporary medical and therapeutic practice that employs humour as treatment — humour has been consistently viewed as positive. Whilst the ancient humoural model of the workings of the body has long since been replaced by newer and more accurate understandings of biology, neurology, and psychology, as referenced by Figure 4.x, the persistent legacy of the humourists is, perhaps, the positive perception of humour.

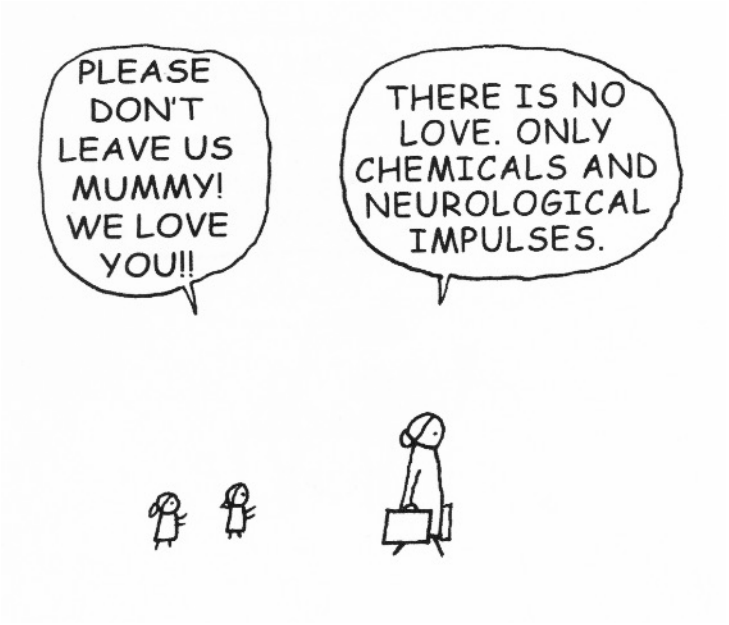

Figure 4.x. A cartoon by Dagsson (Dagsson, 2007, pages unnumbered)

Maybe because laughter appears so much a bodily phenomenon, as the ancient humourists recognised, humour and laughter have been considered from a biological perspective for some time, despite laughter's seemingly confounding properties as part of a functioning body. Koestler described laughter as a 'benign but luxurious reflex', "unique in that it serves no apparent biological purpose" but instead is a "temporary relief from utilitarian pressures" (Koestler, 1970, pp.31). Perhaps Koestler was suffering from the after effects of relief-theory-thinking because others have found many purposes for laughter intimately connected to the biological: unsurprisingly, biologists tend to approach the human as an animal (e.g. Bryant & Aktipis, 2014) but tend to talk of the importance of humour in terms of its social and psychological importance.

The scientific community's abandonment of creationism, and its distancing from religious explanations of human origins in favour of Neo-Darwinist theories of genetic evolution, has afforded a profound re-examination of humour. If one imagines that humans

were created by, and/or ‘in the image’ of a god or gods, then they arrive on Earth fully formed as they are today, and, presumably, with a complete sense of humour and laughter in all its glory: joking, clowning, wit, and tickling giving rise to guffawing, giggling, smirking, and smiling. However, if one subscribes to the idea that humans have evolved from ancestral species then a number of questions quickly present themselves: what is the *role* of humour in evolutionary terms? What is the *value* of humour in evolutionary terms? Why did it develop in the first place and why does it persist? — being, as it is, such a hungry consumer of valuable resources (time, wealth, calories, etc.).

Evolutionary psychologists have long since constructed convincing explanations for love, anger, fear, and other important human emotions. Love is a social bond to ensure protection and care (Lewis, Amini & Lannon, 2001), anger is often an aggressive response to a perceived threat (whether to one’s self or those one loves), and fear is a caution response towards possible or apparent danger: but what about humour? The evolutionary psychologist, Alistair Clarke states that “no other fundamental evolutionary impulse is exhibited solely by humans. Sexual gratification, anger, jealousy, love for mates and young, the desire to nest and build and every other motivational instinct that arises in humans arises elsewhere in the animal kingdom” (Clarke, 2008, pp.73).

Because of its curious mix of the social and the biological, humour has been well considered in the context of evolutionary psychology (e.g. Darwin, 1999; Goddard & Lambert, 2022; Gervais & Wilson, 2005; Molineux, 2019; Provine, 2016). Humour appears to have a long history in mate selection. One might think of paintings, films and plays that portray lovers laughing together, or the well established shorthand request for a ‘GSoH’ (good sense of humour) in so-called ‘lonely hearts’ columns in the printed press, or

their contemporary software equivalents such as Tinder, Hinge, or Match. The consensus appears to be that humour offers an efficient medium for evaluating both intelligence and ideology. Speaking in evolutionary terms, physical assessments of potential mates can often be made visually and quickly: it is relatively easy to deduce strength, health, age, and therefore triangulate a guess at reproductive health, from observing muscle-mass, gait and poise, skin, eyes, lack of injuries, etc. — all useful for assessing one's ability to attack enemies and prey; defend mates, offspring, and resources; gather and utilise resources in inhospitable conditions; build sustainable shelters; successfully mate, bear, and/or rear offspring; and so on. However, intelligence will likely have to be measured more slowly through actions and communications over time: imagining, reasoning, planning, and decision making are harder to observe quickly than age, athletic ability or so-called 'child bearing' hips[224]. Humour, however, can often be an important measure of intelligence. On this matter, to paraphrase Clarke's basic argument (Clarke, 2008): humour is made possible by the recognition of patterns, this requires intelligence, if someone is recognising patterns before you (making you laugh) then they are likely more intelligent than you and this should make them more attractive to mate with (in the hope that your offspring will have greater intelligence than you). The same argument holds true for social hierarchies, with mating being replaced by decision making. In these ways, it is possible for humour to replace certain forms of physical conflict that might arise during mate selection. Others have made contributions that broadly cohere with these ideas (e.g. Kaufman et al, 2008; McGee & Shevlin, 2009, Provine, 2000).

[224] I am, of course, aware that this section is very much centred around heterosexual attraction and partner selection, which dominate the discourse in evolutionary and zoological contexts because heterosexual couplings may lead to procreation: the reproduction of parental genes through the production of offspring, whilst homosexual or other sexual couplings tend not to, especially historically. My language here simply reflects the discourse.

Of the material gathered for this research from the field of psychology, the vast majority was concerned with understanding humour in a general sense, and from a psychological perspective, rather than the analysis or treatment of psychological conditions that may or may not involve humour him some way. As previously mentioned, the theory and discourse of psychology is where much of the more recent and influential humour theory hails, for example that of Ruch (Ruch, 1998), Martin and Ford (Martin & Ford, 2018), and Goldstein and McGhee, (Goldstein & McGhee, 1972).

As previously mentioned, design, and design research, have a well-established history of drawing from the field of psychology. This is not a unique feature of design, the broad remit of psychological research, its utility, and its accessibility, have afforded it the privileged position of servicing many other fields of research. By way of example, Warren and McGraw have a metaphorical foot in the fields of psychology and marketing: publishing materials that contribute to both (e.g. McGraw & Warren, 2010; Warren & McGraw, 2015(b), 2016(a), 2016(b)). McGraw and Warren are responsible for the Benign Violation Theory of Humour (BVt), a simple explanation of which is that "the theory proposes that humor occurs when (1) a circumstance is appraised as a violation, (2) the circumstance is appraised as benign, and (3) both appraisals occur simultaneously", continuing that "violations include anything that seems threatening or departs from a norm in a potentially negative way. Most violations do not amuse people and make them laugh. For a violation to produce humor, it also needs to seem OK, safe, acceptable, or, in other words, benign" (McGraw & Warren, 2015a, pp.75). To clarify and explain, McGraw and Warren later add:

1) a violation can seem benign because of a lack of commitment to the violated norm.

2) A violation can seem benign because of distance from the violation, such as when it occurs to someone else[225], happened long ago, or doesn't seem real.

3) A violation can seem benign because of an alternative interpretation, as occurs in the case of play-fighting and tickling.

(McGraw and Warren, 2010, pp.75).

BVt owes its origins to Tom Veatch who wrote a comprehensive and robust theory of a his model of incongruity humour in 1998 (Veatch, 1998). McGraw and Warren developed and streamlined Veatch's work, as any good marketers would, addressing the important issue that his theory was unnamed[226] (see 'Veatch, T. C., 1998. A Theory of Humor. In HUMOUR: International Journal of Humor Research, 11(2), pp.161-215).

In the fields of computer science and artificial intelligence, researchers have been investigating humour for both the insight that it might give into accurately modelling human traits such as personality and conversation and with the ultimate aim of modelling such things. As discussed, humour is a ubiquitous but highly complex and variable aspect of being human and attempts at modelling humour have confirmed as much — for example, Jentzsch and Kersting's publication: 'ChatGPT is Fun, But it is Not Funny! Humor is Still Challenging Large Language Models' (Jentzsch and Kersting, 2023) and

[225] This sentiment is strongly tied to the notion of schadenfreude (van Dijk & Ouwerkerk, 2014) — as long as it's happening to someone else, it can be funny.

[226] McGraw and Warren, being from the world of marketing, applied the catchy title of Benign Violation Theory to their 2010 incarnation of these ideas.

Stock and Strapparava's 'Getting Serious About the Development of Computational Humor' (Stock & Strapparava, 2003). Much as the technology of Freud's time appears to have influenced his ideas, and the ideas of his associated 'release theorists' (i.e. mechanics, pneumatics, and steam power) and, in due course, so the rise of computation has prompted 'computational' models of humour from a variety of theorists. For example Clarke's 'Pattern Recognition Theory of Humour' (Clarke, 2008) is essentially an incongruity theory that conceptualises the human brain and central nervous system as a 'pattern recognition engine' (Clarke, 2008). Clarke states that: "the humorous response is evoked by the surprise recognition of a pattern" (Clarke, 2008, pp.27), and later, "what does not surprise does not amuse, and the suddenness with which the individual recognises a pattern heightens that surprise" (Clarke, 2008, pp.27). Also looking for patterns, Igor Krichtofovitch has applied a machine-like reductionist logic to humour in order that it can be better understood and predicted: ultimately developing a 'formula for laughter'[227] (Krichtofovitch, 2006).

Hurley, Dennett, and Adams have taken a different approach, using computational notions such as 'debugging' as the inspiration for their ideas. They observe that:

> "Every cell in our bodies needs sugar — glucose is the fuel that keeps us alive […]. So evolution has engineered a powerful fructose-harvesting system and given it a high priority […]. That's the way to understand why we have a sweet tooth. Why do we have a funny bone, a similar craving for, and appreciation of, humor? For a similarly practical reason: we need to devote serious time and energy to doing something which, if we didn't do it, would imperil our very lives… Nature has seen to it that we act vigorously on this need, by rewarding that action handsomely"
>
> (Hurley, Dennett, & Adams, 2011, pp.2).

[227] Not being of a particularly mathematical mind I can't help but find these formulae, and their conception, quite funny. For example: "The value of EH = PE + PSR + BM = -1.0* (+0.5 L) - 0.5 L = -1.0 L" (Krichtafovitch, 2006, pp.92) — LOL.

They then ask: “why is humor enjoyable? Why shouldn't we simply detect jokes without feeling anything?” (Hurley, Dennett, & Adams, 2015, pp.3). Their answer is as follows:

> “Mother Nature — natural selection — has hit upon much the same trick to get our brains to do all the tedious debugging that they must do if they are to live dangerously with the unruly piles of discoveries and mistakes that we generate in our incessant heuristic search. She cannot just order the brain to do the necessary garbage collection and debugging (the way a computer programmer can simply install subroutines that slavishly take care of this). She has to bribe the brain with pleasure. That is why we experience mirthful delight when we catch ourselves wrong-footed by a concealed inference error. Finding and fixing these time-pressured misleaps would be constantly annoying hard work, if evolution hadn’t arranged for it to be fun. This wired-in source of pleasure has then been tickled relentlessly by the supernormal stimuli invented and refined by our comedians and jokesters over the centuries. We have, in fact, become addicted to this endogenous mind candy […]. Humor, we will try to show, evolved out of a computational problem that arose when our ancestors were furnished with open-ended thinking”
> (Hurley, Dennett & Adams, 2011, pp.xi).

Hurley, Dennett & Adams explain this idea so convincingly, and so clearly[228], that, like all the best ideas, it seems surprising that it has taken millennia of humour theory to arrive at it.

Of all of the humour theory appreciated in the pursuit of this research, McGraw and Warren’s (and Veatch’s) Benign Violation Theory of Humour and Hurley, Dennett, and Adams’ ‘pleasurable debugging’, whilst not perfect, are the the theories of humour that this thesis, and its author, most vehemently subscribe to. It seems that between them, BVt accounts for the detection and comprehension of the humour and debugging accounts for the pleasure experienced by doing so, and the evolutionary rationale.

[228] Hence why I have indulged them with a quotation many times longer than any other in this thesis.

4.5). Problematic Taxonomies of Humour Theory: Consensus, Clarity, and Characteristics.

This section explores the popular tripartite taxonomic model of humour theory (aggression theories, incongruity theories, and release theories), but is critical of this model: discussing some problems with it, and with engaging with, and applying, humour theory in general.

4.5.1). There is No Such Thing as a Guaranteed Laugh: Why Humour is Not Yet Explained.

Physicists have long speculated upon a 'grand unifying theory' to synthesise and rationalise their incompatible collection of models of the physical universe, but, thus far, no such grand unifying theory exists. A similar quest exists for many of those who study humour: to develop a grand unified theory that defines, explains and even predicts any instance of humour. As with the frustrated physicists, there remains no satisfactory grand unified theory of humour — despite several claims along the way (e.g. Clarke, 2008). Some, as Quintilian did earlier in this chapter, attest that such a theory may never be possible. As a result, humour theory is a fluid field, fraught with uncertainty, inconsistency, and confusion. For example, Krichtafovitch states that "the number of different theories of humour at present is so extensive that agreement cannot be found even on a unified classification system" (Krichtafovitch, 2006, pp.15). That said, attempts at such classification systems have been made, one result, and one that seems the most endemic, is the tripartite model of humour theory.

4.5.2). A Tripartite Model of Humour.

A fair amount of the key long-form published literature[229] concerning humour, that that has been written between the latter 20th Century and now, discusses a tripartite model of humour theory that has been conveniently, but inconsistently, constructed from three loose categories: superiority theories, incongruity theories, and release theories — typically in that order (see, for example, Morreall, 1983 & 1987; Roberts, 2019; Attardo, 2015; Krichtofovitch, 2006; Clark, 2008). These 'big three' broad enclosures, into which humour theories have been subsequently corralled, are detailed in the following three sub-sections[230].

4.5.3). Superiority (Aggression) Theories

"Tragedy is when I cut my finger.
Comedy is when you fall into an open sewer and die"
(Mel Brooks in Carr & Greeves, 2006, pp.88).

The superiority theories — also known as the aggression theories and, far less frequently, the disparagement theories (e.g. by Carrell, 2008, pp.131) — cohere strongly with the German concept of 'schadenfreude' (see van Dijk & ouwerkerk, 2014) which refers to the fact that "people laugh at the misfortune of others" (Nilsen & Nilsen, 2019, pp.252), an idea that has been demonstrated herein to date back to at least the time of Plato and Aristotle in Ancient Greece and which has been highly influential in the formation of

[229] Meaning books, rather than (considerably shorter) journal papers.

[230] For a brief and accessible "survey of some major views on the nature of humour and laughter" (Lippitt, 1995a, pp.147) that covers the tripartite model in three short papers, see John Lippitt's excellent 'three-parter': 'Humour and Incongruity' (Lippitt, 1995a); 'Humour and Superiority' (Lippitt, 1995b); and 'Humour and Release' (Lippitt, 1995c).

Western understandings of humour in the last two millennia. As Morreall describes: “The oldest, and probably still most widespread theory of laughter is that laughter is an expression of a person’s feelings of superiority over other people” (Morreall, 1983, pp.4). Subscribers to the Superiority theories understand humour to be an emotional response to the world.

Adherents of superiority theories typically understand humour as a social tool to be deployed in the exercising of power over/against one entity by another. In such interactions there is a victor (or victors) and a victim (or victims). This is even the case if they are the same person, as with self-deprecating humour, whereby a person uses humour to attack or demean themself, or an older version of themself. This is a social understanding of humour as a strategy through which hierarchies of power might be either challenged (e.g. through satire) or re-enforced (e.g. by a playground bully). As previously discussed, the superiority theories emerged from Ancient Greece with the likes of Plato, Aristotle, and Euripides (Plato cited in Palmer, 1994; Aristotle cited in Hutcheson, 2010) but they also have more contemporary advocates, e.g. Rapp (Rapp, 1951) and Gruner (Gruner, 1978, 1999). The so-called superiority theories provide an insight into the worldview of the thinkers who conceived of them, and have since advocated for them — a worldview where humour is understood (figuratively and literally) through a lens of antagonism and conflict. The shortfall of these theories is their failing to account for moments where there is no clear aggressor, for example, in the case of nonsense humour — it could be argued that in such cases the victim is ‘sense’, but this seems tenuous[231].

[231] BVt does a better job of explaining nonsensical humour because, from a BVt perspective, ‘sense’ is being violated.

As discussed throughout this thesis, design is sometimes laughed *at*. In these cases, the design (and, by extension, the designer) is the victim of derisive humour. Aggression models of humour do well to explain encounters where designers (and to some extent users) have erred, and the design audience feel superior to them for it. For example, see the design artefact presented in Figure 4.xi.

Figure 4.xi. Laughing *at* poor design: a combi-toiletbrush-plunger — which end would you rather hold?

4.5.4). Incongruity Theories

"If you were a spider, what design job would you be best at?

…Web-designer"

(Anon).

Incongruity theories are concerned with what happens when our expectations are met with surprise. Whilst the origins of incongruity theories are typically attributed to

Enlightenment philosophers such as Immanuel Kant, Arthur Schopenhauer, and Søren Kierkegaard, this camp now has the most support from contemporary thinkers in the fields of philosophy and psychology (according to Morreall, 2020). If aggression theories are an *emotional* processing of humour, then incongruity theories are an *intellectual* processing (for example, a contemporary iteration of an incongruity theory is the aforementioned BVt (McGraw & Webber, 2010; Veatch 1998)). Incongruity theories do well to explain moments when design is laughed *at* for being perceived as unintentionally nonsensical, but they *also* do well to explain instances where design is intentionally incongruous for the purposes of being humorous, see, for example, Figure 4.xii. In such moments, there is shared understanding between the designer and the audience regarding the humorous intent of the design: the user 'gets it'.

Figure 4.xii. Three intentionally incongruous designs: (left) Enrico Salis' 'Archetype' coffee table; (centre) Bert Jones incongruous mugs with exaggerated characteristics to their form; and (right) a chicken wearing 3d-printed nylon 'T-Rex' arms (available on Etsy).

A key problem with many incongruity theories appears to be their dependence upon surprise and the resolution of expectation. If surprise is a vital component of humour then how would anyone laugh at anything upon second viewing? Humour would be an act of

consumption and all humorous experiences would be rendered single use only. Whilst the impermanence of novelty and its diminishing returns for humour and for design were discussed in Chapter 3, the consistent demand for comedy films and stand-up performances in DVD/BlueRay/streaming markets would attest to the fact that people are watching and *re-watching* comic material and, one might presume, still finding humour in repeated experiences where the stimulus is identical (recorded media). The British comedian Peter Kay, at time of writing the Guinness world record holder for the biggest comedy tour in world history (1,200,000 tickets sold), would give his audience the set-up to a well-known joke (e.g. "How does Bob Marley like his doughnuts?"), and then, in silence, outstretch his microphone to the crowd, whereby *they* would shout out the punchline ("Wi' jam in!", in this case). It appears that the resulting laughter is not restricted to those members of the audience that have never heard this joke before. From the call and response nature of this interaction, one might assume that many people in the audience know what is going to happen and anticipate it — genuinely laughing when their expectations are *met*, not disrupted. This hardly seems incongruous at all. The same could be said of much sketch comedy with repeating characters. For example, the characters in 1990s hit BBC television sketch comedy programme 'The Fast Show' would appear several times in the same episode and say pretty much the same things over and over again, week-on-week. These characters were so loved at the time that their catchphrases can still be heard decades later, see Figure, 4.xiii.

Figure 4.xiii. Famous characters from 'The Fast Show', the contemporary equivalent to the Ancient Greek and Roman theatrical archetypes discussed earlier in this chapter.

As with the spider joke that opens this sub-section, incongruity humour can emerges at the realisation that we forget the multiple meaning of certain words, images, or ideas, this idea will be returned to in Chapter 6.

4.5.5). *Release (Relief) Theories*

"A comedian who was well-known for his sexual innuendos, passed away today. …His wife is taking it really hard."

(Anon)

According to Morreall, the release theories (also known as relief theories) are somewhat of a synthesis of the superiority and incongruity theories (Morreall, 1983) and very much arrived third on the scene — despite being probably the closest, conceptually, to the humoural theories of Classical Antiquity. The release theories stem from an idea that was originally proffered by Lord Shaftesbury (Anthony Cooper) in 1709, and latter developed by Herbert Spencer, and, most famously, Sigmund Freud (Freud, 1976). These theories conceptualise humour as a homeostatic mechanism whereby laughter is an 'economical phenomenon' (Weeks, 2007) for the release of pent up nervous or 'psychic' energy (Freud, 1976), much in the way that a pressure valve might regulate optimal performance in a mechanical steam system. These theories have been largely dismissed due to their out-dated models of physiology but are still discussed for reasons of historical interest. Although this thesis does not subscribe to or support the release models they do forefront some interesting aspects of humour, such as the complex relationship between sexual, scatalogical, and other 'taboo' subjects such as death and disgust — all subjects which concern design in one way or another, see Figure 4.xiv (below).

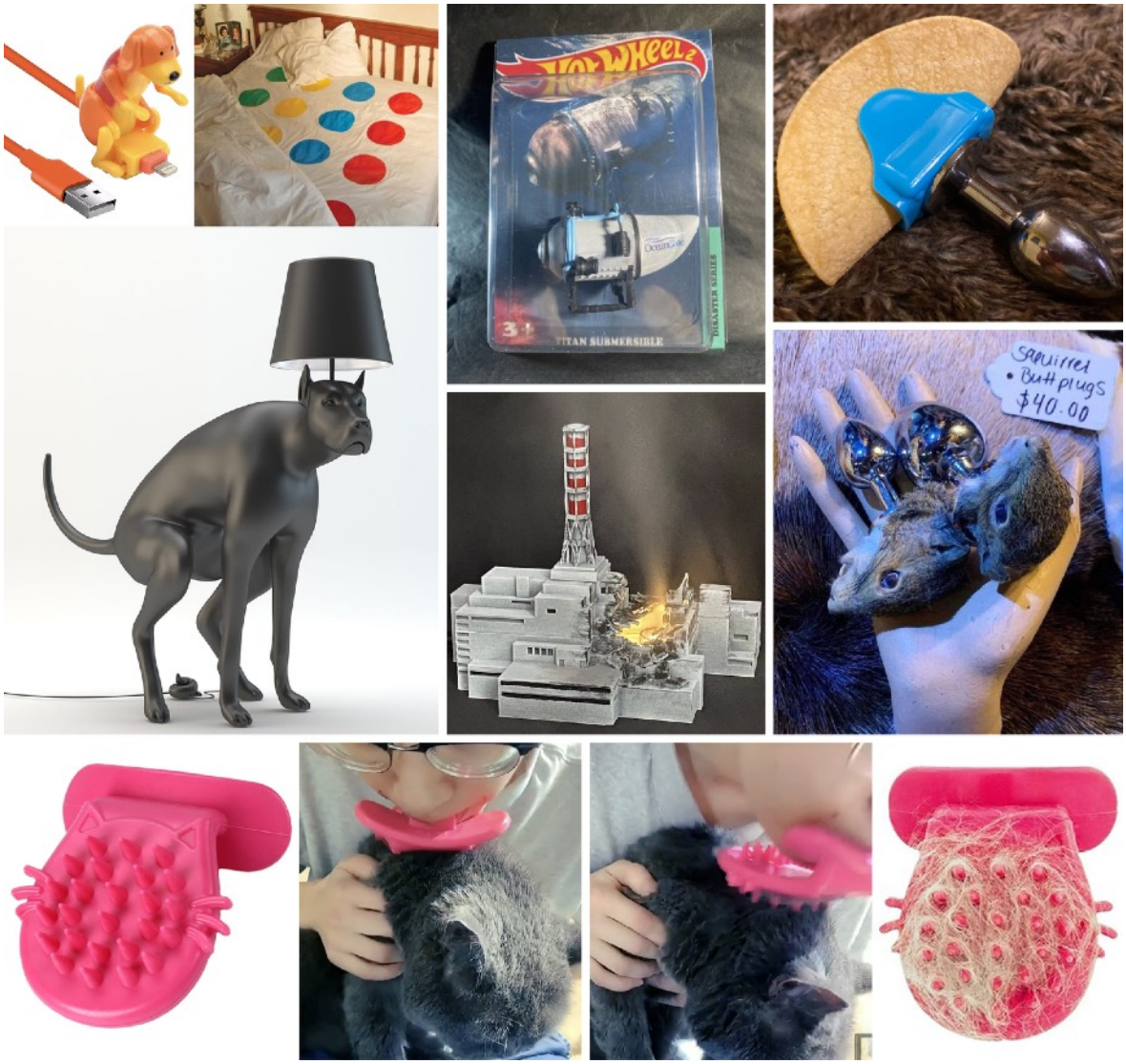

Figure 4.xiv. A selection of rather taboo or ‘gross’ humorous design: (top left) a charging cable featuring a mechanical dog that ‘humps’ an iPhone as a living dog might another dog, or a human leg; (top centre left) ‘Twister’ patterned sheets; (centre left) the ‘Good Boy Floor Lamp’ by Sebastien Burdon — note the faeces floor-switch; (top centre and centre) two models/toys, available on Etsy — a bootleg Hotwheels toy of the Titan submersible that imploded in 2023, killing all passengers onboard, and a model of the 1986 Chernobyl nuclear power plant disaster featuring an exposed nuclear core that glows and effervesces mist to humidify one’s room; (top right and right) two exceptionally unusual ‘butt plug’ designs — a ‘taco-holder’ and a pair of taxidermy squirrel heads; and bottom

row — a 'Cat Tongue Brush' from PETCYY that enables a cat owner[232] to groom their pet by ‘licking’ it.

4.5.6). The ‘Also Rans’: What Humour Theory Sits Outside of the Tripartite Model?

Whilst this historical tripartite model may have been convincing to some, and has been widely acknowledged, this thesis is written from a perspective that it is an inadequate taxonomic model to describe the increasingly diverse and synthesised nature of humour theory and refutes that this ever were an accurate categorisation of theories of humour, a position also adopted by Morreall, and others. Beard goes so far as to declare that she is “fed up” with it (Beard, 2014, pp.x). Recent theories that try to understand humour as an explicit and predictable process (e.g. Krichtofovitch 2006, or Clarke 2008) and/or which conjecture upon a root for humour in deep evolutionary history and ask why people (and some animals) would ever develop and retain such an energy-hungry faculty (e.g. Hurley, Dennett, and Adams, 2011) do not appear to fit comfortably into any of the three camps and either have a metaphorical toe in each, or might be better described as occupying a forth space, or more. This thesis concurs with many contemporary thinkers who are similarly unconvinced by a perceived force-fit of much humour theory into the trinal ‘superiority, incongruity, release’ model. As to whether the tripartite model ever was adequate, one might look to the fact that, when it only had only one component (the Superiority theories of Classical Antiquity, centuries before the Incongruity and Relief theories were purported to have emerged), the key ideas of later theories were being both alluded to and explicitly discussed. For example Aristotle hinted at incongruity in his ‘Nicomachean Ethics’, but never developed the idea, and many of Kant’s ideas can be

[232] Or anyone else, I guess…

argued to sit comfortably in the Relief Camp, despite his strong associations with the incongruity theories and their inception (Morreall, 1983, pp.16). Given these instances, one might argue that Incongruity Theories might trace their origins to the long pre-Kantian realm of Ancient Greece and that the relief theories might also have the wrong patriarchs — Freud is almost always mentioned first, then Spencer, then Lord Shaftesbury.

The tripartite model of humour theory remains a popular subject for discussion amongst theoreticians of humour because of its widespread recognition and historical significance. It is evidently a convenient model in terms of its reductionist approach and its simplification of a complicated, messy, and considerably long history of humour study. However, upon closer inspection it quickly appears fragile and tenuous. Upon detailed examination it should be taken as a casual shorthand way of expressing or grouping humour theory for reasons of convenience and haste (as this thesis occasionally has), rather than as an academically robust and logically consistent taxonomic model. It is the assertion of this thesis that as new theories of humour continue to emerge, propagate, and be assimilated into humour theory's indistinct and inconsistent canon, the shortcomings of the tripartite model will continue to be exacerbated as it is forced to subsume an increasing diversity of ideas.

Another issue with the tripartite model, and with humour theory in general, is that there are no clear 'winners', i.e, in the equilateral triangle of superiority, incongruity, and release, it is not clear what theory to deploy and when, nor what to advocate and what to reject. For example, consider the image presented in Figure 4.xv.

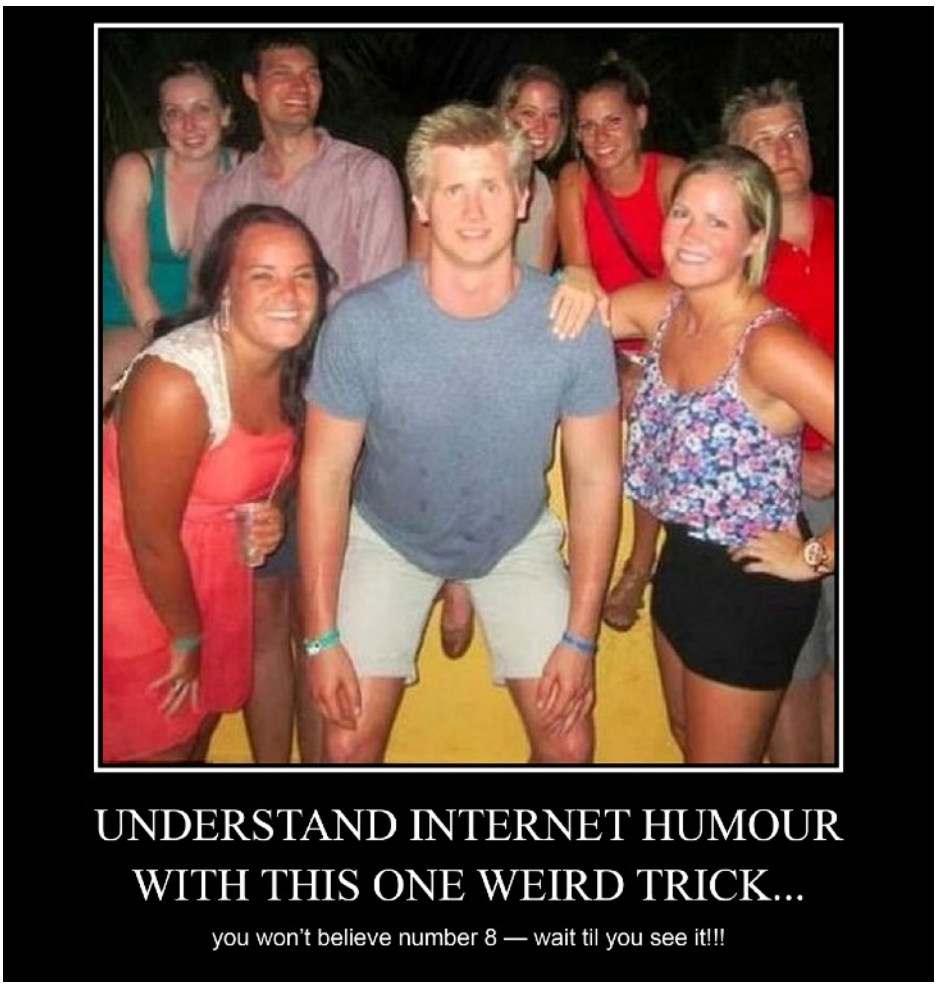

Figure 4.xv. 'Click Bait' (author's composition: Humphries, 2023).

Proponents of the superiority theories (e.g. Plato, Hobbes, Rapp) would argue that one laughs at the vulnerability of the central subject who appears to have accidentally exposed his penis — an embarrassing situation, as his facial expression indicates. Incongruity theorists would argue that one laughs at the resolution of the incongruity: we expect everyone to be clothed, and yet an incongruous penis appears, but it then turns out to be a foot. Advocates of the release theories would explain the humour with reference to the taboo penis, the perception of which triggers a release of pent up psychic energy that manifests as laughter.

This image is further complicated by the ‘Schrödingerian’ state of the foot/penis. Might audiences be laughing because they think it is a penis and then realise that it is a foot, at the fact of this realisation, at the cognitive transition of penis to foot: when the penis/foot superposition collapses? Might audiences be because they think the image presents an intentionally exposed penis, or an accidentally exposed penis? Some people, of course, may recognise the foot as a foot in the first instance and may then either find the image funny because the foot looks like a penis, or may find nothing funny about the picture at all — its just a foot after all. So far, only the image has been referred to, but the entire figure is a parody in itself that might be similarly analysed.

Final Thoughts Concerning Humour Theory.

The issue of subjectivity deserves a mention, largely because it remains unmentioned by much humour theory. A considerable problem in understanding, explaining, and predicting humour and laughter is human subjectivity — it is very difficult to reliably generalise about daily activities, such as humour, experienced by eight billion people, notwithstanding their ancestors, no longer living. For example, the designed object presented below in Figure 4.xvi, is a something that the author finds delightfully ironic and

very funny indeed — laugh out loud funny in design terms[233] — but he does not expect that reaction from almost all of the other people that he knows or might imagine.

Figure 4.xvi. A treasured ‘nice’ plant pot from the author’s house (author’s own image, 2024).

The issue of subjectivity highlights a persistent problem for humour theory: that there is no such thing as a guaranteed laugh. Someone who is not known to be very funny can say or do something that is objectively and technically very funny and not be found

[233] This object brings me so much joy! The idea that a domestic design artefact is so mediocre that it has to loudly proclaim that it is, in fact, ‘nice’ is hilarious to me in terms of a certain design irony. Not only that, but close inspection reveals that it isn’t even a nice pot! It was cheaply made and cheap to buy. The ceramic in not finished to a high standard: it’s attempting to be symmetrical, but isn’t succeeding (as Figure 4.xvi. shows); the glaze is lacklustre; it’s unevenly weighted; and the gold plastic letters have been applied individually and unevenly *by hand* — they aren’t aligned to a straight baseline and the kerning is so subtly uneven that it seems unremarkable at first glance, but increasingly ‘off’ the longer that one looks at it. It’s delectably incorrect. The letters also struggle to adhere to the curved surface of the pot as the adhesive is of insufficient quality to stick them down effectively. It’s exquisitely imperfect: a delightful collision between an ironic designerly humour and a sort of irreverently ‘contemporised' wabi-sabi sensibility (see Koren, 2008, for a detailed exposition of the Japanese concept of wabi-sabi: essentially the pursuit of finding exquisite beauty in the imperfect). I keep this pot on my writing desk and experience a delightful little ebullience whenever I lay eyes upon it. It’s truly unique. Jokes within jokes. Such minimalist kitsch. Undoubtedly my favourite pot in our house.

humorous or laughed with. Someone who is known to be humorous, or expected to be humorous — an experienced and famous stand-up comedian for example — can say or do something that is objectively not very funny at all, sometimes literally nothing, and have audiences laughing so hard that they are practically incapacitated by it. Some comedians have made entire careers out of this performative approach (e.g. British comedian Jack Dee's characteristically miserable-yet-hilarious dead pan stand up.

The humour theory of any time period is a reflection of that time, embodying the zeitgeist. The Ancient Greeks lived in a more violent age. Their concept of humour is rooted in conflict and exultation in the misfortune of others. The Incongruity theories of the enlightenment reflect a curiosity and excitement at new ideas and also a rather radical departure and abandonment of traditional understandings, or lack thereof. The so-called Release Theories resonate with technological advancements in the harnessing of steam power: underpinned by metaphors of the potentials and regulations of mechanical forces. Now, in the 21st Century, we have both the rise of the computational models of humour and an explosion of post-modern humour theory: sympathetic and competing ideas being contributed to, discussed and compared around the globe — oftentimes overwhelming and rendered incomprehensible, reflective of postmodernism and globalisation, embodied in the internet and social media: a cacophony of voices each pushing their own opinion, interpretation, and agenda.

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Chapter 5).

Route to a Solution: Understanding Humour and Laughter, in Terms of Design and Material Culture, Through Theories of Entanglement.

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"Realise that everything connects to everything else"

Leonardo Da Vinci

(Smith, 2021, pp.36).

Whilst much of this thesis discusses intentionally gelastic design and design that has been found humorous, the study of humour, and its theorisation, and the study of design, and its theorisation, remain largely separate realms, with relatively limited connections. In Chapter 6, entanglement theory — largely that of Ian Hodder (Hodder, 2012) — is offered as a 'bridging concept' (in the manner of Dalsgaard & Dindler, 2014), or interlocutor, to meaningfully bring the the realms of humour and design closer together. Before that, here in Chapter 5, various entanglement theories are referenced and explored, especially those of Hodder, in order that they can make a worthwhile contribution to Chapter 6.

5.1). Theorising Things: Some Key Theories of Entanglement and Some Key Entanglement Theories.

The title of this section refers to three broad categories of theory and discourse that will be discussed below. 'Thing' is a commonplace term, being typically a word that is used as a placeholder for another word. However, concepts of things and thingness have

been extensively theorised. Some such thing-theory has informed entanglement theories and is discussed below. Theories and discourses of entanglement' are those which share similar concerns to entanglement theories but do not principally use the term entanglement to describe these concerns: for example, Actor Network Theory (ANT) (Latour 2007, Law & Hassard 1999) and other theories of *networks* of things such as Ingold's 'meshwork' (Ingold, 2013) or Pepperell and Punt's 'membrane' (Pepperell and Punt, 2000). Such ideas are included because they have given rise to, influenced, or may be otherwise relevant to entanglement theories and/or can in some ways be mapped onto them. Much such theory and discourse dates from a time before contemporary entanglement theories staked their claim to the word entanglement. 'Entanglement theories and discourses', refers to those which explicitly employ the word entanglement in identifying themselves: for example, Ian Hodder's 2012 book entitled 'Entangled: A New Archeology of the Relationships between Humans and Things' (Hodder 2012), or Lindsay Der and Francesca Fernandini's collected 'Archaeology of Entanglement' (Der & Fernandini, 2016). Such theory and discourse is relatively recent, mostly 21st Century writing.

Although conceptually related, in that it relates to the 'connectedness of things', the entanglement discussed herein is not to be confused with the entanglement of quantum physics, that is known as 'quantum entanglement' (Erhard, M., Krenn, M., & Zeilinger, 2020) and is significantly different in nature to the entanglement discussed below. Quantum entanglement theory involves specialised knowledge of advanced physics and mathematics and will not be explored or explained in this thesis.

In very general terms, theories of entanglement recognise the complexity and contingency of the relationships between things. Whilst much of the entanglement thinking

detailed below is relatively recent, recognising that the world is complex and contingent, that the things that are in it are complex and contingent, and that their interrelationships are complex and contingent, are not new ideas. The origins of Hodder's model of entanglement, which is the focus here, can be traced through a long history of philosophical thought that precedes him. Hodder readily acknowledges, synthesises, and adapts numerous ideas that deal with the philosophy and theorisation of 'things', and the interconnectedness and interdependency of things and people, and things and each other. For example: looking for theoretical antecedents to Hodder's model of entanglement, Actor Network Theory (ANT) is probably the first and most easily recognised. The key concepts that ANT lends are the idea of interconnected 'networks' of agent actors interacting with one another (Latour 2007). These actors are not individual people but *all* things, whether traditionally thought of as living, material, or otherwise. The actor (or actant) category, then, includes human actors, but a great deal more non-human ones: technologies, materials, and so on. Importantly, ANT employs a principle of generalised symmetry (Law, 1999), that is to say that all actors with the network are equally important to one another: humans do not dominate networks in ANT as they do in other models. Networks of actants, then, are complex and complicated, despite being portrayed in many diagrammatic representations of ANT as rather neatly ordered. A strength of Hodder's model of entanglement is that it, in some way, messes with ANT's neat network depictions. It takes the conceptual straight-line connections as ties them in knots, thus reinforcing their conception as complicated, taught, entrenched, relatively stable, and so on. Other 'network theories' make useful contributions to Holder's model of entanglement theory, for example Ingold's related concept of the meshwork (Ingold, 2010). Ingold describes networks as "purely spatial constructs[s]", continuing that "the lines of the meshwork are of movement or growth. They are temporal lines of becoming [here using Deleuze and Guattari's term]"

(Ingold, 2013, pp.132). Like Hodder, Ingold renders the network as something more 'organic' and, for want of a better word, messier. Whereas the ANT network contains a collection of interconnected *nodes*, for Ingold, the equivalent in a meshwork are *knots*. In a related metaphor, and preempting Hodder's model of entanglement, Pepperell and Punt employ the concept of a membrane to describe a surface upon which *things* can be connected, sharing a metaphorical surface, and yet remaining apart (Pepperell & Punt, 2000). A membrane, of course, being a mesh with no holes.

Aside from the importance of networks, a second key consideration for entanglement is for the things that populate networks: entanglement theories commune around concerns with the relationships between 'things'. Bill Brown has written extensively upon the theorisation of things and the notion of *thing-power* (Brown, 2004). In terms of the interests of this thesis, things provide an important foothold for design to engage with entanglement because designers are the 'kings of things[234]' — the creation of things being a key concern of their profession. Daniel Miller has Written of the *comfort* of things (Miller, 2008), Mihaly Csikszentmihalyi and Eugene Rochberg-Halton have written on the *meaning* of things (Csikszentmihalyi & Rochberg-Halton, 1981), Arjun Appadurai has written on the *social life* of things (Appadurai, 2011), Deyan Sudjic has written on the *language* of things (Sudjic, 2009), and Bjørnar Olsen has written in *defence* of things (Olsen, 2013). To entanglement theory, things are not inert, they have agency and are in flux, co-created by entanglements themselves (Hodder, 2012).

The last theoretical concern of entanglement theories to be discussed here is materials, and the philosophical movement of new materialism which has had profound

[234] And queens too, obviously. But that doesn't rhyme.

effects upon contemporary archaeological theory and discourse, since its emergence in the 1990s, through the writings of authors such as Karen Barad (Barad, 2007), Jan Bennett (Bennett, 2010), Manuel DeLanda (DeLanda 1997, 2006), and Diana Coole and Samantha Frost (Coole & Frost, 2010) and new-materialist readings of, for example, the philosophies of Hegel, Heidegger, and Deleuze and Guattari.

5.1.1). A Choice of Entanglements: Philosophical, Anthropological, Archaeological and More — Why Hodder Then?

As demonstrated by this chapter thus far, there are various and varied forms of entanglement theories to consider. Hodder's model has been chosen for special attention for a number of reasons: it is pragmatic, material/object orientated, relatable (to design), accessible (to designers), convincing, and, most importantly, makes a highly useful contribution to this research (see Chapter 6).

Hodder's model of entanglement is quite pragmatic, in design terms, in comparison to many ideas of entanglement more deeply situated in fields of philosophy. Engaging with and accepting his ideas does not require much in the way of philosophical or conceptual contortions, imaginative leaps, or suspension of intuition or belief: anyone reading these ideas can likely take their eye from the page or screen and find themselves nestled in a complex environment of supporting evidence for Hodder's understanding of entanglement (i.e. the room that they are sitting in and the objects that it contains). Such ocular wanderings might not even be necessary as the page and the screen, of course, are both deeply entangled things. Hodder's discussions of entanglement are particularly orientated around materials and objects: given his archaeological practice, he often refers to materials

and objects such as walls, cooking pots, or balls of wet clay to explain or validate particular ideas (Hodder, 2012). Such things are familiar to designers, and those interested in design, whose expertise resides in material things (Cross, 2007), their design and creation, and the handling of various materials. Hodder's writing is also readily accessible to designers and to those who contribute to design discourses: no specialist knowledge concerning either archeology or philosophy is required to occupy oneself meaningfully with his ideas and they are typically written in a concise and straightforward manner that affords non-expert understanding and engagement. For example, as detailed below, the term 'punctualisation' is used in ANT to describe a phenomenon very similar to Hodder's notion of 'forgetness' — but Hodder's term is more plain-spoken and inherently descriptive. ANT has been described as "notoriously difficult to summarize, define or explain" (Cressman, 2009), a description which would be hard to defend if it were levelled at Hodder's writing. Ultimately, regardless of the arguments above, Hodder's ideas are employed here for the simple reasons that they are convincing, and make a highly useful contribution to this thesis (as will become apparent in this chapter and those following it).

One might ask why a design-focussed thesis would look to archaeology for theoretical ideas. Notwithstanding the arguments above, archaeology is, in essence, a deductive investigation of design. It works backwards from the 'evidence' (e.g. a treasured ceramic urn consigned to a tomb or a ring on the tomb occupant's skeletal finger; a leather pouch of coins hastily buried under a tree; a worn-out item discarded in a ditch or latrine, a fragment of an artefact discovered in ancient soil) and asks 'what does this tell us about the culture from which this designed object arose?'[235]. Archeologists and designers might be

[235] In some ways, this thesis has done similar things: looking to designed artefacts and inquiring how and why they might be found funny (a rather retroactive practice for a designer), what that means for material culture, and how such things might affect designers, design, and design discourses.

considered to work in opposite directions along *paths* of entanglement: a key intention of the designer is to wilfully create things whose entanglement will persist in material culture, whilst a key intention of the archeologist is to analyse designed things in order to discern the nature of their entanglement in history. Given these resonances between designers and archaeologists, their shared focus upon, and expertise in, designed things, it therefore seems reasonable to enquire what archeological theory might contribute to design thinking and discourses. Generally speaking, archeologists have employed the term entanglement to draw attention to the complex and contingent nature of some issues of concern to them. Archaeological discourse has recognised the contribution that considerations of entanglement have made: for example, Sharyn Jones' 'Anthropological Archaeology in 2015: Entanglements, Reflection, Reevaluation, and Archaeology Beyond Disciplinary Boundaries' (Jones, 2015), or Andrew Jones' 'Disentangling Entanglement: Archaeological Encounters with the Concept of Entanglement' (Jones, 2021). Anthropologists have also employed concepts of entanglement, and for similar reasons to archaeologists. For example, Thomas' 'Entangled Objects – Exchange, Material Culture & Colonialism in the Pacific' (Thomas, 1991) or Brit Solli's 'Reindeer-hunting, Materiality, Entanglement and Society in Norway' (Solli, 2018). Solli uses entanglement as a way to forefront the contingent interrelationships between material things, the practice of hunting, prey, and the nature of societies that have slowly developed in ways that are deeply entangled with these things.

5.2). A Hodderian Model of Entanglement

It should be noted that, whilst several references have thus far been made to 'Hodder's model', this is a shorthand convenience for Hodder's individually published

ideas (Hodder, 2011a, 2011b, 2012, 2014, 2018, 2020) *and* those authored with academic partners such as Gavin Lucas (e.g. Hodder & Lucas, 2017) or Angus Mol (e.g. Hodder & Mol, 2016).

5.2.1). Dependence / Dependency, Interdependence / Interdependency.

The core focus of Hodder's theory of entanglement concerns the relationships between things, including humans (being things themselves) — specifically their dependence/dependency, and their interdependence/interdependency. He defines entanglement as "the dialectic of dependence and dependency between humans and things." (Hodder, 2012, pp.206) and, to paraphrase, observes that: "Humans depend on things, things depend on things, things depend on humans, and humans depend on humans" (Hodder, 2012, pp.88), abbreviating these connections to HT, TT, TH and HH entanglements.

In order to describe and explain his model of entanglement, Hodder uses the subjects at either end of interdependence 'chains' to make three important points concerning his entanglement theory. The subjects are either 'human' or 'thing', or any heterogenous or homogenous combination of things (e.g. piano, car, millet, sand), (Hodder, 2012).

These points are:

(1) Humans depend on things. In much of the new work in the social and human sciences in which humans and things co-constitute each other, there is, oddly, little account of the things themselves.

(2) Things depend on other things. All things depend on other things along chains of interdependence.

(3) Things depend on humans. Things are not inert. They are always falling apart, transforming, growing, changing, dying, running out.

(Paraphrase of Hodder, 2012)

To these three points, Hodder later adds a fourth:

(4) The defining aspect of human entanglement with made things is that humans get caught in a double-bind, depending on things that depend on humans.

(Paraphrase of Hodder, 2012)

5.2.2). Dimensions of Entanglements: Space and Time.

"Things assemble."

(Hodder, 2012, pp.8).

"Things fall apart"

(Hodder, 2012. pp.68).

Entanglements extend through space and time: "some are hyper-connected and very far-flung, others are local, short-term and disengaged" (Hodder, 2012, pp.105). For ease of explanation, Hodder often refers to 'simple' artefacts such as ancient clay pots,

that have relatively local and apprehensible entanglements[236]. An issue with this approach is that it risks creating the impression that entanglements are simple, local, and apprehensible. In contrast, consider a 21st Century artefact such as Apple's previously discussed iPhone, of which Steve Ballmer was so dismissive. The typical smartphone is a marvel of global commercial co-operation and negotiation, but also of complex and complicated entanglements. Whilst "designed in California", as its adornment proclaims, the iPhone's materials are drawn from all over the globe — mineral ores yield both rare and common metals for the body and internal components, materials for the Gorilla Glass[237] are quarried and processed, oilfields feed the production of plastics, heavy metals and other chemicals must be sourced for the battery, and so on. Some understanding of the number of material components inside an iPhone can be gleaned from observation, see Figures 5.i, and 5.ii.

Figure 5.i. A 'teardown' image showing the major component blocks of an iPhone 15 Pro Max.

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[236] Hodder has worked extensively in a pivotal role at the 'Çatalhöyük' Neolithic/Chalcolithic archaeological site in Turkey. Çatalhöyük was a protocity for a period lasting between five-and-a-half and nine thousand years ago and, in light of his expertise, many of Hodder's discussions concern technologies common to this period.

[237] Gorilla Glass is the official name for the toughened alkali-aluminosilicate sheet glass used in the iPhone featured in the Ballmer case study, and billions of other devices (not a typo: it's billions). Gorilla Glass is produced by Corning Inc. (Corning, 2024).

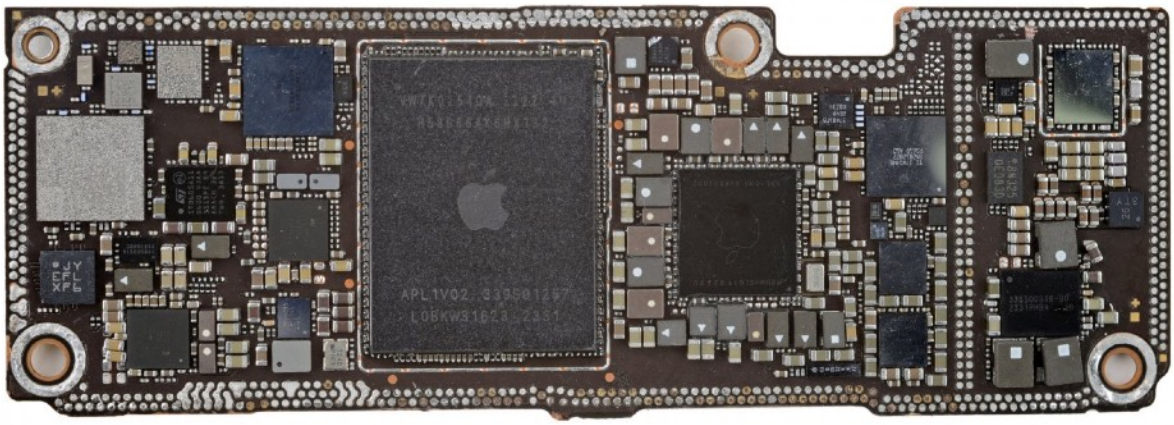

Figure 5.ii. Detail of the main processor board from Figure 5.i (it can be seen in the top left of the image).

All of the iPhone's constituent *materials* need to be understood, gathered, processed, and transported long distances — plus any necessary contracts negotiated and payments exchanged — before they can be wrought into the various forms of the *components* and then assembled in one of the famous Chinese mega-factories that service Apple. Consider, for a moment, a humble machine-screw such as that presented in Figure 5.iii. As a designed object, its materialisation in this form is dependent upon the materials above, but also upon the competency of design engineers and the efficacy of industrial machinery, and upon the post-Industrial-Revolution standardisation that has been previously mentioned: such a screw can be removed from any iPhone and inserted into the corresponding location in any of the millions of other iPhones (of the same model) on the planet. This screw is, from a certain point of view, dependent upon the robot or human that inserts it, the threaded hole that it penetrates, and the bright blue thread-adhesive that secures it in place. It is a camera screw, so the camera is dependant upon this screw for

effective operation and the user is dependent upon both screw and camera (and a host of other material and software components) for taking digital photographs.

Figure 5.iii. A camera screw from an iPhone 15 Pro Max[238].

This tiny screw, then, represents considerable entanglement, and a smartphone is full of hundreds of such components, many being far more complex, each with individual material compositions, and social histories. Just in material terms, this is an unfathomable amount of entanglement, but of course there is the software too: also a global effort, considering the core operating system plus all of the third party apps available through Apple's virtual App Store. Once constructed, the iPhone will be marketed and advertised through multiple media channels, packaged, distributed via transport networks, stored, and sold (likely more than once). In Chapter 4, Steve Jobs described the first iPhone as a "communication device" (Jobs, 2007) and, of course, any smartphone depends upon various network technologies in order to be such a thing: WiFi, bluetooth, GPRS, cell networks such as 5G, and so on. Once sold, a typical iPhone is filled with data, repeatedly

[238] This image is included solely for the reader to deeply consider this minuscule design artefact and, in contemplation, to marvel at the sublime wonder of its entanglement.

charged and discharged of power (likely by a national grid), much used and in many ways, maybe even fixed or recycled — all of which require yet further entangled dependencies and interdependencies — and what would any smartphone be without media content? Enter another entangled morass of interdependencies as 'content providers' supply text, sound, image and film, whilst iPhone users add and exchange content of their own. Each of these systems (all of these networks and media) are as entangled as the material iPhone is — the total entanglement being far beyond individual human comprehension and account.

The iPhone camera screw raises other issues concerning dependence: those of *becoming, being,* and *doing*. The screw depends upon the materials and processes discussed above (the mineral ores and their smelting into alloys for its material substance, and the engineering and tooling of these alloys for its machine screw form) in order to *become* a screw. Once a screw has become a screw, these entanglements become historical: they are its history. In order to maintain its form — to continue *being* a screw — the screw is dependent upon the material properties of its alloy body and its permanence. This entanglement is continual for as long as the screw has this screw form. In order to keep *doing* screwing, the screwing capability of the screw is dependent upon the properties and permanence of the material that it is screwed into, aided by the thread adhesive that secures it in place. Again, this entanglement is continual for as long as the screw has screw form, but also for as long as it remains engaged in the fastening action of screwing: if it is, for example, removed, disposed of, and buried in landfill, then it will no longer be doing screwing — the dependencies for screwing will become historical entanglements too. In this way, things (and humans) are caught up in processes of entangling, and being entangled, but also disentangling as well (Semerari, 2016).

Designer Thomas Thwaites' 'Toaster' project humorously draws attention to these ideas: not explicitly in the language of entanglement theory, but through his critical design practice. In 2009, Thwaites bought a very cheap toaster[239] and began to deconstruct it. His idea was to study the components and then make a toaster of his own — from scratch. Thwaites reports being surprised by the number of components within the toaster (see Figure 5.iv), but set about gathering his own iron ore (a few very heavy rocks); copper (electrically recovered from copper rich water from a copper mine); mica[240] (from a Scottish cliff-face); melting coins for nickel; and sourcing, processing and casting his own recovered plastic.

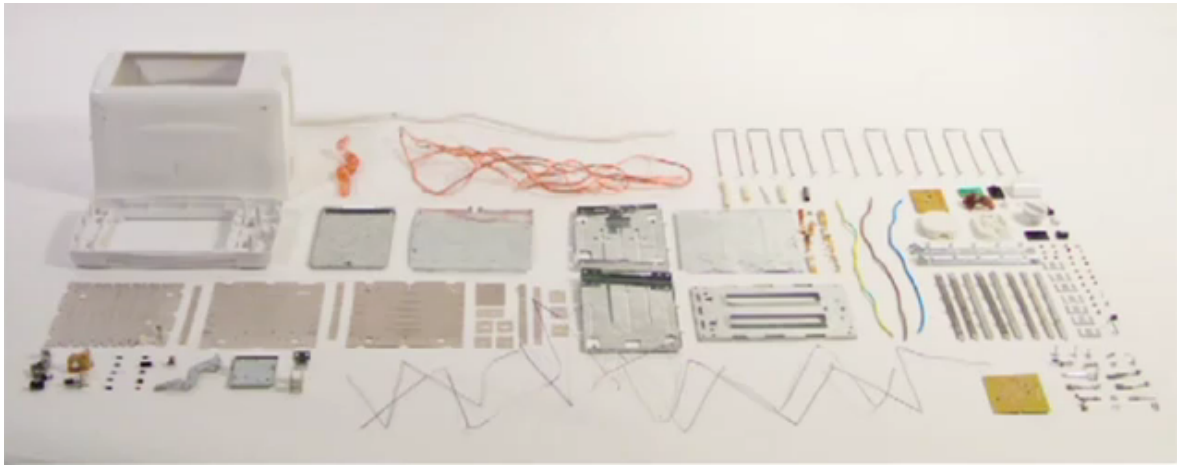

Figure 5.iv. A teardown image of the toaster that Thwaites purchased in 2009 (Thwaites, 2011, pp.16-17).

After expending £1187.54 (Thwaites, 2011, pp.13) and considerable person-hours of effort, Thwaites had created a toaster (see Figure 5.v) which worked *momentarily*, but, more importantly, drew attention to the facts that, in order to create a toaster that can be sold for £3.94, one first needs to create a global industrial complex, and design has done a

[239] £3.94 from 'Argos' (Thwaites, 2011, pp.13), a popular high-street retailer in the UK.

[240] A mineral insulator (Thwaites, 2011).

successful job of concealing this fact — to the point where users just see ‘a toaster’ and may consider it a rather simple and isolated tool (as Thwaites freely admits that he did). In addition to the bizarre appearance of Thwaites’ toaster, which surely enhances its comic affect, the inefficient ridiculousness of trying to make a toaster, when one can be purchased so inexpensively, is where the humour in this project arises. Thwaites is well aware of this, of course, and capitalises upon the humour to benefit the project in terms of audience engagement. Like the iPhone above, Thwaites toaster points to the deeply entangled nature of design and the webs of dependency and interdependency that, according to Hodder’s model, spread out through space and time from any designed artefact.

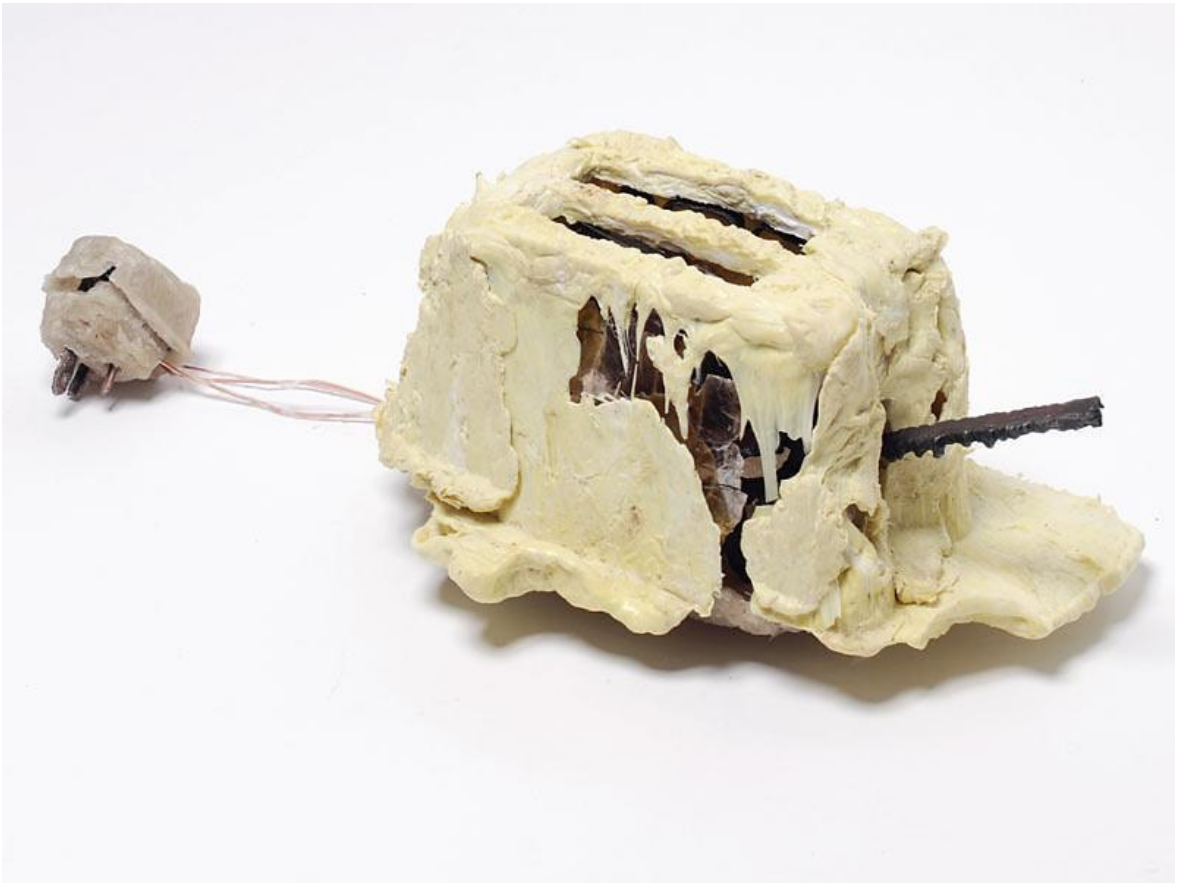

Figure 5.v. Thwaites’ toaster, 2009 (Thwaites, 2011, pp.182-183).

Entangled dependencies can be both reciprocal and nonreciprocal. For example, humans depend upon the Sun to sustain life, but the Sun does not appear to depend upon humans for anything. Such dependency is nonreciprocal. Alternatively, a human who keeps chickens might depend upon them for food (eggs and meat), to deal with food waste (kitchen leftovers), or for monetary income (in the case of a chicken farmer). In return, the chickens may depend upon the human for shelter, food and water, protection from predators, and so on. Such dependency is reciprocal.

The descriptions of iPhones, toasters, and chickens above have been fairly limited, generally describing one 'stage' of entanglement — *this* depends upon *this*, *that* depends upon *that* — but entangled dependencies 'stack up': an apex predator that eats animals in the tier below itself, also depends upon what they eat, which depends upon what they eat, which depends upon what they eat, and so on — often back as far as the Sun's rays which usually feed the lowest level of a 'classic trophic pyramid model' (Turney & Buddle, 2016). In similar ways, all of the dependencies mentioned above are entangled with other dependencies. Hodder describes entanglements being stacked in linear "*chains*" (Hodder, 2012, pp.68) and these chains branching out or being connected by other chains to form webs of entangled dependencies and interdependencies. These entanglement chains are reminiscent of Benjamin Franklin's proverbial 'horse shoe nail': "A little neglect may breed great mischief; for want of a nail the shoe was lost; for want of a shoe the horse was lost; and for want of a horse the rider was lost, being overtaken and slain by the enemy; all for want of a little care about a horse shoe nail." (Franklin, 2024, pp.8).

In order to make these ideas more clear, Hodder has employed the use of "tanglegrams" (Hodder, 2012, pp.180) which are diagrammatic representations of entanglement, see Figure 5.xi.

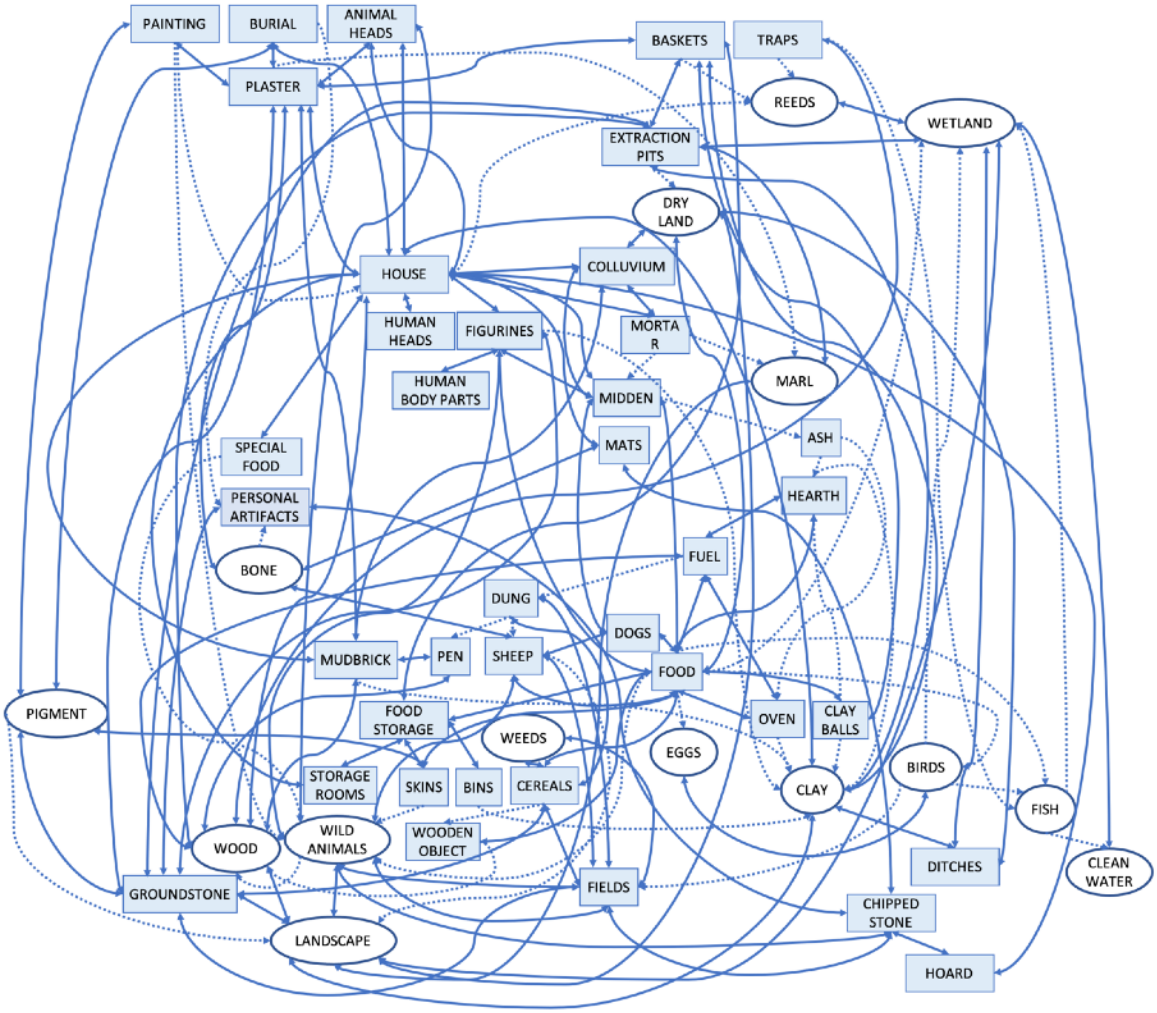

Figure 5.xi. A Hodderian tanglegram for 'clay entanglements' (bottom right) "in the first part of the sequence of occupation at Çatalhöyük" (Hodder, 2012, pp.181).

The iPhone entanglements, then, rapidly multiply and spread out to include dependencies upon a host of others things: employees, their families, their food, their homes and other architectures, their transport, their education, their financial dealings, their

healthcare, the regulations of governments and many other institutions, market demands, the whims of designers, and so on, even to events that took place millions of years ago (e.g. the lives of the beings whose organic matter gave rise to the oil for plastics, or other fossil fuels derivatives that drive industry). An important facet of Hodder's tanglegrams is not what they include, but how much is missing: whilst valuable, they are nonetheless tremendously simplified diagrams of entanglement.

Regardless of the nature of the dependencies and interdependencies described above, it is clear that when one considers any *thing* in detail, the number of entanglements that pertain to that thing is both vast, and vastly more than identified above. The "assemblage" (DeLanda, 2006, pp.3) that is an iPhone is dependent, then, upon an immeasurable and unaccountable imbroglio of present and historical entanglements that calls to mind Douglas Adams' fictional 'McGuffin'[241]: the 'Total Perspective Vortex[242]' (Adams, 1978). However, this incomprehensibility does not render entanglement useless as a concept. The detail of the entanglements is largely unimportant but to illustrate their presence and complexity. What *is* important to this thesis is entanglement theory's reminding of interconnectedness: the dependence, and interdependence of things. The following chapter asserts that design and its problem solving model do the opposite.

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[241] A technology in fiction that is important for the plot but isn't explained in any real detail and may be quite unfeasible. The McGuffin (sometimes MacGuffin) is a useful concept for designers in the contexts of design fiction and speculative, critical, and discursive design because it grants licence to play with possible ideas for future technologies (see Vines in Blythe & Monk, 2018).

[242] A machine that extrapolates "the whole of creation—every galaxy, every sun, every planet, their orbits, their composition, and their economic and social history from [a] small piece of fairy cake" (Adams, 1978) and then exposes a victim to this incomprehensible knowledge — which has disastrous effects upon their sanity (unless they happen to be Zaphod Beeblebrox, a main character in Adams' books, who is immunised to the Total Perspective Vortex by having an ego that is the size of the universe).

5.2.3). Unruliness, Taughtness, Entrapment, and Dissentanglement.

According to Hodder, material things are *unruly*. Despite human wants and wishes, things continue to break down, wear out, get stuck, get lost, need refuelling, recharging, replenishing, repainting and repolishing. From a certain point of view, things depend upon humans to keep them working and humans depend upon the working of things to keep them living in the manner to which they have become accustomed. To paraphrase Hodder: a defining aspect of human entanglement with things, designed or otherwise, is that humans get caught in a double-bind of interdependency: depending upon things that depend upon them (Hodder, 2012). Hodder refers to this phenomena as *entrapment*: the more deeply humans and things become entangled — the more dependent they are upon one another — and the more entrapped they become: "as humans increasingly live in a world they have produced, they have to work harder to reproduce the world on which they depend" (Hodder, 2012, pp.103), "the multiplicity of the links in the entanglement creates entrapment. To make a change in one place has impacts in many other places[243]." (Hodder, 2012, pp.104). The measure of these compounded entanglements, how binding they are, is referred to, by Hodder, as their *taughtness.* This is where Hodder departs from ANT and much New-Materialist thinking and associated ideas, stating: it is not the material conditions of social life that determine the direction of change, but the tautness (the entrapment) of heterogenous entanglements." (Hodder, 2012, pp.206). Humans, of course, are unruly too: they readily and regularly neglect the things that depend upon them, and upon which they depend. Some dependencies, then, appear to require upkeep and energy, and this raises the inevitable issue of disentanglement. All entangled things tend towards disentanglement as dependencies fail and fade and/or are neglected. In this way, certain design artefacts become disentangled from culture (due, for example, to technological

[243] Much like writing a thesis :)

obsolescence or the whims of fashion or ideology) and are relegated to history (VHS, ruffs, human sacrifice, and so on). Things may become so disentangled that understanding them becomes difficult: as with the Antikythera Mechanism, or Egyptian hieroglyphics[244]

5.2.4). Forgettness.

> "It is because we take for granted, often not focusing on them, that we fail to notice the characteristics of things […]. We fail to see that things are connected to and dependent on other things. We do not recognise that they are not inert.
>
> (Hodder, 2012, pp.6).

Given the importance of the interdependencies described above, Hodder draws attention to a rather paradoxical idea — namely the 'forgetness of things' (Hodder, 2012, pp.101) — asserting that the vast majority of entangled interdependencies are forgotten by people as they go about their lives (or, we might infer, are never even known to them in the first place). Taking, for example, a hammer — a popular choice in philosophical discussions concerning designed artefacts (Inwood, 1997; Harman, 2010, 2011). A person might know, or guess at: the geographical origin of the ore's that might have yielded the metals that constitute the head; the biological origin of the wood for the shaft; the industrial processes that might transform such things from mineral ore to cast alloy, or tree trunk to polished handle; the commercial distribution of the finished product; the governmental safety standards that the hammer satisfies; the marketing infrastructure that inspired its purchase; that it was lent by a friend; that it has been previously damaged and

[244] The understanding of which was lost to time until the discovery of the Rosetta Stone: Until then, hieroglyphics were progressively disentangling but the Rosetta Stone enabled their rapid re-entanglement.

has a small (but slowly growing) split in the heel; that the head becomes loose in the summer, but tightens again in the winter; and so on. One might continue for a great deal longer listing every process, person, and thing that contributes to the assemblage of the specific hammer in question. According to Hodder, and others, this wealth of entanglement is forgotten, even in use — the designed object is succinctly reduced to 'a hammer' in the minds of those who encounter it, and little more. The same would hold for a car, or a cake, or a cloche, or a catapult, or a cat for that matter.

Forgetness is disrupted when things break-down and a *remindness*[245] of their entangled interdependencies manifests in the mind of the audience/user. This is especially apparent in the case of heterogenous design objects that are constructed of multiple parts: when one part fails, the *whole thing* fails to function, and there is also a conceptual failure — a car with a flat battery will not *go.* The thing that was a 'car' is now not quite that. It is an assemblage of components, one of which has failed. Whatever the definition of a car, it is likely to require that it *goes* — if it does not, then what is it? Not quite a car. Hodder's forgetness is akin to ANT's notion of "punctualisation" (Law, 1999), with "depunctualisation" (Law, 1999) being the equivalent of the remindness mentioned above.

5.3.5). Fittingness: Affordance Plus Coherence.

In 'How Artefacts Afford' (Davis, 2020), Jenny Davis defines affordances as "the multifaceted relational structure between an object/technology and the use that enables or

[245] As previously mentioned: 'remindness' is a word that I attribute to Dr. Hannah Drayson. It doesn't appear to be in any popular English dictionary but I am using it nonetheless, as Drayson did, to refer to moments when Hodder's forgetness collapses in the mind of user/audience. According to Hodder, and others, forgetness collapses when something fails (or, as will be discussed later, when something is found to be funny).

constrains potential behavioural outcomes in a particular context. That is, affordances mediate between a technology's features and its outcomes" (Davis 2020). Davis goes on to describe a well-known story of how the concept of affordance is generally attributed to James Gibson, an ecological psychologist. It was then recognised as a powerful concept for design by Donald Norman and applied to technology (see also Norman, 2000; Fisher, 2004, and Gaver, 1991). To affordances, Hodder brings a notion of *coherence* to form a concept of *fittingness* (Hodder, 2012, pp.113) which imbues affordance with even more potential to be of use to design by making it more dynamic.

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Chapter 6).

Proposition: A Revised Strategy for Understanding Gelastic Design.

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6.1). A Synthesis of Ideas from design, humour and entanglement.

Earlier in this text, design was described as inescapable: not only as something that all humans *do*, but also something that all humans are immersed *in*, and, arguably, that design *co-creates* humans themselves. Entanglement is also inescapable. To *be*, you must *be* entangled — no one can live without being dependent upon things[246]. We are all immersed in entanglements — made from them and through them (Hodder, 2012). Entanglement theories forefront the 'relationality' of all things, including designed things, but also the fact that people forget these connections in the day-to-day playing out of their lives. In this chapter, entanglement is offered here to meaningfully connect design to humour through consideration of a humour of things. As Chapter 4 demonstrates, much humour theory centres around linguistic considerations of humour, whether written and read, or spoken and heard. But people also find *things* humorous — a fact that has received far less attention by humour scholars.

Much humour relies upon an idea similar to entanglement theory's *forgetness*, especially humour that is explained by incongruity theories. Humour that relies upon forgetness works through remindness. For example, consider this well-trodden joke:

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[246] The classic examples being air, water, and food, but one might also consider the physical principles of the Universe as fundamental things to depend upon.

‘A man walks into a bar…

“Ouch!”’

(Anon).

It is axiomatic of many incongruity theories that at least two meanings of ‘bar’ must be known to this joke’s audience in order for humour to have a good chance of emerging. Such humour occurs at the moment where one understanding ‘collapses’ into another (in this case from ‘bar’ as building-that-can-be-walked-into to ‘bar’ as metal-object-that-should-not-be-walked-into – which is inferred by the exclamation ‘Ouch!’). There is a resonance between the forgetness of entanglement theory and the forgetness that is vital for incongruity theories of humour, see, for example, Boyd (Boyd, 2004); or Koestler’s theory of ‘Bisociation’ (Koestler, 1970). In order for this joke to be found funny, one has to temporarily forget that there are multiple meanings for the heteronymous word *bar.* This happens in the same way that people forget the number of components in any heterogeneous designed thing (or not-designed thing for that matter[247]), and the number of things that anything is dependent upon/entangled with.

The design of the joke, of course, engenders one interpretation of the heteronym over another. The joke is carefully and purposely constructed in such a way that the audience will interpret the bar to be a building, something that is *typically* walked ‘into’. This joke can be easily reconstructed to give initial primacy to other meanings of the word bar:

[247] Any *thing*, designed or not, can be interpreted as either a unified ‘monadic’ whole or as an assemblage of components. For example, a mountain can have a name and be understood as a cohesive entity (Everest, Kilimanjaro, Fuji, etc.), or it can be understood as an assemblage of large component foothills, crests, crags, screes, cliffs, plateaux, or smaller components such as rocks, stones, snow, moss, or even smaller components such as molecules or atoms: the conception of any one thing being as granular as the mode of its analysis (Thompson, 2008).

A man picks up a heavy bar…

…the drinks spill everywhere and the bartender is furious.

Or

A man walks into a bar…

He squashes it and gets chocolate on his shoes.

Or

A man walks into a bar…

The graph is ruined.

And so on. As will be discussed in the next section: design is working here to nurture forgetness — in this case to ensure that one semantic interpretation has primacy and that the joke's audience forgets that there are multiple understanding of the heteronym bar, until, that is, the punchline. Humour relies on remindness — the collapse of forgetness.

Unsurprisingly, given the close association between entanglement theories and new materialist philosophy, entanglement theory is often materially focussed. Hodder's explanation of entanglement is no different: with thought experiments, and discussions centring around concerns with material artefacts: ancient ceramics, for example. It therefore follows that much discussion of dependency and interdependency is similarly materially focussed. At risk of appearing overly dualist: considering entanglement and humour together forefronts semantic dependencies, which opens up other avenues for consideration of entanglement: in these 'bar' jokes, and others, the dependency is not between material things such as the iPhone camera screw and its threaded receiver mentioned in Chapter 5, but the semantic interdependence of words upon their interpretations and meanings. As discussed in Chapter 4, humour is highly dependent upon

context and entanglement theories brings a new perspective to the complexity and dependencies inherent in context.

Entanglement theory suggests that an awareness of entanglement (a collapse of forgetness) might arise in a moment when an expected orderliness of things is disrupted, or 'depunctualised' as Actor Network Theory would have it (Law, 1999). Referencing Heidegger's 'Conspicuous Unreadiness-To-Hand' (Heidegger, 1962) which concerns malfunctioning objects, Hodder presents the example of a car (Hodder 2012 pp.102). The car is understood cohesively as 'a car' rather than as an entanglement of interdependent components. At the moment when a vital component fails (a tyre bursts, a headlight bulb blows, the brakes fail, the key does not start the engine, etc.) the interdependency of the car components becomes dramatically apparent: forgetness falls away and the entangled interdependency of things is revealed. In discussions of entanglement, this awareness is typically presented as arising from the problematic, as in the examples presented by Heidegger, Hodder, and others. This thesis recognises that, in other instances, as yet seemingly unaccounted for, entanglement appears to be revealed not as a result of the problematic, but of the humorous. Many jokes, such as the 'bar' jokes above, intentionally bring about a remindness (a depunctualisation) by way of humour. Intentionally humorous design (design that is intended to be laughed *with*) does this also: whereas design failures (component failures) might bring about a remindness, designers have employed a sort of 'delightful remindness', through humour, to engender attraction and/or endearment with design.

6.1.1). Design for Forgetness, Humour for Remindness.

Design, especially that which is done by designers who value a minimalist aesthetic, and that which is often perceived to be of higher taste and refinement, frequently and actively encourages forgetness through the cultivation of form. For example, one might consider the preponderance of products that secrete their working parts inside a casing of some type, often plastic or metal, so that the design object appears 'monad'-like (Schrag, 1997) in its completeness. It is a thing. A complete *thing*. Not a complex collection of multi-material components being drawn together into a heterogeneous assemblage, and bound in a temporary fixity, but a simple bounded *thing* that may be given a simple name like 'house', or 'car', or 'phone'. This process is referred to as 'blackboxing' (Fallan, 2010, pp.70) — "When most people know how to operate [something] but don't know how to works" (Fallan, 2010, pp.70). One might conceive of this as a certain courteousness, magnanimousness, or even a self-sacrificing pursuit on the part of the designer. As Joe Sparano has said "Good Design is Obvious, Great Design is Transparent" (Wood, 2016). The inference being here that the best design 'slips by' conscious recognition. For example, one might take the example of a recently released flat screen television (such as Sony's 'Bravia XR A90J' shown in Figure 6.i.) that boasts a minimal edge to the screen. The design aim here is that the device itself should be as unobtrusive as possible: that only the media content should be the focus of the attention for the audience, not the television itself.

Figure 6.i. The Sony Bravia XR A90J Master Series 4K OLED Smart Television (Sony, 2024).

Gone are the elaborate and intricately decorated cabinets of the 1950s, where the ratio of the screen size to the size of the other components was radically different, not just though a designerly choice, but as dictated by the technology of the age. Over time, progress has been towards the ideal of *just* the screen. The media taking centre stage, not the device. When television sets were first available to the public, they were perceived to be expensive and highly desirable objects. A certain rather grandiose design seemed appropriate at the time: design that drew attention to the device itself. Whilst an argument could be made that ‘hiding’ screens behind elaborate doors and hinged lids, when not in use, was an attempt to blend the television cabinet into the Western domestic interior design of the 1930’s and 40’s, it is hard to deny that, through the design, formal references to the interior architecture of palatial ballrooms, opulent theatre stages, Art Deco skyscrapers, and futurist locomotives abound in early television set design. The exclusivity of the early television was matched by a style that today seems extravagant: highly-polished exotic veneers and chamfered hardwood cabinets with rich brown bakelite knobs and occasionally doors that would open to reveal the screen — or mirrors or lenses that

would increase its apparent size. The ambition here was to draw attention to the device, to celebrate the technological capabilities of the time, to welcome an exciting new era of broadcast telecommunication, and to enhance the perceived status of its owner. For example, one might look to the Andrea 1-F-5 produced by Andrea Radio Corp in 1939, with a five inch black and white screen and retailing for about a hundred and ninety dollars — equivalent to approximately three thousand dollars at time of writing in 2024 (see Figure 6.ii), or its competitors: the Invicta TL5, or Cossor 54.

Figure 6.ii. The Andrea 1-F-5 produced by Andrea Radio Corp in 1939.

The zenith of this extravagant approach is the Kuba ‘Comet’, designed by Gerhard Kubetschek and released in 1957 by Kuba Imperial Rundfunk und Fernsehwerk[248] (see Figure 6.iii.). This was technically more than just a television, offering a multimedia

[248] Kuba Imperial Radio and Television Plant

entertainment centre that featured a fifty-three centimetre television (increased to fifty-eight centimetres in later models), a four-band radio, a four-speed stereo vinyl turntable, and eight speakers: all encased in a magnificent (or maybe ridiculous) geometric sail-like arrangement of light maple (or imperial palm) and dark wenge[249]. It stood on four wooden legs to a height of a hundred and seventy one centimetres, was two-hundred and sixteen centimetres long, seventy centimetres deep, and weighed over one-hundred and thirty kilos (Ohio Early Television Museum, 2024).

Figure 6.iii. The Kuba ‘Comet’, designed by Gerhard Kubetschek in 1957.

[249] A type of wood.

Taking a retrospective view of the last century of electronic television and monitor design, design and engineering imperatives appear to have been towards making screens larger, flatter, cheaper, and therefore more ubiquitous. Wood and Bakelite have been long abandoned in favour of (at first) sheet metals and then more contemporary plastics, and, other than a few notable exceptions, televisions and computer monitors are now, in the early 2020s, almost exclusively black in terms of casing colour. The oatmeal-beige plastic that was so strongly associated with cathode ray tube monitors of the 1970s, 80s, and 90s was consigned to a metaphorical aesthetic scrapheap as radically flatter (in terms of overall unit depth) plasma and LED screens replaced them (and they were consigned to very real landfill sites). Today, televisions and computer monitors are often either hardly distinguishable from one another, or actually hybrid units that are able to perform either role. Now truly just ‘screens’.

Notable exceptions to the widely establish practice of opaque encasement are designs such as Ive’s lauded Apple Mac G3 (released in 1998), with its accompanying transparent Harmon Kardon USB ‘SoundSticks’ speaker system, or, a transparent predecessor, the Unisonic 6900 ZX ‘see thru’ telephone (1980/90s), see Figure 6.iv.

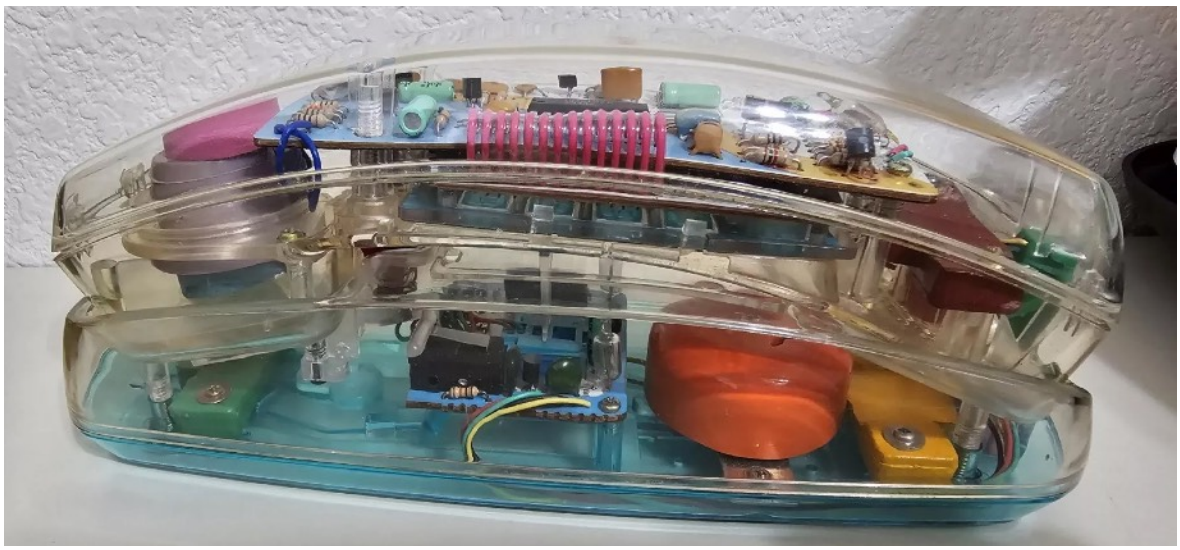

Figure 6.iv. The Unisonic 6900 ZX.

These are celebrated examples of moments when bold designers took the decision to buck the orthodoxies of casing design practice to visually expose and celebrate the accomplished workings of these complex electro-digital devices by specifically presenting the viewer with a multitude of visual references to the entangled nature of these objects — rare moments when designers chose to promote remindness rather than forgetness in entanglement terms. It should be noted that the ‘see through’ exceptions above, and others like them, do not tend towards longevity, representing rather anomalous novelties rather than paradigm shifts in design aesthetic.

6.1.2). Designers: Not so Much Problem Solvers as Entanglers of Things in Material Culture.

This thesis is written from the perspective that, despite the design rhetoric that has been previously outlined, designers are not principally professional problem solvers, instead being professionals who intentionally create and entangle things in material culture.

In Critique of a Problem Solving Model of Design.

As reported in Chapter 1, and elsewhere in this thesis, much has been written that defines product designers as professional 'problem solvers' and the practice of product design as a 'problem-solving process' (for example: the Design Council 2018; Erlhoff & Marshall, 2007; Johnson, 2004; Morris, 2009; Cross, 2007; Dunne & Raby, 2013). The idea of problem solving as a model for design has also been demonstrated in the author's investigation of the pervasiveness of 'problem solving' in promotional/indicative-content material for UK undergraduate product design programmes (see Chapter 1 and Appendix 12.3). Perhaps due to the widespread acceptance of the problem-solving model within design discourse, theory, and professional communities, and the authority assumed by this well-established rhetoric, there has been a lack of critical attention paid to the 'problem solving' model in design[250].

Before a critique of the problem solving model, an acknowledgement: effective problem solving is evidently an important part of what professional designers do. The critique here is not aimed at problem-solving per-se, but at the pervasive claims that it is the principal concern of the professional designer (see Chapter 1). Depending upon one's definition of what a problem is, or can be considered to be, the word *problem* can encompass a relatively broad spectrum of instances and circumstances. It is rather straightforward to reframe many things as problems.

[250] Whilst ideas such as 'wicked problems' (Rittel & Webber, 1973) are welcomed and celebrated by this thesis for their critique of the myopathy of more linear and traditional problem solving models of design (and *in* design), they essentially address the nature of some problem (being wicked, not tame), but not the idea that designers are principally are about *solving* problems, as this thesis does.

In Chapter 1, the claim was made that all humans design. All humans also solve problems, especially so if one includes problems such as those referenced above. Also previously discussed has been the idea that while all people design, some do it professionally. This fact seems to lend credence to the idea that designers are professional problem solvers, but there is nothing particularly unique about design professionals solving problems. A veterinarian is a professional problem solver, they have to diagnose a patient creature from observations of symptoms and test results[251]. This is a persistent and difficult set of problems to solve, and which require years of study and professional experience to do so effectively — hour after hour, day after day. A lawyer in a court spends much of their time trying to solve the problem of persuading a jury of someone's innocence or guilt. An artist may have to solve the problems of representation or abstraction such as how to 'capture' light in paint. A teacher repeatedly solves the problem of how to impart knowledge, a postal worker how to deliver their letters and parcels, a supermarket worker how to gather and stack shopping trolleys, and so on. The problem solving undertaken by these professionals does not seem remarkably different from that of a designer — at least no more so than from one another — and yet designers seem to have assumed the title of professional problem solvers. Of course it can be argued that all of these people are *professionals* who are 'designing' solutions (enacting designerly thinking) to achieve professional goals, rather than people who are *professional designers*, but the boundaries between these states now seem indefinite.

When one encounters a designed thing: a building, a car, a washing machine, a chair, a microwave, a pair of reading glasses, it is easy to accept that it is a designed

[251] They cannot ask a cat 'where does it hurt?', or a hamster 'How are you feeling today?', and expect a definitive answer.

solution to a problem (a desire for shelter, transport, cleanliness, relaxation, convenience, effective sight). However, this thesis takes the position that these problems were solved a long time ago, by people who identify as designers, or by their historical equivalents, and what one is likely encountering is not a true design solution, but a *variation* of a previous design solution — likely one that has a well established history. The design in question may be marginally better functioning, slightly more attractive to some eyes, or in some other way a little more desirable than its predecessors, although this is by no means necessarily the case[252], but it is likely to be barely distinguishable in appearance or use. The Ancient Egyptians had very effective chairs and stools: "the X-shaped folding chair dates back to the ancient Egyptians" (Kovel & Kovel, 1985). Whilst there are built-in sitting places at Skara Brae[253] and Çatalhöyük, the Ancient Egyptians could be argued to have solved the 'occasional sitting problem' — a folding chair with a small storage footprint when not in use, and light enough to be easily moved where needed. Every chair since has arguably been nothing but iterative *tweaking* by generations of tinkering designers.

A genuine and novel innovative design solution is a relatively rare thing in the professional life of most designers, in the general professional field of design, and amongst the worlds design artefacts. This is not a novel observation, having been noted by, for example, Cross (2007).

A problem with problem solving as a perspective on design practice is that it tends to be a narrow and focused one: regardless of whether designers are more 'problem

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[252] Consider, for example, the value of vintage or antique design items.

[253] A 7,000 year old Neolithic settlement that is well preserved in the Orkney islands, UK (Historic Environment Scotland, 2024).

focussed', or 'solution focussed' (Dorst & Cross, 2001). Whilst this makes for straightforward objective setting (what problem needs solving? How might it be solved?), and evaluation of solutions (how satisfactorily has the problem been solved?), these goal-orientated approaches repress consideration of issues beyond the limits of the description of the problem in their focus. In their paper 'Creativity in the Design Process: Co-Evolution of Problem–Solution' (Dorst & Cross, 2001) Dorst and Cross have demonstrated this experimentally, in the context of industrial/product design. They found that "experienced industrial designers" (Dorst & Cross, 2001, pp.425) tended to focus upon the immediate problem defined in a design brief, rather than considering wider issues or possible *wicked* dimensions to problems that appear (to them) to be 'simple'. For example, if the design problem is to create a cheap-but-effective toothbrush then a moulded plastic handle with embedded nylon bristles seems like an effective solution and designers can pat themselves on the back, metaphorically speaking, congratulating each other on a problem solved and a job well done. However, in solving this problem, other problems are of course created: how were these materials sourced? What are the environmental and social impacts of doing so? What happens to the toothbrush after it becomes too worn to be an effective solution to the tooth brushing problem? Can the plastic materials be viably recycled or will they end up buried or burnt? What will be the consequences in either case? And so on. The problem solving model tends toward myopathy: making *wicked* problems appear to be *tame* ones (Rittel & Webber, 1973). It is only when the consequences of design solutions begin to outweigh their benefits that many designers and design stakeholders take notice and reappraise design solutions (e.g. the eventual discontinuation of the use of CFCs in domestic refrigerators (Rees, 2015, pp.48-9)).

Volitional Entanglement

This line of reasoning quickly leads to the question: if designers are not principally engaged in the professional practice of problem solving, as they have told themselves that they are, then what do designers *really* do? In answering this question, this thesis takes the position that most designers are not working to solve a problem but instead are working (consciously or not) to *vary* a previous solution to a *similar* problem enough that it satisfies the design brief being addressed and effectively enough to be deemed a success — in order that their design can be propagated through mass production and mass distribution. In simple terms: to ask themselves 'How do I ensure that people want this thing that I'm designing, and, ideally, will keep wanting it?' or, asked in another way — '*How can I, a designer, ensure the entanglement of my design in material culture?*'.

There are many ways to achieve this aim, and of course problem-solving is an important one if a design is to be understood as *fitting* (Hodder, 2012) by its audience (the design must be conceived of as a viable 'solution' to whatever need/desire/problem it addresses), but so are other factors such as functionality, aesthetics, cost, maybe ergonomics, and, — sometimes — humour: intentionally making design funny to audiences in order that it will be desired, acquired, and entangled in material culture. These strategies, and their materialisation in design artefacts, are not exclusive to one another. A design can be attractive and utile, and/or funny and a fair price, all four, and many more.

This thesis, then, proceeds from the position that design is principally an activity of volitional entanglement on the part of the designer. *Design is here reconceptualised, not principally as a problem-solving process, but as a codified process of organising the entanglement of design in material culture.* Models of design that emphasise that design is

a problem-solving profession fail to adequately recognise the role of design as a co-creator of material culture because they are too narrowly focused upon each problem to take a wider view. Material culture is, of course, not static: it is in a constant state of flux, as newly emerging things (design artefacts, for example) become entangled in it and disentangle from it.

Much design, as discussed above, is iterative: involving the minor modification of previous design to better fit current demands and, in commercial contexts, to drive sales. However, design innovation does tend to involve the generation of *novel* design and is concerned with alternatives to established approaches and artefacts. The process of entangling innovative design in material culture tends to be more difficult the more innovative the design is — i.e. the further it is from affirmative design traditions. Design histories are littered with examples of design ideas that were rejected, 'never really caught on' and, one imagines, such histories are also *missing* ideas that are, for lack of entanglement, not even accounted for in historical canon. Obsolete ideas become disentangled, loose their cultural significance, and are forgotten.

6.1.3). Malentanglement.

Due to the pervasiveness of the problem solving model of design, and the persuasive logic of positive rationalism that has underpinned it (see Chapter 1), design audiences expect design to appear in certain ways, and to do certain things. These expectations are reinforced by people's constant exposure to design in the leading of their individual lives, combined with considerations of the principles of fittingness that have been outlined by Hodder (see Chapter 5). When audience expectations are not met (e.g. in

the case of ‘bad’ design), or are challenged (e.g. in the case of critical design), or are particularly innovative (e.g. in the case of the case studies in Chapter 2: Westwood, Ballmer, and Ransome) then audiences may laugh in response. They are laughing because the design in question appears to them to be incongruous in some way. The design in question does not ‘make sense’ to their personal design logic: such design being ‘malentangled’ — i.e. entangled in a way that is not perceived as ‘fitting’ (in Hodder’s terms (Hodder, 2012)), (see Chapter 5).

Design audiences laugh when they cannot identify, or misidentify, the problem being solved (the manner of the intended entanglement) or when they understand the problem but misunderstand the manner in which the problem is being addressed (a common response to critical design, for example, is laughter at its ‘incongruity’, but it is only incongruous according to the standards and logic of affirmative design). For example, to return to the case studies in Chapter 2: Westwood’s audience laughs because the clothes are unusual in their treatment of gender norms, and historical norms; Ballmer laughs because the lack of buttons on the iPhone seems like an interaction shortcoming rather than a liberation that has enabled a far more dynamic interface; Ransome’s rebar arouses derisory laughter because his audience thought that he had weakened the iron, and weak iron would not provide as good architectural support as strong (untwisted) iron. In each case, the audience interprets something amiss in the orderliness and fittingness of the design. The concept of malentanglement draws conceptually from the benign violation theory of humour (McGraw & Webber, 2010, Veatch, 1998) in that BVt posits the idea that people perceive events, but interpret them, or maybe misinterpret them, as somehow contrary to expectation, troublesome, or ill-at-ease. This concept is then synthesised with

Hodder's notion of 'fittingness' (Hodder, 2012) but inverted to a sense of ill-fittingness, or perceived *malentanglement*.

As raised in Chapter 5, there is an issue with entanglement theories, including Hodder's, that entanglement is rather objective and discussed in rather objective terms. However, people's perception of entanglement is personal and therefore *subjective*. It is this subjective perception of the entanglement of designed things that gives rise to forgettness, remindness, perceived incongruity, malentanglement, and, therefore, consequential humour. Anything, and any *thing,* can be perceived as malentangled — that is to say perceived as entangled but in incongruous ways that can lead to humour. This may lead people to laugh at innovation, and the more innovative, the more incongruous, and the more funny.

Malentanglement is not a state of entanglement, it is a description of a perception of entanglement by an audience — an interpretation of an ill-fittingness.

6.2). New Understandings of Humour and Laughter as Responses to Design and Design Innovation.

Design strategies, theory, and discourse have largely ignored humour. Therefore, when designed things (and, by extension, designers) are laughed *at,* designers are ill equipped and inexperienced in responding to such laughter: interpreting it as derisory. This may well be the intention of the person laughing (as seems the case with Ballmer and the iPhone), and such instances of laughter are convincingly explained by the so-called aggression theories of humour. However, the concept of *malentanglement* introduces

another possibility: that innovative design ideas, ones that really challenge the affirmative status quo, may appear so incongruous (malentangled) to design audiences that they are found to be humorous. This thesis argues that laughter, at such moments, can be understood as a ‘signal’ or ‘symptom’ of genuine design innovation.

This thesis reframes humour and laughter, turning the situation ‘on its head’ and presenting humour and laughter as assets rather than problems — for affirmative commercial designers, the thesis suggests that innovative design ideas may not be being laughed at because they are ‘bad’ ideas, but just that they are not yet as deeply entangled in material culture as other, more established, ideas. For critical designers (and discursive, speculative, adversarial, etc.) it explains the humour and laughter that their practice is often met with: *critical designers deliberately set out to make malentangled things*.

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Chapter 7).

Speculative Testing with the Revised Strategy.

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7.1). Looking Again, Through a New Lens.

This comparatively short chapter reconsiders the case studies detailed in Chapter 2 in light of the revised analysis outlined in Chapter 6. In doing so, it helps to explain some instances of derisory humour — through the metaphorical lens of malentanglement.

7.1.1). Revisiting Westwood on Wogan.

In addition to Sue Lawley (on Wogan), the comedian and presenter, Ruby Wax, also conducted a television interview with Westwood in 1988, this time for the UK's 'Channel 4'. Interestingly, Westwood was wearing exactly the same outfit as she did for the Wogan programme. The two interviews are markedly different in terms of the audience expectations and reaction: with Wax, no one laughs *at* Westwood, although sometimes quietly *with* her and Wax — Wax, as a professional comedian, employs humour to entertain the audience and to respectfully put her guest at ease. One way to understand the difference between the two interviews is to compare the opening questions in each. Wax' opening question is "Speaking of fantasy, what do you think of Western civilisation as we know it?", followed by "What do you think about culture? — are you pro-tradition?", and then "What are you doing with your clothes now? (Wax, 1988). These are open questions, designed to afford the guest in sharing their opinion and insight. When Wax later asks "What are we going to look like?" she is subtly acknowledging the considerable influence that Westwood had already exerted over British fashion, but also that she would continue

to do so — "what are we *going* to look like?", in the future tense. Conversely, Lawley's opening five questions are all closed — every one can be answered with a word or two: "What do you call them?" (Referring to Westwood's 'Rocking Horse Shoes'), "What are they made of?", "Are all your ideas from 'old books'?", "Tell me about the twin-set and pearls for men. I mean: has it caught on?", "I know every time you do a collection, they say 'Crikey! Viv's blown it'. Don't they?" (see 'Appendix 1' (12.1)). The ambition for the conversation is entirely different: Westwood is not being invited to share her opinions or ideas, nor to introduce or explain her work — despite it being imminently revealed. Lawley is making absolutely no effort to inform the audience of what they are about to see, and this appears, due to the nature of the questioning, to be a deliberate choice (although it is not clear whose choice this was, e.i. the extent to which Lawley is following a pre-written script of questions and/or abiding by the instruction of production staff and other decision makers.

The Wax-Westwood audience are not laughing because Westwood's fashion design is not malentangled to them: they are expecting to see provocative, innovative, and unorthodox design and that is what they are presented with. Contrarily, the Wogan-Westwood audience shriek with laughter[254] because Westwood's fashion design appears malentangled to them. One imagines that the Wogan-Westwood audience are comparing Westwood's Time Machine collection to mainstream 'high street fashion' of the day, and its associated material forms and gender norms, rather than understanding the avant-garde/ haute couture context in which Westwood's practice resided at the time. The audience laughing at Westwood's collection appear either incapable of or unwilling to accommodate

[254] For example, an audience member can be heard screeching "The shoes!" when Westwood first enters the stage (Appendix 1, 12.1).

any other perspective than a malentangled one, so they laugh at the incongruity of the spectacle before them — encouraged, purposely, at every stage by Lawley and Harty (see the full interview transcript in ‘Appendix 1’ (12.1)).

The ‘Westwood-on-Wogan’ moment has since been recognised as an important instance in British cultural history, and a moment of paradigm shift. For example, it has been discussed in several publications and television programmes (see Chapter 2, Section 2.2.1). The infamous interview was also parodied by Steve Coogan playing his most well known character ‘Alan Partridge’ six years later, in 1994 (see Figures 7.i, and 7.ii).

Figure 7.i. Steve Coogan (left) as ‘Alan Partridge’, and Rebecca Front (right) playing the character ‘Yvonne Boyd’ (BBC, 1994).

Figure 7.ii. Seated from left to right: comedic actors Steve Coogan playing ‘Alan Partridge’ (clear parallels with Lawley), Melanie Hudson playing 'Nina Vanier’ (a French version of Janet Street-Porter), Rebecca Front playing ‘Yvonne Boyd’ (a caricature of Westwood), and Patrick Marber playing ‘Phillippe Lambert’ (rather than including an equivalent to Russel Harty, Marber’s character is closely aligned with Lanier and Boyd, in opposition to Partridge), (BBC, 1994).

In this episode, Partridge is a parody of Lawley — oscillating between the states of being patronising and bemused, trying to take the stance of an imagined ‘common person’ with ‘common sense’, asking ‘is this serious? Is this what you’d wear to hospital? And, in a direct quote lifted from Lawley, to Westwood (on Wogan), “Is this supposed to be a winter collection?” (See Appendix 1, 12.1).

When interviewing Westwood, Lawley makes repeated reference to Westwood’s suggestion of “twin sets and pearls — *for men!* [Lawley’s spoken emphasis]” (Appendix 1, 12.1), mentioning it in her introduction of Westwood to the studio audience and viewers-at-

home, and returning to it mid-interview as a form of challenge to Westwood's authority as a designer. Lawley evidently wants to draw attention to Westwood's proposal that men could wear these traditionally feminine items. From Lawley's perspective, it appears that she thinks such a design suggestion epitomises the socially unacceptable, and therefore unrealistic and *unwearable* nature of Westwood's designs. Writing in 2024, this design suggestion does not seem preposterous at all and we see regular examples of similar ensembles in the popular press: e.g. Figure 7.iii.

Figure 7.iii. Actor/singer/celebrity Harry Stiles wearing a 'twin set and pearls' inspired outfit on the red carpet at the 40th annual Brit Awards in the O2 Arena, London, UK, 2020.

Early-career Westwood expected to be found malentangled, although would not have used that term for it. The clothes in 'Sex' were *intended* for that purpose: to be malentangled in the eyes of establishment audiences, to shock them, to confuse them, to unsettle them, even to intimidate them. Then, over the course of her career, Westwood

became the establishment — one of Britain's most important and influential fashion designers (the *most* important in Britain and one of the most important in the World, according to Fairchild (Fairchild, 1989, pp.34)). Westwood was then visibly distressed when mainstream audiences (on Wogan) surprised her by perceiving her Time Machine collection to be malentangled — and laughing at it. As she remarks in the Wogan interview: "I usually don't get that kind of reaction, it's a bit strange" (see Appendix 1, 12.1).

7.1.2). Revisiting Ballmer and the iPhone.

The Ballmer case study is difficult to conclusively analyse because there are a number of reasons that Ballmer may be laughing at the iPhone. It could be an assertion of dominance on his part. As the superiority theories would have it: Ballmer is threatened by the arrival of the iPhone and, in order to neutralise this threat, he chooses to belittle it through derisory laughter, likely in the hope that others will share in his mockery, or at least be influenced by it, and the iPhone's market uptake will suffer as a consequence. It could also be that he genuinely misperceives the threat to Microsoft that the iPhone poses, and is laughing at the malentanglement of a buttonless mobile communication device: in the CBNC interview he laughs at the iPhone for its high cost, and lack of physical buttons, stating that, "It doesn't appeal to business customers because it doesn't have a keyboard, which makes it not a very good email machine" (CNBC, 2007. See 'Appendix 2' (12.2).

Foreshadowing some of the conclusions of this research, Tony Fadell, an important member of the design team that developed the iPhone, and later co-founder of 'Nest[255]',

[255] A successful multinational 'smart-home device' company founded in 2010.

confessed to the BBC that “We also laughed at Blackberry,” and that “Whenever I create a new product, and I learned this with Steve [Jobs], if the incumbents laugh at you and the press laugh at you, you go, ‘we’ve hit a nerve’” (Reisinger, 2017). Fadell’s insight is that humour and laughter, in such instances, are indicators of genuine design innovation.

7.1.3). Revisiting Ransome’s Rebar.

In a similar situation to Westwood, but over a century earlier, Earnest Ransome presented his method for reinforcing concrete with cold-twisted iron rebar to an audience of the ‘Technical Society of the Pacific Coast’ in 1884. Ransome’s proposal appeared malentangled to his audience: “the consensus of opinion being that I injured the iron” (Ransome & Saurbrey, 2018, pp.3). At this time it seemed inconceivable to this audience that twisting the iron bars at room temperature[256] would not weaken them, and the benefits of their twisted form were, one imagines, not recognised for their quite brilliant solution to the problem of securely ‘fixing’ the bars into the concrete without traditional fixing such as threads, bolts, and pins.

The audience’s derisory laughter was aimed at the design, for its perceived malentanglement and designerly shortcomings, but also at Ransome for conceiving of, and proposing, his method to an audience such as themselves.

[256] Not ‘cold' as most people understand it, but considerably colder than the temperatures at which iron was typically and necessarily formed and manipulated in the foundries and smithies of the time.

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Chapter 8).

Taking a Humour-Centred Approach: Implications of the Revised Strategy for Understanding Gelastic Design.

- -

“The most exciting phrase to hear in science, the one that heralds new discoveries, is not ‘Eureka!’ but ‘That’s funny…’”

Isaac Asimov (Asimov, 2009).

Asimov, of course, is likely referring to the so-called ‘funny odd’, and not its compatriot ‘funny ha ha’. Nonetheless, he recognises that moments of innovation might not be met with the responses that one might, as a designer, hope or expect.

8.1). Reframing the Problem as the Solution: Welcoming the Laughter! :)

To reaffirm the position of this text — the problem is not the laughter. It is the misunderstanding of the laughter (by design(ers)) that is problematic. Whilst some laughter may be genuinely and intentionally derisory (aggression theories do well to explain such instances), other laughter is an involuntary response to the incongruity of malentanglement. Malentanglement is not a state of entanglement, it is a description of a perception of entanglement by an audience — an interpretation of an ill-fittingness.

If the laughter is due to malentanglement, then this is an affirmation that the design in question is genuinely innovative (as was Westwood Time-Machine collection, Apple's 'buttonless' iPhone, and Ransome's cold-twisted rebar). Such laughter then, can be — should be — welcomed, rather than cause for anxiety.

8.2). New Perspectives on Problem Solving.

This thesis forefronts alternatives to the problem solving models of design, and presents an alternative understanding for what designers principally do: *purposely entangle designed things in material culture*.

If designers wish to best facilitate the longevity and legacy of their design, they should therefore — from the perspective of this thesis — aim to ensure a sustainable and enduring entanglement in material culture, by whatever strategy seems most appropriate. There are numerous such strategies available to designers for doing this, effective problem solving being but one of them.

8.3). Cautions and Possible Concerns.

> "The fact that some geniuses were laughed at does not imply that all who are laughed at are geniuses. They laughed at Columbus, they laughed at Fulton, they laughed at the Wright Brothers. But they also laughed at Bozo the Clown[257]."
>
> (Carl Sagan, 1979, pp.75).

[257] Well maybe Bozo was *also* a genius then, *Carl!*

Sagan, as ever, raises an interesting point, and an important concern for this thesis: just because people are laughing at design, this does not mean that it is 'bad' — *or* 'good'.

This research raises a number of questions concerning the evaluation of the quality of design because it challenges and undermines the idea that people laugh at bad design. This makes the tasks of separating 'bad' design (even ridiculously bad design) from 'good' design, and evaluating the quality of any such design, more complex, more difficult, and less reliable — such evaluations being particularly difficult in the context of design innovation. How does one tell the good design from the 'poor' design if design-being-laughed-*at* is not a reliable indication of the quality of the design? Or, as proposed here, that audiences may be laughing at design that is very good but just not yet sufficiently entangled in material culture to be recognised as such. A misinterpretation of these ideas — that there is no such thing as bad design, just malentangled design — could cause problems. This is not the position of this text, but it could be misinterpreted as such: it is a seed of doubt.

The answer to the questions above is beyond the scope of this text, the aim here being to call into question the interpretation of humour and laughter as responses to design and design innovation and to provide an explanation for it. It is hoped that this explanation, and this 'calling into question' will form the basis of future consideration within design discourses, and future research on the part of the author. Fortunately, there are a considerable number of people who contribute to the evaluation of design, through the analysis, theorisation, critique, and teaching that contribute to design discourses — this thesis is instead concerned with highlighting humour and laughter as important

components in design innovation that have been historically overlooked and/or misunderstood.

8.4). New Design Strategies for Designers.

As described above: humour and laughter may be genuinely and intentionally derisory (aggression theories do well to explain such instances). This thesis proposes that other humour and laughter is an involuntary response to the incongruity of malentanglement. It may not be abundantly clear what the underlying reasons for any humour and laughter might be, and, in audiences of more than one laugher, there may be a number of specific reasons for laughter — which may be as high as the number of laughing people in the audience.

In the case of the former (derisive humour), a key stance of the aggression theories of humour is that humour is used as a social 'weapon' — an offensive[258] social tool for asserting the social dominance of someone who considers themself 'superior' over someone, or something 'inferior' (hence their alternative label: the superiority theories). From this, one can infer that one of three things is happening:

i). The design that is subject to derisory humour is the intended victim in the victor/victim dyad that is described by aggression theories: this is apparent in the case of the 'design fails' and 'ugly design' described in Chapter 2.

[258] Here meaning 'the opposite of defensive', rather than disgusting or repulsive.

ii). The design is not really the subject of the humour and laughter, they are aimed at the designer, but vailed under the guise of being directed at the design. This may well have been the case with Ballmer laughing at the iPhone: maybe his true targets were Apple, its board of directors, and its design and managerial staff.

iii). Both i. and ii. are the case. The design, and the designer of the design, are being coterminously subject to ridicule.

In the case of the latter (involuntary laughter), as demonstrated by Ransome, *communication*, *explanation*, *demonstration,* and eventual *vindication* are the foils to malentanglement: communication, explanation, and demonstration are within the immediate strategic purview of the designer and many publications exist to advise designers, and design students, in regard to these matters (e.g. Reynolds, 2008). Vindication, however, takes time, and is difficult to achieve in advance of realisation[259], and distribution of any design in question. As Chapter 2 has stated: iPhone sales vindicated Apple's design decisions fairly quickly (a matter of months, that turned into years), but it took longer for Westwood's avant-garde design ideas to 'trickle down[260]' into commonplace 'high-street' fashion tastes and years for 'Vivienne Westwood' chain-stores to become a feature of British city-centres, rather than a small collection of unique boutiques[261]. It took nearly two decades for the San Francisco quake of 1906 to provide a critical test for Ransome's cold-twisted rebar — which was perceived to have performed very well against other construction methods involving cast concrete (Architect and

[259] 'Realisation' as in making real — i.e. bringing into existence.

[260] Being, of course, metaphorically 'watered-down' on this journey.

[261] 'Vivienne Westwood' stores are far more numerous in East Asia, there being more stores just in the South Korean city of Seoul than in the whole of the UK (twelve versus nine) (Vivienne Westwood, 2023).

Engineer of California, 1917a, pp.101-102, and 1917b, pp.106). This forefronts a significant issue for design and designers: vindication can only manifest slowly and/or in hindsight.

With these thoughts in mind, designers, and associated stakeholders, can anticipate the possibility of their design being found humorous, and being laughed at, and respond appropriately as they see fit. They are free to welcome humour and laughter as indicators of genuine design innovation and dismiss 'malentanglement evoked humour and laughter' as a failing in the foresight of the design audience, rather than a failing on the part of the design.

'Risus abundat in ore stultorum![262]'

(Latin proverbial saying, Anon.)

It is hoped that this perspective might emboldened designers to take more intellectual 'risks', to be more ambitious in their creativity, and to have more confidence in their innovative design ideas. This may go some way to ameliorate the self-censorship that was raised as an issue in Chapter 3. Laughter is a reaction that should be welcomed if a designer is really challenging design dogma. From this perspective, this thesis may thereby be considered a support-mechanism/strategic-advisor for designers who are laughed at. It should imbue confidence: design should welcome laughter. Laughter is an indicator of malentanglement and malentanglement is a symptom of genuine design innovation. Chapter 3 quoted Hiroki Asai, who has stated that "Fear is the greatest killer of creativity" (Aaker & Bagdonas, 2020, pp.55). Asai goes on to say that "humour is the most effective

[262] 'Laughter abounds in the mouths of fools!'

tool that I have found for insulating cultures from fear" (Aaker & Bagdonas, 2020, pp.56) and this thesis is written in empathic agreement.

8.5). Design, Humour, and Entanglement Discourses.

This research presents ideas that are of consequence to self-identified autonomies in design, and the discourses that surround them. It presents new ways to understand design: that affirmative commercial design tries to avoid malentanglement in order to ensure ease of entangling design in material culture and, once entangled, that such design's longevity in the entanglement of material culture perseveres. Alternatively, critical design intentionally creates malentangled things in order that its audiences are stimulated into consideration and critique of the prevailing characteristics of material culture, and its associated ideologies — and to consider possible alternatives.

The text is constructed from a perspective that is characterised by scepticism towards the pervasive models of design as principally a problem-solving profession and designers as professional problem solvers. As previously mentioned, the problem solving models of design have received limited critique within design discourses, in comparison to their widespread acceptance, and it is hoped that this thesis might act to provide a counter position to the prevailing linear logic of the problem solving models of design. Design claims important moments in history (including inventions and innovations) as moments of 'problem solving', but disregards malentangled moments (which are often funny), until the entanglement is 'proven' (i.e. become status quo) or are at least better understood[263].

[263] And, full circle: we are back to Gershwin's charming song again.

This thesis provides further critique of the tripartite model of humour, in addition to that which is public already, and also a model for how humour might, or might not, be brought to bear in novel ways to explore 'other realms' — in this case, design.

In its consideration of entanglement theory, especially Hodder's model which is a key focus of this text, this thesis raises the issue of the *actuality* of entanglement — the *reality* of dependencies and interdependencies whether known, unknown, or unknowable to those things which are entangled (including humans — as opposed to their identification and understanding by those who are entangled and/or are considering the entanglement of other things (humans included) — on not, as the case may be. As previously stated, malentanglement is not a *state* of entanglement but a description of a perception of entanglement that is perceived as ill fitting in some way (fitting in Hodder's terms, but extending beyond the material affordances of things. Whether someone is aware of an entanglement or not does not affect its actuality, but it does effect concepts that concern people's knowledge and awareness of entanglements — forgettness, remindness, fittingness, and so on. This thesis, then, draws attention to notions of subjectivity and objectivity in relation to some key concepts of Hodder's entanglement theory.

A key potential impact of the concept of malentanglement upon discourses of entanglement theory is that malentanglement raises the point that depunctualisation (herein referred to as *remindness*) occurs in moments when humour draws attention to entanglement. In entanglement theories previously, depunctualisation is typically described as occurring in moments of failure — when a component of a heterogeneous *thing* fails and this causes the whole thing to underperform in some way (a flat tyre on a car, a broken hammer handle, a dead battery, etc.), maybe even to fail completely.

8.6). New Approaches to the Teaching of Design: Another Experiment.

Chapter 1 discussed the results of an experiment that the author conducted in order to gain some insight into the pervasiveness of the idea of 'problem-solving' in UK undergraduate product design programmes (Section 1.2). The experiment revealed that over 85% of such programmes made mention of problem solving in there promotional materials, and indicative programme content. On the same day, for purposes of comparative analysis, the experiment was repeated in order to gain similar insight into the pervasiveness of the term 'entanglement'. The rerun of the 'problem-solving' experiment was identical in every way — the same forty-eight product design programmes were identified as being offered for the 2018/19 academic year, again identified using UCAS, and so on. The only difference between these two experiments was that the latter of the two did not search for evidence of problem solving. Instead, it searched for mentions of entanglement[264].

The results of this second experiment can be described very succinctly: zero — there were absolutely no mentions of entanglement in any of the materials that had yielded so many mentions of problem-solving (or variations of that term) (as briefly discussed in the methods section of the Introduction to this thesis (see Section 0.5.1)). For a full breakdown of the results of this second experiment, see Appendix 4: 'Pervasiveness of 'Entanglement' in UK Product Design Programmes, 2018/19' (12.4).

[264] The exact search term was 'entangl'. This term was used in order to return the words *entangle*, *entangled*, *entanglement*, *entangling*, and even *entangler*.

These two experiments, whilst they may have their shortcomings, do clearly indicate a propensity for student designers to be exposed to the concept of problems solving, with its issues of myopia, and not, to notions entanglement. Despite the stance of this thesis, entanglement, currently, is not considered by designers to be the most pivotal concept to any designer, and there are plenty of other concepts that might address the inherent myopia of many problem solving models — for example, one would hope that discussions of problem-solving would lead to engagement with wicked problems (Rittel & Webber, 1973) and a recognition that, as Stuart English has observed, "design problems are complex, fluid and ill defined" (English, 2010, pp.79). The hope is that 'complexifying' the reductive tendencies of many problem solving models, in a manner that throws their "solutionist" approach (Blythe et al, 2016) into question, will be revelatory.

Ultimately, it is hoped that in inverting the problem of humour and laughter being directed at design, and welcoming humour and laughter that were hitherto problematic, emerging and established designers might be emboldened to take more intellectual risks and to be more innovative in their thinking and designing, whilst self-censoring creative ideas to a lesser extent.

8.7). Humour-Centred Design and its Nascence: An Emerging Field? (No!)

Designers employ the terms 'user' and 'users' to describe the (typically human) individuals, or groups of individuals, who intentionally interact with design artefacts (in whatever form that interaction takes). This is a well established and pervasive design term whose origin can be traced back to the mid 1960s, originally referring to the operator of a computer. Once established, *user* became so important a term that it gave rise to the

concept of ‘user-centred design’, which was popularised in the 1980s (Millet & Patterson, 2012, pp.130), a design approach that centres around the real concerns of the user. User-centred design resists the tendency of factors other than usability exercising too much influence over design decisions. The term ‘user friendly’ also emerged, to signify a well-designed interface or artefact that was easy, intuitive, and productive to interact with. Following the establishment of user-centred design, designers (and their critics) began to recognise that many other people who were not, strictly speaking, direct users of any design in question were subject to the effects of design, whether by choice or not. In response, the concept of human-centred design (Fiell & Fiell, 2019, pp.168-169) emerged in recognition of the fact that design is part of, co-creates, and may have both positive and negative effects upon, humanity and material culture.

Much as user-centred design refocussed design thinking onto usability, and human-centred design refocussed design thinking onto humanity, humour-centred design is an attempt to refocus design thinking upon the role that humour and laughter play in design, designing, and the interpretation of design and design innovation. A comparatively small number of designers and design researchers acknowledge this term and self identify as engaging in humour-centred design practices (e.g. Delaney, 2011; and the author of this thesis) but many others do not — yet. The metaphorical fledgling of humour-centred design as a ‘movement’ is, of course, dwarfed by its gargantuan forebears: user-centred design and human-centred design. However, like Anthony Dunne and Fiona Raby have looked back upon design history and argued that their definition of critical design extends to include “many people doing this who have never heard of the term critical design and who have their own way of describing what they do. Naming it Critical Design is simply a useful way of making this activity more visible and subject to discussion and debate”

(Dunne & Raby, 2007) so thesis thesis argues the same — to adapt Dunne and Raby's model: *many people doing this have never heard of the term humour-centred design and have their own way of describing what they do. Naming it humour-centred design is simply a useful way of making this activity more visible and subject to discussion and debate*. By this rationale, this thesis argues to claim designers, and/or design researchers, that are engaged in intentionally designing, and/or studying, gelastic design (mentioned herein or otherwise) as humour-centred designers engaged in practices of humour-centred design. Viewed in this way, humour-centred design is not quite as infant or diminutive as it might at first seem: it is well established, with a deep history that extends back to the ancient World[265], but is largely unrecognised, overlooked, and/or misunderstood by the design community and its observers.

[265] See Chapter 4 for evidence of ancient-and-funny design things.

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9). Conclusion: Understanding Humour and Laughter as Responses to Design and Design Innovation Through a Humour-Centred Approach to Design.

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In Summary.

This research set out to address the question — how might humour and laughter, as responses to design and design innovation, be better understood by design? Design here meaning design discourse, and the theory and professional practices that are entangled with it. In order to address this question, the thesis begins with both a substantial preamble and a full introduction. The key function of these two structural devices is to contextualise and explain the aims, approach, and findings of the thesis: to lay out a metaphorical stage, describe the territory of the set, the main characters and their supporting cast, the narrative arc, and the final scenes — all before the play begins. This story is complex, with three key players: design, humour, and entanglement, each of whom have long and complicated back stories, are often unpredictable, esoteric, and generally hard to fathom, and interact with one another in unusual and unexpected ways. Metaphors aside, following the introduction, the thesis then presents eight chapters before culminating in this conclusion.

The key function of the first chapter is to contextualise this thesis in design, it being written by a designer, with the ambition to make a contribution to design discourse and design theory. This chapter demonstrates that design is generally understood in three key ways: as universal processes of human thought and action, as professional autonomies of autonomous professionals, and as categories of things: things in history that also have history. Then, an axis is introduced upon which design practices can be arranged: an

unbalanced spectrum between affirmative and critical approaches to designing. The text is broadly sympathetic to designers, but it recognises that they are fallible — largely due to the fact that design is a complex and often unpredictable professional activity. This portion of the text is keen to impress the diversity of roles, skills, attitudes and aptitudes that constitute the varied and variable profession of designer, and that these things have deep histories. However, the text aims to present an illustrative, rather than compressive, account of the characteristics, vagaries, and specialisms of design. In order to begin to understand why and how design might have overlooked and misunderstood humour and laughter, the latter part of Chapter 1 is more of a historical exploration: considering how design histories and their associated ideologies have engendered a neglect or rejection of humour in favour of more 'serious' matters — exemplified by the reductionism and myopathy of a problem-solving model of what designers do — and considering what might have been lost to design (or at least be more difficult to access) as a consequence.

With a design context established in the first chapter, the second chapter gets down to the business of accounting for the perceived problem at hand: when design is laughed *at*. Chapter 2 is divided in two, with the first half presenting a general overview of when and where design is subject to derisory laughter (but not yet particularly dealing with why). The text demonstrates the breadth of settings, circumstances, manners, and media by which design can be laughed at, that sometimes derisory laughter is directed at legitimate shortcomings on the part of design and designers (design fails) but at other times (such as in the case of jugaad and so-called 'redneck engineering') seems to be rather unfairly and inappropriately directed at creative and innovative design thinking. A key point of the chapter is to impress how potentially hostile an environment designers face when ushering their creations into the world. The second half of Chapter 2 focuses at length upon three

case studies: Westwood on Wogan in 1988, Ballmer and the iPhone in 2004, and Ransome's rebar in 1884. These case studies were chosen because they share much in common (each involving an incident of derisory laughter, and each representing an important moment or turn in design history), but are different enough from one another in terms of specific circumstances, impacts, and legacies, that there is no unnecessary duplication in their accounts. Together, the three case studies present a rich picture by which the reader can triangulate a useful understanding of derisory humour and laughter that has been directed at design.

Chapter 3 is purposely constructed from a designerly perspective. Again, the chapter is divided in half, with 'designedly intent' being the deciding factor for orchestrating the content, i.e. whether the designer in question intended the design in question to be humorous or not — whether it was intended to de laughed *with* or whether it was unintentionally laughed *at*. The first half of the chapter is a natural continuation of the previous chapter, presenting an account of design responses and reactions to the threat of derisory humour and laughter as accounted for in Chapter 2 and is particularly concerned with the consequences for design, and designers, of derisory humour and laughter and the threat of derision. The second half of the chapter focusses upon ways in which designers have knowingly capitalised upon the potential benefits of intentionally designing humorous design, and/or researching it, how designers have done so, might do so, and why they might wish to.

Chapter 4 shifts perspective again, this time drawing focussing upon humour, rather than design, although this exploration of humour is mediated through design artefacts as the chapter plays out. This chapter traces a history of the understanding and theorisation of

humour and laughter from a point beyond prehistoric evidential limits, up to contemporary discourses, via the last two millennia of (mostly) Western European thought. The text then outlines late 20th and early 21st century understandings of humour in order that they can be brought to bear for design, designing, and designers, through the remaining thesis. The chapter concludes with a critical discussion of the well established tripartite model of humour theory that is conducted with reference to a range of humorous design artefacts.

In a final perspectival shift, Chapter 5 explores entanglement theory, specifically Ian Holder's model of entanglement, which is presented as particularly well suited to contribute to the the addressing of the research question at the heart of this thesis, and also particularly well suited to act as a metaphorical bridge or interlocutor between the otherwise rather separate realms of humour and design.

Now, to return to the theatrical metaphor employed at the inception of this conclusion: Chapter 6 marks the moment that all three of the key players are centre stage. This chapter presents a synthesis of ideas drawn from the theory and discourses of design, humour, and entanglement in order to address the question: how might humour and laughter, as responses to design and design innovation, be better understood by design? In doing so, a number of insights are presented throughout the chapter: for example, that design works to encourage forgettness (punctualisation), that some humour requires forgettness, and that humour, in addition to failure, can be a trigger for remindness (depunctualisation). A concept of malentanglement is introduced, inspired somewhat by the benign violation theory of humour, as a way to conceptualise, and give a name to, subjective models of entanglement that are ill-fitting (to use the term 'fit' in a Hodderian sense), which explains why critical design, or any design that is perceived as incongruous

for that that matter, is often laughed at. The thesis then returns to the case studies, in Chapter 7, re-analysing them in light of this knew knowledge, before, in Chapter 8, considering what taking 'a humour-centred approach' to the understanding of gelastic design, design innovation, and design in general, might imply for designers — the ultimate 'move' being to reframe humour and laughter, as responses to design and design innovation, in such a way that they are understood as indicators of perceived malentanglement on the part of design audiences. Such humour and laughter, instead of being problematic, can instead be welcomed as indicators of genuine design innovation.

Further Work and Future Opportunities.

As previously discussed[266], this thesis is, in essence, a theoretical study grounded in case analysis. Consideration of the ideas contained herein now demands a phase of more robust *operationalisation* (Shields & Rangarajan, 2013) and *testing*, and/then *dissemination* of this research. The research and writing of this thesis has, unsurprisingly, also revealed a considerable number of opportunities for further study and for further exploration by design practice: some of which demonstrate the potential to be very funny and rather silly, others very funny and very serious. Not least amongst these opportunities is the observation that the idea of humour-centred design is far from widely known or discussed. Addressing this issue will likely be the first opportunity to be explored and one that can continue to be addressed as this research continues. Other opportunities centre around the further consideration of the notion of 'outsider design' which was formulated and discussed in the research and writing of Chapter 2, and further deliberate design and *realisation* of 'malentangled' things in order to innovate design thinking, understanding, and practice.

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[266] See Introduction, Section 0.5.1, Research Methods, for detail.

There also appears to be potential for asking who else, beyond designers, gets laughed at when innovating, and whether this research might be useful to them.

Contribution to Knowledge.

In these closing moments, to reiterate the main contribution to knowledge made by this doctoral thesis[267]. This research is the first academic work to deeply consider design, humour, entanglement, and the theorisation and discourses of these three subjects, within the same thesis. It is also the first research in the context of design discourse that considers, at such length, the implications of design being laughed at, and how designers might interpret and respond to such a thing. The contribution to knowledge is made through this drawing together of ideas from design, design theory, humour theory, entanglement theory, and their discourses, for the purpose of explaining how humour and laughter, as responses to design and design innovation, have been historically misperceived, and how this misperception might be addressed for the benefit of design, and of designers. More specifically, through the concept of malentanglement, the thesis demonstrates how this synthesis of ideas provides a new designerly understanding of humour and laughter that is not framed in terms of derision, but reconceives the problem as the solution: laughter, when more fully understood from a psychologically, physiologically, historically, and socio-culturally 'entangled' standpoint, becomes a welcome indicator of genuine design innovation, rather than an expression of derision. In addition, the thesis concludes that designers are not principally professional problem solvers. Instead, the thesis takes the stance that designers are principally concerned with the volitional entanglement of design

[267] See the Introduction, Section 0.9, for a more detailed description of the contribution to knowledge.

in material culture: problem solving is but one strategy, amongst many, for achieving this — another being humour. Thereby, this thesis is proffered as a foundational contribution to a nascent field of humour-centred design.

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10). List of Figures

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chandigarh-india-touchaleaume-le-corbusier5.jpg and https://images.medindia.net/health-images/1200_1000/blobfish.jpg [Accessed 28 March 2024].

Figure -1.vii. (Left) the original 'Penguins' cross-stitch kit from Vervaco and (right) the Crapestry version ('Penguins', from the 'Polar' collection, 2009). Left image [online], available at: https://images.prom.ua/3284212262_podushka-vervaco-dlya.jpg and right image — author's own image, 2009, [online] image available at: https://crapestry.wordpress.com/wp-content/uploads/2009/04/penguins-to-upload.jpg [Accessed 2 July 2024].

Figure -1.viii. Facial jewellery from Pauline Müller's 'Doux Leurre' collection, (Müller, 2020) [online] image available at: https://static.dezeen.com/uploads/2020/06/lucerne-jewellery-design-vdf-school-shows_dezeen_2364_col_0.jpg [Accessed 15 Aug 2023].

Figures in 0). Introduction: Malentanglement, and (Mis)Understanding Humour and Laughter as Responses to Design and Design Innovation.

Figure 0.i. Ginger Rogers singing 'They All Laughed' in the 1937 film 'Shall We Dance' (Sandrich, 1937) in Broadway Classics, 2021. They All Laughed - Extended Audio - Ginger Rogers, Fred Astaire - Shall We Dance? 1937. [Video online] Available at: <https://www.youtube.com/watch?v=49BDynDH9K8> [Accessed 18 Feb 2024].

Figure 0.ii. An illustrative imagining of the intersection of design discourse and humour discourse that emphasises humorous design discourse in the overlap — where this research can be found. Author's own diagram, 2024 (some Adobe Stock elements were used in the creation of this diagram).

Figure 0.iii. Research methodology. Author's own diagram, 2024 (some Adobe Stock elements were used in the creation of this diagram).

Figure 0.iv. 'Pillow Fight' (Ku, 2011). [Online] Images available at: https://www.foundshit.com/weapon-shape-pillows/ and https://odditymall.com/includes/content/upload/pillow-fight-weapons-607.jpg [Accessed 18 Feb 2024].

Figure 0.v. 'Too Cool to do Drugs' (Ku, 2011). [Online] Images available at: https://i0.wp.com/boingboing.net/wp-content/uploads/2014/02/BhUx36nIUAASePA.jpg-large.jpeg?w=640&ssl=1 [Accessed 18 Feb 2024].

Figure 0.vi. Art and design conceived of as sharing a spectrum (left), and, alternatively, as distinct bounded entities (right). The dots represent creative practitioners, for want of a better term. This thesis is written from a perspective that prefers to conceive of art and design as the former, but both recognises and discusses that others conceive of art and design in the manner of the latter (see especially Chapter 1, Section 1.5). Author's own diagram, 2024 (some simple Adobe Stock elements were used in the creation of this diagram).

Figures in Chapter 1). A Hankering for Humourlessness: Design Professionals Take Themselves Seriously, and Want Others to do so Too.

Figure 1.i. Three of Wentworth's images: (top left) bricks used to convert steps into an improvised ramp, probably for a barrow, photographed in London in 2007; (top right) plastic glasses abandoned upon fencing spikes, London, 2010; and (bottom) a cup props open a window, South West France, 2008 (Wentworth, 2015, pp.57, 99, and 75 respectively). In WENTWORTH, R. 2015. *Making Do and Getting By*. London, UK: Hans Ulrich Obrist and Koenig Books, pp.57, 99, and 75.

Figure 1.ii. Three life-hacks: (left) an empty drink can deformed into a phone holder; (centre) a CD spindle repurposed as a lunchbox for a bagel; and (right) a pair of stockings stretched over a vacuum cleaner nozzle acts as a filter for finding jewellery. [Online] Images available at: https://thunderdungeon.com/wp-content/uploads/2023/01/Funniest-memes-of-all-time-27-01-28-2023.jpg, whttps://www.cubesmart.com/blog/your-space/organization/repurposing-storage-containers/, and https://content.instructables.com/FHW/YBTD/GLYX9JXK/FHWYBTDGLYX9JXK.jpg?auto=webp&frame=1&width=1024&height=1024&fit=bounds&md=8430ef3d04ee1e3fe67f4b7719051c65 [Accessed 09 July 2024].

Figure 1.iii. In order to reach the park gate, one may choose to follow the 'designed path' on a long looping meander to the right, or cut straight across the grass via the direct 'desire path'. Enough people have made the latter choice to prevent the grass from growing. This strongly suggests that a path is necessary (to satisfy the evident desire), and was probably necessary in the original design, but was not anticipated by the original designer(s). Author's own image, 2024.

Figure 1.iv. (Top left) Gehry's Guggenheim Bilbao (1997); (far right) Thonet's Bentwood Chair (1859); (far left) Maija Isola's 'Unikko' pattern (1964); (centre left) the 'T-1000' from 'Terminator 2' (1991); and Connare's 'Comic Sans' font (1994). [Online] Images available at: https://cms.guggenheim-bilbao.eus/uploads/2019/05/el-edificio-guggenheim-bilbao-1.jpg, https://cdn20.pamono.com/p/z/1/8/1846560_aoi4v81txq/no-14-bentwood-chair-from-thonet-1920s-image-1.jpg, https://www.marimekko.com/media/catalog/product/0/0/009043-001_X13187_10_1666863961.jpg?width=1120&height=1400&canvas=1120,1400&quality=100&bg-color=255,255,255&fit=bounds, https://media.gq.com/photos/608099d505534217298cc895/master/w_1600,c_limit/GettyImages-187171065.jpeg, https://cdn.theasc.com/Terminator-2-FX-Helicopter-Ride.jpg, and comic sans text — author's own image, 2024.

Figure 1.v. A Selection of Fukasawa & Morrison's 'Super Normal' objects: some paperclips, a wooden chair, and a plastic storage basket (Fukasawa & Morrison, 2007, pp.73, 17, and 37 respectively). In FUKASAWA, N. & MORRISON, J., 2007. *Super*

Normal: Sensations of the Ordinary. Zürich, Switzerland: Lars Müller Publishers, pp.73, 17, and 37.

Figure 1.vi. Objects from Dunne and Raby's 'Placebo' project, 2001 (Dunne & Raby, 2001). The left image is from the cover of DUNNE, A. & RABY, F., 2001. *Design Noir: The Secret Life of Electronic Objects*. Basel, Switzerland: Birkhäuser. The right image [Online] is available at: https://www.flickr.com/photos/nearnearfuture/425785816 [Accessed 09 July 2024].

Figure 1.vii. A metaphorical umbrella of discursive design encompasses a number of other modes of design and illustrates the breadth of differentiated critical and reflective practices now recognised within the scope of design (Tharp and Tharp, 2018). In THARP, B. M. & THARP, S. M., 2018. *Discursive Design*. Cambridge, USA: MIT Press, pp.84

Figure 1.viii. A collection of models of designing, including: the Stanford Design School Model of Design Thinking; the Zurb Design Thinking Model; The Double Diamond; The Loop (The IBM Design Thinking Model); IDEO's Human Centred Design Model; the Scrum method; The Google Design 'Sprint' Process; Interaction Design Foundation's 5-Stage Design Thinking Process; Clarkson's Design Process / Methodology; Bruno Munari's Metodologia Del Design (Design Method); the 'Agile' Development Methodology; Jelvix' UX Vision; the 'Lean Agile' model; Nurun's Human Centred Design Process; and Crady's Design Research Model. [Online] Images available at: https://en.idei.club/22844-design-methodology.html (author's re-composition) [Accessed 09 July 2024].

Figure 1.ix. Newman's 'Design Squiggle'. [Online] Available at: https://thedesignsquiggle.com/about [Accessed 15 July 2024].

Figure 1.x. (Top left) An advertisement for Heinz 'Hot Ketchup' by Agency 'Leo Burnett' 2004; (top right) the classic and much copied 'I'm With Stupid' T-Shirt; (bottom left) a 'tyre mug' from 'XtremeAuto', suggested as "A great gift for mechanics and car enthusiasts"; and (bottom right) a pair of mugs by Climbergoods — designed to appeal to the humour of indoor rock climbers. [Online] Images available at: https://n4mb3rs.com/wp-content/uploads/2015/08/heinz_hot_ketchup.jpg, https://i.etsystatic.com/14311875/r/il/e4e37f/4115739296/il_794xN.4115739296_cyk5.jpg, https://m.media-amazon.com/images/I/71B7tVerB4L._AC_SL1500_.jpg and https://i.etsystatic.com/10298258/r/il/1dfbb7/1597301129/il_794xN.1597301129_t2qc.jpg [Accessed 09 July 2024].

Figure 1.xi. (Left) Sottsass' 'Carlton' bookshelf/room-divider (Sottsass, 1981) and (right) 'Tahiti' table lamp (Sottsass, 1981). [Online] Images available at: https://artemest-cdn.myshopify.com/cdn/shop/files/kjvzfy3xwhora6wcxntz0dypokoz.jpg and https://media.madeindesign.com/cdn-cgi/image/fit=pad,background=white,format=webp,width=800,height=800,quality=80/https://media.madeindesign.com/nuxeo/products/8/2/table-lamp-tahiti-multicoloured_madeindesign_221539_original.jpg [Accessed 15 July 2024].

Figures in Chapter 2). A Perceived Problem: Losing Control of Humour — When Design is Laughed *At*.

Figure 2.i. Genuine patent drawings for (top left) a 'parachute hat' with accompanying bouncy shoes; (top right) a 'combined plough and gun'; (bottom left) a pair of prosthetic ears for communicating with animals; and (bottom right) an 'airplane of rooster shape', all four sourced from Cooper's 'Patently Absurd' (Cooper, 2004, pp.12, 39, 86, and 36 respectively). In COOPER, C., 2004. *Patently Absurd: The Most Ridiculous Devices Ever Invented*. London: Robson, pp.12, 39, 86, and 36.

Figure 2.ii. A collection of design artefacts from the Museum of Failure: (top) the 'Uroclub' (2008), a golf club with integral urinal reservoir and 'privacy shield' for those that are caught far from a toilet when out on a golf course; (bottom left) Nike's 'Magneto' sunglasses (1995), which stay in place by way of magnets. As people's faces are not magnetic, magnets must be glued to the skin before the sunglasses can be worn; (bottom centre) the Ford Edsel (1957), over-marketed, underwhelming, and considered ugly at the time of release; (bottom right) a Facit calculating machine. [Online] Images available at: https://museumoffailure.com/exhibition/uroclub-urinal-golf-club, https://museumoffailure.com/exhibition/nike-magneto, https://museumoffailure.com/exhibition/ford-edsel, and https://museumoffailure.com/exhibition/facit-mechanical-calculators [accessed 24th April 2024].

Figure 2.iii. 'An Interesting and Elegant Apparatus Designed to Overcome Once and for all the Difficulties of Conveying Green Peas to the Mouth'. In ROBINSON, W. H., 1975. *Inventions*. London, UK: Gerald Duckworth & Co. Ltd., pp.7.

Figure 2.iv. 'How to Get a Long-Stayer Out of a Bath Tub'. In GOLDBERG, R. & GARNER, P., 1983. *Rube Goldberg: A Retrospective.* New York, USA: Delilah Communications Ltd., pp.69.

Figure 2.v. Viz's spoof advert for a 'Titfer Tilt' electric hat tilting machine. In Viz, 2003. *Viz: Roger Mellie's Ad Break*. London, UK: Boxtree, pp.13.

Figure 2.vi. Three Viz adverts for sheds that draw attention to design's ambitions to satisfy user desires in terms of status — 'bigger is better' (the King of Sheds); efficiency and ordering (the Shed Shed); and multi functionality (the Telly-Shed). In Viz, 2003. *Viz: Roger Mellie's Ad Break*. London, UK: Boxtree, pp.57, 84, and 24.

Figure 2.vii. Obvious Plant's 'I would Kill for You' toy knife (2020) and 'Funeral Kazoo' (2019). [Online] Images available at: https://obviousplant.shop/wp-content/uploads/1728/16/only-sale-11-00-usd-for-i-would-kill-for-you_0-scaled.jpg and https://obviousplant.com/products/funeral-kazoo?variant=29378867200084 [accessed 24th April 2024].

Figure 2.viii. The Simpsons pokes fun at Apple's Newton PDA (The Simpsons, S06:E08, 'Lisa on Ice', 1994) [Online] available at: https://www.youtube.com/watch?v=u6qxixgQJ4M [Accessed 24 April 2024].

Figure 2.ix. The Trotter Brothers' yellow Reliant Regal, made famous by long-running BBC sit-com 'Only Fools and Horses' (1981-1991), and actors Buster Merryfield, David Jason, and Nicholas Lyndhurst (from left to right) playing the characters Uncle Albert, Derek 'Del Boy' Trotter, and Rodney Trotter, respectively. [Online] Images available at: https://static.wikia.nocookie.net/onlyfoolsandhorses/images/4/40/Van.jpg/revision/latest?cb=20120412115555 and https://i2-prod.mylondon.news/incoming/article23532467.ece/ALTERNATES/s1200b/7_TV-programme-Only-Fools-and-Horses.jpg [Both accessed 24th April 2024].

Figure 2.x. Three material 'design fails': (left) presumably vital structural supports interpenetrate a pedestrian walkway; (centre) an array of waste bins — they work, but are labeled in such a way that the 'left' labels counter the instructions of the 'right 'labels and vice-versa; and (right) corner drawers that block each other. [Online] Images available at: https://images.squarespace-cdn.com/content/v1/62b419aea94b0b63f312a79f/c3741645-ffc6-4249-8041-d3f8afe57769/3EC7DA5200000578-4364890-image-a-119_1490887377770.jpg?format=1500w, https://www.reddit.com/media?url=https%3A%2F%2Fpreview.redd.it%2F80cgfear6m721.jpg%3Fwidth%3D1080%26crop%3Dsmart%26auto%3Dwebp%26s%3D09f4be9ecc96e00bfea13d94163e674ecae6dd73 and https://www.thesun.co.uk/wp-content/uploads/2017/06/nintchdbpict000332311700.jpg?w=1240
[accessed 24th April 2024]

Figure 2.xi. Design fails are not only material, as the examples in Figure 2.x are. Fails can be visual (left) as demonstrated by the confusing photo-editing of this baby; interactional (centre), rather than simply enabling keyboard input into a text box, this UX/UI designer/software engineer has decided that twenty or more drop-down menus are a better option; and conceptual (right), this advert for a home pregnancy test is touted as a design fail because the mother-to-be is evidently in her final trimester and long past requiring a pregnancy test. [Online] Images available at: https://worldwideinterweb.com/wp-content/uploads/2024/03/50-funniest-design-fails-that-were-so-bad-they-were-almost-good-this-week-march-6-2024-1.jpg, https://programmerhumor.io/wp-content/uploads/2023/10/programmerhumor-io-programming-memes-67e098f31ddfcce.png and https://img.huffingtonpost.com/asset/5cd644f82100005800c47d9b.jpeg?ops=scalefit_720_noupscale&format=webp [accessed 24th April 2024].

Figure 2.xii. (Top left) One might see a number one shaped cake with the name 'Emma' written upon it (tilt head to the left), or a penis and testicles shaped cake with the word 'WEED' written on it (tilt head to the right); (top right) according to this advertisement infographic, Thompson Reuters' core values appear to sit outside the principles of trust, partnership, innovation, and performance; (bottom left) one might read the phrase 'Non stop action and excitement' in this NBL advertisement, as the designer intended, or 'Non action and stop excitement'; (bottom right) are rooms 201-216 to the left, or to the right? [Online] Images available at: https://images.squarespace-cdn.com/content/v1/5c4b6b663c3a5399055adb5f/1616561237711-3MRB12NXRUULYKBXRL97/Elizabeth-TW-Emmadong.jpg?format=1500w, https://flowingdata.com/wp-content/uploads/2014/08/Unintentional-Venn-Diagram.png, https://imgix.ranker.com/user_node_img/50107/1002127116/original/1002127116-photo-u1?

auto=format&q=60&fit=crop&fm=pjpg&dpr=2&w=500 and https://www.awesomeinventions.com/wp-content/uploads/2017/07/Hotel-Fails-confusing-hotel-room-directions.jpg [accessed 24th April 2024].

Figure 2.xiii. Three potentially deadly design fails: (left) a geometric patterned carpet confuses the edges of these stairs; (centre) a yellow and black brand identity is unthinkingly applied to cans of insect poison and cooking oil spray — affording an easy and dangerous mix-up; and (right) a play-ground slide that splits into three halfway through the descent! [Online] Images available at: https://www.boredpanda.com/blog/wp-content/uploads/2019/08/5d4bc6971ef5e_sIHUMnM__700.jpg, https://www.memedroid.com/memes/detail/2500048/Poor-design-choice and https://cdn.thepoke.com/uploads/2019/01/06121105/playgrounds-17.png [accessed 24th April 2024].

Figure 2.xiv. (Top left) The cover of Amy E. Arntson's 'Graphic Design Basics' (Arntson, 2006) is widely referred to as an example of graphic design that is so distasteful that it is funny, the humour being heightened by the irony that this is the cover of a graphic design textbook; (top centre) a toilet brush holder in the form of a caricature face; (top right) a custom car-bonnet modification; (bottom left) an oversized chair as a sort of Disney princess parody; (bottom centre) an amalgam of leather cowboy boots and leather sandals; (bottom right) London's 'Walkie Talkie' tower, designed by Rafael Viñoly, is a caricature of the skyscrapers that surround it, and winner of the 2015 'Carbuncle Cup' (Wainwright, 2015). [Online] Images available at: https://www.boredpanda.com/blog/wp-content/uploads/2021/03/terrible-book-covers-156-6061c40cf14c9__700.jpg, https://www.instagram.com/outrebizarre_/p/DAKcweUhNSi/, author's own image, 2011, https://scontent-lhr8-1.xx.fbcdn.net/v/t39.30808-6/461899848_3687687678148552_400325947625600621_n.jpg?_nc_cat=107&ccb=1-7&_nc_sid=0b6b33&_nc_ohc=XW6KCvcrm1UQ7kNvgHhRzKE&_nc_zt=23&_nc_ht=scontent-lhr8-1.xx&_nc_gid=AV6Zn2G0RG4J6-jAFMcE8XF&oh=00_AYC-U6n0tBO-SB4TyE2pzeiuCBpP8Lw5qb2x3ABYnx7H4w&oe=6765A58B, https://metro.co.uk/wp-content/uploads/2015/06/cowboy-sandals.jpg?quality=90&strip=all&w=646 and https://cdn.shopify.com/s/files/1/0132/0383/2932/files/Fenchurch_Street_-_Ugly_Buildings_London_2048x2048.jpg?v=1572436663 [accessed 24th April 2024].

Figure 2.xv. A 'Tree Swing' or 'Tire Swing' cartoon (Anon). [Online] Image available at: https://www.tandfonline.com/cms/asset/fbaaaa95-7d86-4c98-a6d5-b602c35c323e/rjar_a_533537_o_f0001g.gif [accessed 24th April 2024].

Figure 2.xvi. Three memes that pokes fun at (left) graphic design perspectives (Anon), (centre) professional life (Anon), and (right) professional practices (Anon). [Online] Images available at: https://www.codeitbro.in/wp-content/uploads/2024/10/what-designers-see.jpg, https://programmerhumor.io/wp-content/uploads/2023/09/programmerhumor-io-linux-memes-programming-memes-c7f70eac36dcb99.jpg and https://sadanduseless.b-cdn.net/wp-content/uploads/2023/03/graphic-designer-memes1.jpg [accessed 24th April 2024].

Figure 2.xvii. A meme depicts ‘the world on fire’ whilst a designer distracts from the important issues at hand (Anon). [Online] Image available at: https://images.squarespace-cdn.com/content/v1/59c502b0f9a61ec2b4604708/d2bc92d2-37a2-48ee-bbb0-63e861108ba5/Memes2-02.jpg?format=1000w [accessed 24th April 2024].

Figure 2.xix. (Top left) Cable conduit deployed in a wildly incorrect manner; (top centre) a front door fitted upside down; (right) a toilet installed before the critical ‘door test’ — the workaround being to remove part of the door to allow it to pass the toilet (the hole will likely impact privacy when the door is shut; (bottom left) a satellite dish installed through a ladder, instead of above it; (bottom centre) eyebrows haphazardly applied with a microblade device. [Online] Images available at: https://cdn.acidcow.com/pics/20180514/builders_12.jpg, https://www.newszii.com/wp-content/uploads/2017/postimg/funny-architect-construction-fails-you-had-one-job-47-5822d7c88bfe7__6051023.jpg, https://cdn.ebaumsworld.com/mediaFiles/picture/604025/85614155.jpg, https://hub.its.co.uk/wp-content/uploads/2020/07/Stepping-Up-Your-TV-Watching.webp and https://diply.com/wp-content/uploads/2024/06/bVkViwvkwFTMQ450vAfG-750x393.png [accessed 24th April 2024].

Figure 2.xx. Four jugaad vehicles: (top left) built from the front of a tuk-tuk (auto-rickshaw), a plastic chair, a steel chassis, and a small motor featuring a plastic drink bottle fuel tank; (top right and bottom left) two ‘trikes’ that meld motor bike (for power and piloting) and cart (for cargo), one carrying passengers, the other carrying materials; a car chassis that employs a repurposed engine and wooden parts. [Online] Images available at: https://i.imgur.com/wmzkeve.jpeg, https://tamil.cdn.zeenews.com/tamil/sites/default/files/2024/07/25/417816-bizarre-vehicle-1.jpg, https://res.cloudinary.com/do-up-designtech/image/upload/v1581503636/Do%20Up%20Blogs/ghaziabad-ghaziabad-registered-wednesday-enforcement-hindustan-vehicles_4d383c06-ecc5-11e8-86fe-bb1c4000c468_s4dijj.jpg and https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEi6FEWtGMnMnBxQHGGgNLshQeQuj07YSBCMtijwgLrCZ__xxvmXG398FXADIO7MM087wh-CX8HlEk1p47msbP-t8m2yDpjJTUelQWiYdMN3o7vNOxvBwtRJjWRpup3QFM24Rjeg3LJqLEwm/s640/Funny-Indian-Car-Desi.jpg [accessed 24th April 2024].

Figure 2.xxi. A selection of smaller jugaad interventions: (left) a sandal used as a mobile telephone holder; (centre) a clothes iron supported by books used as a cooking surface; and (right) a plastic bottle used as a domestic electrical switch housing. [Online] Images available at: https://pbs.twimg.com/media/EsKlGIuXAAU-uMs?format=jpg&name=900x900 and https://www.electricaltechnology.org/wp-content/uploads/2015/08/Funny-ON-OFF-Button-electrical-India-150x150.jpg [accessed 24th April 2024].

Figure 2.xxii. An illustration of a ‘Jugaad Triangle’ (author’s version of a diagram by Prakash, Chatterjee, Srivastava, and Chauhan (Prakash et al, 2020, pp.313). This is the author’s re-creation of the original diagram — some simple Adobe Stock elements were used in its construction.

Figure 2.xxiii. The Mitti Cool refrigerator (two different models). [Online] Images available at: https://img.mensxp.com/media/content/2020/Jun/4_5ef34e7e1b73a.jpeg?

w=1500&h=2310&cc=1 and https://www.indianarrative.com/wp-content/uploads/2022/07/clayfridge.webp [accessed 24th April 2024].

Figure 2.xxiv. An Internet meme attempts to evoke humour by ‘punching down’ at users with less socio-economic agency. [Online] Image available at: https://www.facciabuco.com/post/2426553h5c/vaccata-post-by-sbogoland.html#google_vignette [accessed 24th April 2024].

Figure 2.xxv. Five examples of redneck design: (top left) a burglar alarm — the handle turns, the pan drops; (top centre) a makeshift double-door lock; (top right) an improvised parking sensor — the rubber chicken honks on contact with another object; (bottom left) a simple example in a refrigerator door repair; (bottom right) a rare and far more complex example — the front third of a dismembered Chrysler PT Cruiser drives a trike. [Online] Image available at: https://img-comment-fun.9cache.com/media/aVOKPK/a0N2Velz_700w_0.jpg, https://www.reddit.com/media?url=https%3A%2F%2Fpreview.redd.it%2Fwayn8jc8n1951.jpg%3Fwidth%3D640%26crop%3Dsmart%26auto%3Dwebp%26s%3D1d3d5483bb1ad6efa58206f51d1ff31132d27e2f, https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEhIyIvOFxv4SZfi-p0tUw4uqQfEBkGtNTPUgAV2MM_Z7Og0TpF8jB-qt7lOtBHtNPfBXFKB7o9oYNvwT4W8RBoBJKIq9dw6BfQdcs0is45Ehmke6NoGoBCd1jgHGzX9BLFqz4E2X3kWboI/s1600/low+budget+reverse+sensor.jpg, https://wl-brightside.cf.tsp.li/resize/728x/webp/47b/588/5537e15613860274dbf40cdac3.png.webp and https://thechive.com/wp-content/uploads/2021/06/Incredible-Examples-Of-Redneck-Engineering-And-Ingenuity-Humor-Funny-Pictures-DIY-33.jpg?attachment_cache_bust=3713434&quality=85&strip=info&w=600 [accessed 24th April 2024].

Figure 2.xxvi. (Left) A ‘mains adapter’ kluge made from nail clippers; and (right) a makeshift ‘emergency stop switch’. [Online] Image available at: https://www.electro-tech-online.com/attachments/adapting-jpg.142970/ and https://img-9gag-fun.9cache.com/photo/aA3qpDL_700bwp.webp [accessed 24th April 2024].

Figure 2.xxvii. A china tea cup with integrated moustache guard. [Online] Image available at: https://www.reddit.com/media?url=https%3A%2F%2Fexternal-preview.redd.it%2FDftVHk-l3zlSARseTQeAIB3cPgmnOXqRQNcSW2z0Pp0.jpg%3Fwidth%3D640%26crop%3Dsmart%26auto%3Dwebp%26s%3D4e6a0eea0bb556147f97eb20bdee88aef827ae38 [accessed 24th April 2024].

Figure 2.xxviii. (Left) A hairdryer (1930s); (centre) a mask which acts as a ‘poker face’ when playing cards (1932); and (right) a US Military listening device for pinpointing flying aircraft (1928). [Online] Image available at: https://static.wixstatic.com/media/5c7002_9c148fc19aa345858040ec5cb7521019~mv2.jpg/v1/fill/w_740,h_1000,al_c,q_85,usm_0.66_1.00_0.01,enc_auto/5c7002_9c148fc19aa345858040ec5cb7521019~mv2.jpg, https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEjrJeCA-aJmFjGoX6zApJYZtC0Qsp-tAITZ6N-Jq7-mCRPdP4UXP2o7Klx5YGpEgtptdNKyAsy6SA12SD7SiowQasMxb9ulcHEriaGZnzujjtsa

ohVnayoOuqsxhHP6xBJMVEkPw6get1HJ/s1600/funny-vintage-photos-1.jpg and https://img-s-msn-com.akamaized.net/tenant/amp/entityid/AA1th8Ms.img?w=534&h=719&m=6 [accessed 24th April 2024].

Figure 2.xxix. Four illustrations depicting: (top left) 'An Aviator agent'; (top right) a 'Whalebus'; (bottom left) 'Seaside Season in Atlantis'; and (bottom right) 'Radium Heating', (Asimov & Côté, 1986, pp.40, 58, 34, and 94 respectively). In ASIMOV, I. & CÔTÉ, J-M., 1986. *Futuredays: A Nineteenth-Century Vision of the Year 2000.* London, UK: Virgin Books, pp.40, 58, 34, and 94.

Figure 2.xxx. Four illustrations depicting: (top left) 'Cinematic-Phonotelegraphic Correspondence'; (top right) a 'Rural Postman'; (bottom left) 'School'; and (bottom right) 'A Curiosity', (Côté, 1986, pp.78, 44, 60, and 92 respectively). In ASIMOV, I. & CÔTÉ, J-M., 1986. *Futuredays: A Nineteenth-Century Vision of the Year 2000.* London, UK: Virgin Books, pp.78, 44, 60, and 92.

Figure 2.xxxi. (Left) The 'Hitler House', Swansea, UK, and (right) the dictator Adolf Hitler. [Online] Images available at: https://i2-prod.dailystar.co.uk/article19974586.ece/ALTERNATES/s1200e/0_57d15fa8905e0_hitler1 [accessed 24th April 2024].

Figure 2.xxxii. Fashion designer Dame Vivienne Westwood being interviewed by Sue Lawley on BBC television chat show 'Wogan' (S8.E31, aired on 11th March 1988). In Wogan, 1988. S08, E31. BBC Television, 11th March 1988 [Online] Available at: https://www.youtube.com/watch?v=sCedYlh2Gvo [Accessed 8 Sept 2024].

Figure 2.xxxiii. Left image: a 'pre-Sex Pistols' Sid Vicious (left) and Westwood in 1976 (Connelly, 2002, pp.28). Right image: Jordan (left), Westwood (right), and a friend, wearing Westwood and McLaren in 1977. In JOHNSON, G., 2023. *Vivienne Westwood*. London, UK: Welbeck Non-Fiction Ltd., pp.29).

Figure 2.xxxiv. Articles from Westwood's 'Time Machine' collection, Autumn-Winter 1988-89. [Online] Images available at: https://www.kerrytaylorauctions.com/auction/lot/30-a-vivienne-westwood-mens-time-machine-suit-autumn-winter-1988-89/?lot=33438&sd=1 and https://www.artforum.com/wp-content/uploads/2023/01/article08_large-3.jpg?w=1024 [Accessed 18 Sept 2024].

Figure 2.xxxv. Three outfits from Westwood's 'Time Machine' collection, 1988, being modelled on Wogan (S08:E31, 1988). Sara Stockbridge is centre, and Michael Clarke is on the right. In Wogan, 1988. S08, E31. BBC Television, 11th March 1988 [Online] Available at: https://www.youtube.com/watch?v=sCedYlh2Gvo [Accessed 8 Sept 2024].

Figure 2.xxxvi. Microsoft CEO Steve Ballmer being interviewed by Scott Wapner for CNBC News in 2007. [Online] Available at: https://www.youtube.com/watch?v=eywi0h_Y5_U&t=34s [Accessed 6th May 2024].

Figure 2.xxxvii. (Left) Steve Jobs discusses the iPhone's fixed-button smart phone competitors (from left to right: the Moto Q, the Blackberry, the Palm Treo, and the Nokia E62) at the iPhone's first public presentation. (Right) The 1st generation iPhone in comparison (not to scale with the other smartphones). [Online] Images available at: https://

www.youtube.com/watch?v=VQKMoT-6XSg and https://www.thesun.co.uk/wp-content/uploads/2023/03/851ad9e5-59f5-42ce-8f77-1bd1acc90353.jpg?strip=all&w=960 [Accessed 6th May 2024].

Figure 2.xxxviii. USA smartphone sales in 2023 by manufacturer and model (Rao, 2024). [Online] Available at: https://www.visualcapitalist.com/wp-content/uploads/2024/01/OC-Top-Selling-Smartphones_Jan25.jpg [Accessed 6th May 2024].

Figure 2.xxxix. The best-selling mobile phones of all time (Rao, 2024). [Online] Available at: https://www.visualcapitalist.com/top-15-most-sold-mobile-phones-all-time/ [Accessed 6th May 2024].

Figure 2.xxxx. Ernest L. Ransome, photographed in 1910. In CAMPBELL, H. C., 1917. *The Ransome Book: How to Make and How to Use Concrete*. New York, USA: Ransome Concrete Machinery Co.

Figure 2.xxxxi. An illustration from Ransome's cold-twisted rebar patent (#305,226), 1884. In MARS, R., 2013. 99% Invisible. Episode 81: Rebar and the Alvord Lake Bridge (podcast transcript). [Online] Available at: https://99percentinvisible.org/episode/episode-81-rebar-and-the-alvord-lake-bridge/transcript/ [Accessed 06 July 2018].

Figure 2.xxxxii. Figure 2.X. The Alford Lake Bridge, Golden Gate Park, San Francisco. In MARS, R., 2013. 99% Invisible. Episode 81: Rebar and the Alvord Lake Bridge (podcast transcript). [Online] Available at: https://99percentinvisible.org/episode/episode-81-rebar-and-the-alvord-lake-bridge/transcript/ [Accessed 06 July 2018].

Figure 2.xxxxiii. Figure 2.X. The Ingalls Building, Cincinnati. [Online] Available at: https://media.bizj.us/view/img/11958270/ingalls-building.jpg [Accessed 4th April 2024].

Figures in Chapter 3). First Analysis of the Perceived Problem: Designerly Understandings of Humour and Laughter, as Responses to Design and Design Innovation, in Design Discourse and Practice.

Figure 3.i. A sniper in a peanut, a small plastic gashapon from Takara Tomy Arts. [Online] Available at: https://i.ebayimg.com/images/g/6qwAAOSwmDNj5U~e/s-l1600.jpg [Accessed 4th April 2024].

Figure 3.ii. Dali's Lobster Telephone (1938) and Mae West Lips Sofa (1937). [Online] Image available at: https://cdn.shopify.com/s/files/1/0849/4704/files/Artisera_Dali_Lobster_Phone_14c1c47e-fc66-4045-910b-7efb077011f2_grande.jpg?v=1586775272 and https://cdn.shopify.com/s/files/1/0849/4704/files/Artisera_Dali_Lips_Sofa_948a5723-c64c-44b9-97c7-e98ff620f03a_grande.jpg?v=1586775451 [Accessed 4th April 2024].

Figure 3.iii. The remaining 'snipers' in demi-set 1: a sniper in a single-serving milk carton (top left); a sniper in a cherry tomato (top right); A sniper in a pack of chewing gum (bottom left); and a sniper in a wrapped sweet (bottom right). Gashapon by Takara Tomy

Arts. [Online] Source images available at: https://i.ebayimg.com/images/g/mxQAAOSw-qFj5VAM/s-l1600.jpg, https://i.ebayimg.com/images/g/FIUAAOSw4fNj5U9h/s-l1200.jpg, https://i.ebayimg.com/images/g/0yMAAOSw2xdj5U9c/s-l1600.jpg, and https://i.ebayimg.com/images/g/7HQAAOSwBY5j5U-r/s-l1600.jpg [Accessed 4th April 2024].

Figure 3.iv. More incongruous gashapon: tempura battered construction vehicles (top left); animals using human toilets and urinals (top right); pets making press-conference apologies (bottom left); geometric seal pups (bottom right); (various manufacturers). [Online] Source images available at: https://lavitsfigure.com/products/takara-tomy-pandas-ana-gashapon-samefurai-tempura-fried-builders-5-mini-figure-set, https://soranews24.com/wp-content/uploads/sites/3/2020/12/7126CA32-56A0-49FC-B0BC-804E7615A56F.jpeg, https://i.etsystatic.com/39210308/r/il/6a3a80/4534130354/il_1588xN.4534130354_15ry.jpg, https://soranews24.com/wp-content/uploads/sites/3/2022/02/Japanese-capsule-toys-gacha-cute-animals-apologising-press-conference-shop-buy-photos-weird-Japan-news-1.jpg, and https://i.ebayimg.com/images/g/WKMAAOSwkcBk6OsO/s-l1600.png [Accessed 4th April 2024].

Figure 3.v. Tharp and Tharp's model of the user-as-audience (Tharp & Tharp, 2018, pp.241-243). In THARP, B. M. & THARP, S. M., 2018. *Discursive Design*. Cambridge, USA: MIT Press, pp.241-243.

Figure 3.vi. Tharp and Tharp's 'Umbrellas for the Civil but Discontent Man' (Tharp & Tharp, 2009). Umbrellas for the Civil but Discontent Man. [Online] Available at: https://stamps.umich.edu/work/22397 [Accessed 26 June 2024].

Figure 3.vii. Vivienne Westwood reacts to her designs being laughed at on the BBC's 'Wogan' television show in 1988. The author has synthesised this image from three screen shots obtained from Youtube. [Online] available at: https://www.youtube.com/watch?v=n-TOefBXHCY [Accessed 24 April 2024].

Figure 3.iii. A representation of a damage-log that aggregates damage-data from a number of individual aircraft, superimposing such data to illustrate patterns in the position of projectile holes in surviving bombers that have successfully flown their missions and returned to their airbases, despite being damaged. [Online] Available at: https://upload.wikimedia.org/wikipedia/commons/thumb/b/b2/Survivorship-bias.svg/1920px-Survivorship-bias.svg.png [Accessed 30 April 2024].

Figure 3.ix. A Mesoamerican wheeled toy, manufactured 700-800CE (Urcid, 2017). [Online] Available at: https://www.mexicolore.co.uk/aztecs/home/the-concept-of-the-wheel-in-ancient-mesoamerica [Accessed 29 April 2024].

Figure 3.x. The aeolipyle: (left) a model at rest; (centre) a drawing; and (right) a model in use — the nozzles are blurred due to the speed of rotation. [Online] Source images available at: https://miro.medium.com/v2/resize:fit:1400/format:webp/0*-hS20yE7wrghT91R and https://www.youtube.com/watch?v=sA_DeB7Uxeo [Accessed 29 April 2024].

Figure 3.xi. (Top) Mies van der Rohe's MR10 chair, designed in 1927, mass produced by Knoll in 1967; (bottom left to right) Venturi and Denise Scott Brown's Queen Anne chairs: 'Gothic Revival', 'Sheraton', and with 'Grandmother' print, also for Knoll, in 1984. [Online] Source images available at: https://assets.catawiki.com/image/cw_large/plain/assets/catawiki/assets/2024/3/22/0/0/5/00592a7f-725b-445c-81f5-cfa061eb9698.jpg and https://www.dezeen.com/2015/08/17/postmodern-design-queen-anne-chair-robert-venturi-denise-scott-brown-knoll/
[Accessed 18 Sept 2024].

Figure 3.xii. 'The B-Sharps' (left to right: Principal Skinner, Apu, Barney, Nigel (a theatrical agent), and Homer) from The Simpsons, Season 5, Episode 01, 1993: 'Homer's Barbershop Quartet'. [Online] available at: https://www.youtube.com/watch?v=wMHp1YcyoEY [Accessed 24 April 2024].

Figure 3.xiii. Balenciaga's 'Romeo' collapsible-heel patent-leather loafers (Balenciaga, 2024).[Online] Source images available at: https://www.mrporter.com/en-gb/mens/product/balenciaga/shoes/loafers/romeo-collapsible-heel-patent-leather-loafers/1647597332920120?utm_source=google&utm_medium=cpc&utm_campaign=GOO%3AMRP%3AEU%3AGB%3AEX%3AENG%3ASEAU%3APLA%3ASLR%3AMXO%3ANEW%3AMN%3ABALENCIAGA%3ALV0%3ALV1%3ALV2%3AXXX%3A13%3AEMPTY%3A&utm_id=19744102724&utm_term=0400645834716&vtp00=GOOGLE&vtp01=SEAU&vtp02=149466778267&vtp03=pla-1942618820536&vtp04=g&vtp05=c&vtp06=649510751421&vtp07=pla&gad_source=1&gclid=CjwKCAjw3P-2BhAEEiwA3yPhwDT55tPdmUOShs5Mz5B-NtgxokLdszXEY7lCe2iF3k7VZq7VhxK4AxoCzQkQAvD_BwE [Accessed 18 Sept 2024].

Figure.3.xiv. Two chindōgu: (left) 'Contact Lens Protectors' that are designed to catch a falling contact lens, but seriously impair eyesight; and (right) 'Earring Safety Nets' which catch expensive earrings should they fall from the ear but are quite impractical and, one imagines, rather cumbersome and uncomfortable (Kawakami, 1995). 'Contact Lens Protectors' in KAWAKAMI, K. 1997. *99 More Unuseless Japanese Inventions: The Japanese Art of Chindōgu* (translated by D. Papia). London, UK: Harper Collins, pp139. 'Earring Safety Nets' in KAWAKAMI, K. & FEARNLEY-WITTINGSTALL, H. (ed.). 2004a. *The Big Bento Box of Unuseless Japanese Inventions* (translated by D. Papia). New York, USA: W. W. Norton & Co., pp.21.

Figure 3.xv. (Left) still images from Waze's 'air dancer' advertisement and (right) from an advert in the 'Should've Gone To Specsavers' anthology campaign, featuring a cameo appearance by celebrity chef Gordon Ramsay. [Online] Source images available at: https://www.adsoftheworld.com/campaigns/air-dancer and https://www.adforum.com/talent/41714302-gordon-ramsay/work/34475207 [Accessed 30 May 2024].

Figure 3.xvi. Three mugs: (left) IKEA's 'Dinera' mug, (centre) a generic freak in the sheets mug, and (right) Thabto's 'Knuckle Duster Mug'. [Online] Source images available at: https://www.ikea.com/gb/en/p/dinera-mug-beige-60350646/, https://i.etsystatic.com/30743155/r/il/1003d4/4101250844/il_1588xN.4101250844_7pr0.jpg and https://www.thabto.co.uk/cdn/shop/products/knuckle-duster-mug-white-gold_5000x.png?v=1444735882 [Accessed 31 May 2024].

Figure 3.xvii. Design artefacts humourised through the *application* of humorous decoration: (top left) a ‘Thinking Cap’ from Poketo; (top centre) David Shrigley’s ‘Heroin and Cocaine' salt and pepper shakers, 2000; (top right) a ‘Cereal Killer’ spoon handmade by Ashijewelers; (bottom left) some rolls of ‘Sushi Tape’ designed by Rosie Upright for Suck UK; and (bottom right) a Star Wars cockpit themed car windscreen sun shield from Plasticolor. [Online] Source images available at: https://colossal.shop/cdn/shop/files/thinking_52043bb0-c6f2-4100-af52-819de9aef9a8_1802x1802.webp?v=1712162594, https://thirddrawerdown.co.uk/products/heroin-cocaine-salt-and-pepper-shakers-x-david-shrigley, https://i.etsystatic.com/14311875/r/il/e4e37f/4115739296/il_794xN.4115739296_cyk5.jpg, https://cdn.thisiswhyimbroke.com/images/star-wars-sunshade.jpg, https://www.suck.uk.com/binary_data_seo/sushi-tape-scattered-green-feature-on-grey_69328.jpg. [Accessed 18 Sept 2024].

Figure 3.xviii. Design artefacts humourised through the *alteration* of their form: hairdryer in the form of a .357 Magnum handgun from Jerdon Industries Inc., 1981; ‘Titanic’ table-lamp by Charles Trevelyan, 2005; ‘Stool Dollar’ from Kare Design, 1981; ‘Sister’ lamp by José Manuel Ferrero for {H} Bespoke; spiked dog bowl by Ginori 1735 for Balenciaga, 2022; lightning power socket extension from Kikkerland B.V.; Lego-hair bicycle helmet by Higby & Prior, 2017; and an ‘enter’ doormat by Vladimir Pavlenko, 2012. [Online] Source images available at: https://www.etsy.com/uk/listing/78802051/the-357-magnum-gun-hair-dryer-by-jerdon?show_sold_out_detail=1&ref=nla_listing_details, https://www.architonic.com/en/product/viable-london-titanic/1031214, https://b2b.kare-design.com/en/Stool-Dollar/79192, https://www.estudihac.com/sister-en, https://i.pinimg.com/originals/26/7e/ac/267eacb60e6a624db9e52f4f31f48c8c.jpg, https://theawesomer.com/photos/2012/09/100912_lightning_bolt_power_strip_1.jpg, https://northernart.ac.uk/helmet-hair/, and https://www.artlebedev.com/kovrikus/enterus/ [Accessed 18 Sept 2024].

Figure 3.xiv. Zach Gardner’s ‘*App*ocalypse’ (Gardner, 2021) which renames the apps in a stock iPhone image, e.g. ‘Instagram’ becomes ‘Be Fake’, ‘Tinder’ becomes ‘Die Alone’, and ‘Pokemon Go’ becomes ‘Grow Up’; Sarah Alexander’s ‘Frugal Wine-Glass’ (Alexander, 2023); and James Whitaker’s ‘This Type is Kerned Well’ (Whitaker 2021). Unpublished BA and MSc. student projects, Cardiff School of Art And Design, 2023. Author’s own images of the work.

Figure 3.xx. Four of Wilcox’ designs: (top left) ‘The Three Stages of Relationships’ table; (bottom left) ‘Queue Headrest’; (centre) Remote Control Sun Shade’; and (right) ‘Reverse Listening Device: Hear Sounds on Your Right, Through Your Left Ear and Vice Versa’ — the original sketch from ‘Variations of Normal’, and a physical model worn by Wilcox (Wilcox, 2015, pages unnumbered). [Online] Other image sourced from: https://www.buzzworthy.com/wp-content/uploads/2016/04/reverse.jpg [Accessed 18 Sept 2024].

Figure 3.xxi. Thomas Thwaites’ ‘Harmless Car’ (Thwaites, 2024). [Online] Image sourced from: https://www.thomasthwaites.com/a-harmless-car/ [Accessed 18 Sept 2024].

Figure 3.xxii. Three of Errazuriz’ designs: (left) ‘Duck Fan’ (2010); (top right) ‘Athena Lemnia’ and ‘Meleager’ stools (2018); and (bottom right) ‘Duck Lamp’ (2004). [Online]

Images sourced from: https://images.squarespace-cdn.com/content/v1/5cf56bb2622f1700010563b4/1571412628345-728KZF2AQDHMCYVJKQ4F/3.png?format=1000w, https://images.squarespace-cdn.com/content/v1/5cf56bb2622f1700010563b4/1569508105595-TC9UNUVH6FGF6PRCDSAN/5.+SE+Side+Table+%27Meleager+%26+Athena+Lemnia%27.jpg?format=1000w, and https://images.squarespace-cdn.com/content/v1/5cf56bb2622f1700010563b4/1571411024947-3NJJYBFCWJF2QYDVAFA5/image-asset.png?format=1500w [Accessed 10 Sept 2024].

Figure 3.xxiii. Maywa Denki designs: (left) a USB cable in the form of a fish skeleton; (centre) 'Knock Man', a clockwork character that knocks their own drum-shaped head; and (right) Nobumichi Tosa with a selection of musical design artefacts. [Online] Images sourced from: https://b.st-hatena.com/entryimage/articles/17994-1387957591.jpg, https://i.ebayimg.com/images/g/msIAAOSweERlIbRq/s-l960.webp and https://www.tricera.net/artclip/blog806 [Accessed 19 April 2024].

Figure 3.xxiv. (left) a print by Jan Basarab (2023) displayed in the author's bathroom amongst a personal collection of other 'funny things', and (right) an anthropomorphic toilet roll holder shared by the UglyDesign Instagram account (Nyffenegger & Mathys, 2021) — these artefacts say something about their owner's sense of humour to the 'captive' bathroom audience: they project it.
Authors own image 2024, and [online] other image sourced from: https://m.media-amazon.com/images/I/51Hl5D78S1S._AC_SL1000_.jpg [Accessed 18 Sept 2024].

Figure.3.xxv. (left) A classic 'My other car is a Porsche' car window sticker and (right) some humorous graffiti that references MC Hammer's catchphrase 'Stop… Hammer time' from the 1990 single 'U Can't Touch This'. [Online] Images sourced from: https://pbs.twimg.com/media/GODXSkkbYAAt9oc?format=jpg&name=medium and https://www.reddit.com/media?url=https%3A%2F%2Fpreview.redd.it%2Ftss7zibj8xq71.jpg%3Fwidth%3D640%26crop%3Dsmart%26auto%3Dwebp%26s%3D2b2db0ba89f88db1e35e3fac4d3e473cc799d979 [Accessed 19 April 2024].

Figure 3.xxvi. Three novelty items: (left) a bar of soap that looks very much like a hot dog; (centre) fridge magnets in amusing shapes for altering photographs; and (right) the 'Wrongulator', a calculator that gives incorrect answers. [Online] Images sourced from: https://i.etsystatic.com/5203039/r/il/2883f0/199336128/il_794xN.199336128.jpg, https://i.ebayimg.com/images/g/DycAAOSwHzhep2m8/s-l1600.webp and https://i.chzbgr.com/full/7769061376/h146D5310/this-could-have-some-serious-consequences [Accessed 19 April 2024].

Figure 3.xxvii. A selection of 'gag gifts': (Left) A 'home vasectomy kit'; (centre left) a 'travel hair dryer'; (centre right) Bernard's 'Dehydrated Water'; and (right) "The World's Most Famous Thought Experiment" — 'Schrödinger's Cat' in a box. [Online] Images sourced from: https://cdn.thisiswhyimbroke.com/images/diy-vasectomy-kit-prank-box-640x533.jpg, https://scontent-lhr6-1.xx.fbcdn.net/v/t39.30808-6/310728920_211609764538713_1536924173116382145_n.jpg?_nc_cat=110&ccb=1-7&_nc_sid=833d8c&_nc_ohc=AUbXx4KvwacQ7kNvgFDRIIq&_nc

_zt=23&_nc_ht=scontent-lhr6-1.xx&_nc_gid=A7R2jIqGbz2QhhAhhDU5NJm&oh=00_AYACKFcr8vWyaUf1iB06SkwJn5hfmORqrxci4h9M9UsEKQ&oe=6766152D, https://m.media-amazon.com/images/I/81iunr9B+8L._AC_SL1500_.jpg and https://i.etsystatic.com/6522262/r/il/5322ec/5458339404/il_1140xN.5458339404_p2m4.jpg [Accessed 19 April 2024].

Figure 3.xxviii. Jobs smiles as he introduces Apple's comical fake iPhone design. [Online] Images available at: https://www.youtube.com/watch?v=VQKMoT-6XSg and https://www.thesun.co.uk/wp-content/uploads/2023/03/851ad9e5-59f5-42ce-8f77-1bd1acc90353.jpg?strip=all&w=960 [Accessed 6th May 2024].

Figure 3.xxix. (Left) Starck's 'Juicy Salif' citrus squeezer for Alessi in 1990; (centre top) Aalto's glass 'Savoy' vase, designed in 1936, but manufactured by Iittala Lasitehdas in 1960; (centre bottom) Eames 'Lounge Chair and Ottoman' for Herman Miller Furniture in 1956; and (right) a Westwood corset from her 'Portrait Collection' 1990. [Online] Images sourced from: https://www.einrichten-design.co.uk/media/30/e1/e6/1597949195/Alessi_Juicy_Salif_PSJS_1.jpg, https://m.media-amazon.com/images/I/61E+fbTMs4L._AC_SL1500_.jpg, https://www.hermanmiller.com/content/dam/hmicom/page_assets/products/eames_lounge_chair_and_ottoman/mh_prd_ovw_eames_lounge_chair_and_ottoman.jpg.rendition.1152.864.jpg and https://fashionhistory.fitnyc.edu/wp-content/uploads/2020/12/westwood_featured-1280x640.jpg [27 June 2024].

Figure 3.xxx. The key visual element of Mother's restorative KFC campaign: an empty chicken bucket displaying some cheeky wordplay (Mother London, UK, 2018). [Online] Image sourced from: https://image.adsoftheworld.com/w8bncpigz4832ogl2xdbima8u3v9 [12 June 2024].

Figure 3.xxxi. Examples of Wackaging: (top left) a bottle label, once peeled back, reveals an image of a sloth saying "You found me! Okay now you hide. 1…2…3…"; (top centre) a sweet packet that states "You're a curious one. I like you" on its base; (top right) a bottle of shower gel that recommends "How to use: if you really don't know how, then we suggest you find someone you really like and invite them into the shower with you to demonstrate"; (bottom left) a smoothie carton that insists "Stop looking at my bottom"; and (bottom right) an 'Aunt Gina' cookie that contains "brown cane suga', cane suga', shit ton of buttah, unbleached flour" and advises that "If you're srsly concerned about calorie count… just step away. Contains: wheat (sry.), milk (sry.), eggs (sry.), and soy (sry.). May contain traces of nuts. Sorrrrryyy". [Online] Images available at: https://www.boredpanda.com/blog/wp-content/uploads/2018/08/funny-products-hidden-message-44-5b7139f1bba7f__605.jpg, https://i.imgur.com/8F6UGmH.jpeg, https://jackiebarrie.com/wp-content/uploads/2018/09/Usage.jpg, https://brilliantnoise.com/wp-content/uploads/2020/03/image-10.png and https://i.imgur.com/8F6UGmH.jpeg [Accessed 11 June 2024].

Figure 3.xxxii. A selection of chindōgu: (left) a 'Portable Commuter Seat'; (centre left) 'Wide Angle Glasses' "for making apartments into Castles" (Kawakami, 2004b, pp.173); (centre right) 'One Cut Clippers' and a Swiss-army-knife style 'Ten-in-One Gardening

Tool'; and (right) efficiency doubling 'Up/Down Toothbrush', and 'Nature Lovers' Footwear' (Kawakami, 1995-2004). 'Portable Commuter Seat' in KAWAKAMI, K. & FEARNLEY-WITTINGSTALL, H. (ed.). 1995. *101 Unuseless Japanese Inventions: The Art of Chindōgu* (translated by D. Papia). New York, USA: W. W. Norton & Co., pp.76-77. 'Wide Angle Glasses' in KAWAKAMI, K. & FEARNLEY-WITTINGSTALL, H. (ed.). 2004b. *Bumper Book of Unuseless Japanese Inventions: The Art of Chindōgu* (translated by D. Papia). London, UK: Harper Collins Publishers, pp.173. 'One Cut Clippers' in KAWAKAMI, K. 1997. *99 More Unuseless Japanese Inventions: The Japanese Art of Chindōgu* (translated by D. Papia). London, UK: Harper Collins, pp.31. 'Ten-in-One Gardening Tool' in KAWAKAMI, K. & FEARNLEY-WITTINGSTALL, H. (ed.). 1995. *101 Unuseless Japanese Inventions: The Art of Chindōgu* (translated by D. Papia). New York, USA: W. W. Norton & Co., pp.76-77, pp.146-147. 'Up/Down Toothbrush' in KAWAKAMI, K. & FEARNLEY-WITTINGSTALL, H. (ed.). 2004a. *The Big Bento Box of Unuseless Japanese Inventions* (translated by D. Papia). New York, USA: W. W. Norton & Co., pp.73. 'Nature Lovers' Footwear' in KAWAKAMI, K. & FEARNLEY-WITTINGSTALL, H. (ed.). 2004b. *Bumper Book of Unuseless Japanese Inventions: The Art of Chindōgu* (translated by D. Papia). London, UK: Harper Collins Publishers, pp.188-189.

Figure 3.xxxiii. (Left) Alan Wexler's 'Hearing Aid' (Wexler, 2016); (top right) Jaques Carelman's design illustration for a 'Charitable Fly Swatter' that, being "pierced with a hole, gives the insect a chance!" (Carelman, 1977, pp.141); and (bottom right) a physical Carelman object — 'Enclume de Voyage' ('Travel Anvil') (Carelman, 1977, pp.170). In CARELMAN, J., 1997. *Catalogue D'Objets Introuvables* (Catalogue of Extraordinary Objects). Paris, France: Le Cherche Midi, pp.141 (fly swatter) and 170 (anvil). Wexler's 'Hearing Aid' [online] other image sourced from: http://www.allanwexlerstudio.com/sites/default/files/styles/style_extralarge/public/projects/images/hearing_aid_01.jpg?itok=g7sdlHfJ [Accessed 18 Sept 2024].

Figure 3.xxxiv. Three of the author's own 'chindōgu inspired' design projects: (left) an 'iPhork', a stainless steel smartphone accessory that enables one to shovel food into their mouth whilst viewing social media feeds on their smartphone, uninterrupted (Humphries, 2016); (centre) a toothbrush mounted upon a washing machine — at the peak of the spin cycle the vibrations from the washing machine provide a really deep-clean (Humphries 2018); and (right) 'Data Iron: Unlosable USB Stick' (Humphries, 2014), (authors's own images, 2016, 2018, and 2014).

Figure 3.xxxv. 'Protective methods for the rainy season' in GOLDBERG, R. & GARNER, P., 1983. Rube Goldberg: A Retrospective. New York, USA: Delilah Communications Ltd., pp.86.

Figure 3.xxxvi. Absurdist/surrealist comedians (from left to right), Spencer Jones, Vic Reeves & Bob Mortimer, and Noel Fielding. [Online] Images available at: https://www.thetimes.co.uk/imageserver/image/%2Fmethode%2Ftimes%2Fprod%2Fweb%2Fbin%2Fbd086d02-30bb-11e7-aef5-2d8dbd8d80b5.jpg?crop=5198%2C2924%2C317%2C730&resize=1500, https://64.media.tumblr.com/b28e2c73339d0b8065ece28ca72869cd/

tumblr_oo7hiqW6dp1tr4jrlo4_540.pnj, and https://media1.tenor.com/m/J6uQMNW4piQAAAAC/noel-fielding-fish-finger.gif [Accessed 23rd April 2024].

Figure 3.xxxvii. Intentionally incongruous design that plays with size, scale, and proportion: (left) 'Light Soy' pendant light by Heliograf (Angus Ware and Jeffrey Simpson), 2020; (centre) Lila Jang's voluptuous 'Narrow Chair', 2013; and (right) Swatch's 'Maxi Lemon Time' wall clock, 2011. [Online] Images available at: https://image.invaluable.com/housePhotos/theodorebruceauctions/30/716530/H3561-L277912162.JPG, https://www.designspiration.com/save/1907784828829/?utm_source=extension&utm_medium=click&utm_campaign=muzli and https://images.urbndata.com/is/image/UrbanOutfitters/54488440_072_b?$xlarge$&fit=constrain&fmt=webp&qlt=80&wid=720 [Accessed 18 Sept 2024].

Figure 3.xxxviii Intentionally incongruous design that plays with materials: (left) 'Soft Cabinet Small', a foam cabinet by Dewi van de Klomp, 2013; (centre) 'Glass Zipper Bag' — a glass jar that looks like a plastic 'Ziplock' bag — by American Metalcraft; and (right) on of Tim Kowalczyk's ceramic mugs that looks remarkably like it is made from battered packaging cardboard, 2016. [Online] Images available at: https://posts-cdn.kueez.net/HiT3FxsiEea78B46/image-kVTDaOf69Q8qPcB8.jpg, https://www.candywarehouse.com/cdn/shop/files/glass-zipper-bag-22-ounce-candy-jar-candy-warehouse-6.jpg?v=1689317643&width=600 and https://www.thisiscolossal.com/wp-content/uploads/2016/10/TomKowalczyk_04.jpg [Accessed 18 April 2024].

Figure 3.xxxix. Intentionally incongruous design that mixes contexts: (top left) 'Horse' floor lamp by Front design studio for Moooi, 2006. The audience recognises horses and understands the contexts in which horses are encountered (field, farm, racecourse, TV programme, etc.), and recognises floor lamps and the contexts in which they are encountered (home, office, etc.). The incongruity arises when design collides these contexts and the result is a full size horse that is also a floor lamp; 'Bootbag' — a children's Wellington boot recontextualised as a handbag — by Vlaemsch, 2004; 'Sarcophagus' by Recycle Group, 2019; and a slickly clever and understated advert for Amsterdam's Van Gogh Museum Café, 2013 (by Duval Guillaume). 'Horse' floor lamp by Front design studio for Moooi, 2006, [online] image available at: https://mozaikdesign.com/wp-content/uploads/2024/03/moooi-horse-floor-lamp-ambiance-04.jpg [Accessed 18 April 2024]. 'Bootbag' by Vlaemsch, 2004 in WONG, K. (ed), 2007. *[Art]ifact: Re-Recognizing the Essentials of Products*. Hong Kong: Victionary, pp.119. 'Sarcophagus' by Recycle Group, 2019, [online] image available at: https://64.media.tumblr.com/9748ebf8b6b2618939d1f6350e067525/df7f9e681671424e-b4/s500x750/4945765f35f646ca325d51b819bd6d020feade76.jpg [Accessed 18 April 2024]. Van Gogh Museum Café advert, 2013 (Duval Guillaume, 2013) [online] images available at: https://www.jbe-platform.com/docserver/fulltext/cogls.00050.kas_fig10.svg [Accessed 18 April 2024].

Figure 3.xxxx. Remy's 'Chest of Drawers' (1991), and Bey's 'Tree Trunk Bench' (1999) for Droog. In RAMAKERS, R. & BAKKER, G. (eds.), 2006. *Simply Droog*. Amsterdam, Netherlands: Droog, pp.27 and pp.40-41.

Figure 3.xxxxi. Kao's 'Seven-Year-Itch' (ring) (Kai, 2003). In EBENDORF, R. W., 2003. 1000 Rings. New York, USA: Lark Books, pp.322.

Figure 3.xxxxii. 'USB Sticks' (2006) by 'Oooms' (Guido Ooms) and Karin Van Lieshout. In WONG, K. (ed), 2007. *[Art]ifact: Re-Recognizing the Essentials of Products*. Hong Kong: Victionary, pp.90-91.

Figure.3.xxxxiii. 'Woofers', designed by Buro Vormkrijgers (2006). In WONG, K. (ed), 2007. *[Art]ifact: Re-Recognizing the Essentials of Products*. Hong Kong: Victionary, pp.44.

Figure 3.xxxxiv. Wechsler's Circular Bicycle, 2003. [Online] Images available at: https://images.squarespace-cdn.com/content/v1/5e75168f31c46a65a3dfb998/e421ed9e-3b7b-47ea-ae3d-7a86e86ef492/2005_CircularBike_SBCC4.jpg?format=2500w and https://images.squarespace-cdn.com/content/v1/5e75168f31c46a65a3dfb998/37168693-24dd-482d-a9d0-5ec34fd5aa53/2005_CircularBike_SBCC5.jpg?format=2500w [Accessed 25 April 2024].

Figure 3.xxxxv. People wearing Wilde's HipDisk. When they dance, the HipDisk acts as an interface for the creation of music. [Online] Images available at: https://www.daniellewilde.com/wp-content/uploads/2015/02/hipdisk-in-at-monash_1.jpg [Accessed 25 April 2024].

Figure 3.xxxxvi. Yu and Tam's nine principles for humorous products. In YU, Y. & NAM, T.-J., 2017. Products with A Sense of Humor: Case Study of Humorous Products with Giggle Popper. *International Journal of Design*, 11(1), pp.79-92, this image: pp.81.

Figure 3.xxxxvii. Magic machines from Blythe et al's anti-solutionist workshops. In BLYTHE, M., ANDERSEN, K., CLARKE, R. & WRIGHT, P., 2016. Anti-Solutionist Strategies: Seriously Silly Design Fiction. Problem-Solving or Not? The Boundaries of HCI Research. #chi4good, CHI 2016, San Jose, CA, USA, pp.4975.

Figures in Chapter 4). Second Analysis of the Perceived Problem: Perspectives from Humour Theory and Discourse.

Figure 4.i. Crochet Frog Dissection by Cottontail & Whiskers. [Online] Available at: https://cdn.cottontailandwhiskers.com/wp-content/uploads/Amigurumi-Crochet-Frog-Dissection-Pattern-04.jpg?_gl=1*1mqbdz7*_gcl_au*MTQ3NTg5NzkxMi4xNzI2NzA4MzQ3*_ga*MTU0Mzg2MDk3MC4xNzI2NzA4MzQ0*_ga_0DF1N0K7JM*MTcyNjcwODM0My4xLjEuMTcyNjcxNzc5OS42MC4wLjA. [Accessed 9th Sept 2024].

Figure 4.ii. "The relation between the four cosmic elements, the four qualities of the elements and the four humours" based upon a model in Stelmack, R. M. and Stalikas, A.

(1991) ‘Galen and the Humour Theory of Temperament’, Personality and Individual Differences, 12(3), pp. 258. This is the author’s re-creation of the original diagram: some simple Adobe Stock elements were used in its construction.

Figure 4.iii. ‘Laugh and smile taxonomy based on the different expressions of joy’ in MASCARÓ, M., SERÓN, F. J., PERALES, F. J., VARONA, J. & MAS, R., 2021. Laughter and Smiling Facial Expression Modelling for the Generation of Virtual Affective Behavior. In E. Kasneci (Ed.), PLoS ONE, 16(5), e0251057, pp.4.

Figure 4.iv. (Left) ‘Le Sorcier: in its original execution’ (Universita Degli studi Di Torino, 2023). (Right) ’Le Sorcier: through the sketch interpretation of George Bataille in 1952’ (Universita Degli studi Di Torino, 2023). [Online] Images available at: The Gates of the Year. Pre-Christian Continuities in European Ritual Masquerades. Genealogy of Mythic Motifs. Palaeolithic. Human-Animal Transformation https://www.leportedellanno.unito.it/eng_paleolitico_trsformazioni_grande_1.htm [Accessed 20 Jan 2024].

Figure 4.v. ‘Ostracon of a Cat Waiting on a Mouse’ in Egypt Museum, Cairo, 2024. [Online] Available at: https://egypt-museum.com/ostracon-of-cat-waiting-on-mouse/ [Accessed 20 Jan 2024].

Figure 4.vi. ‘Terracotta model of a Greek theatre mask’ in The British Museum, 2024. [Online] Available at: http://www.teachinghistory100.org/objects/greek_theatre_mask [Accessed 20 Jan 2024].

Figure 4.vii. A dog defecating under a cup handle — unknown artist, 540-525 BCE. In MITCHELL, A. G., 2012. Greek Vase-Painting and the Origins of Visual Humour. Cambridge, UK: Cambridge University Press. pp.44.

Figure 4.viii. The ‘Roswell Cradle Tree’, part of the ‘Alien Cat Furniture’ range by the Hollywood Kitty Company, 2018, [Online] Available at: https://www.hollywoodkittyco.com/for-cats/themed-cat-furniture/roswell-alien-theme/alien-cat-furniture/roswell-cradle-tree.html [Accessed 16 July 2019].

Figure 4.ix. A nose-shaped mains angle adapter and a fish skin hat — according to Bergson, the first is funny because it resembles a human nose, rather than a designed device, the second is funny because it is a fish fashioned into a human hat. (Fish hat: author’s own image, 2023). [Online] Images available at: https://www.japantrendshop.com/img/products/2234/2234-hanaga-tap-nose-outlet-plug-accessory-1.jpg [Accessed 20 Jan 2024] and author’s own image, 2023.

Figure 4.x. A cartoon by Dagsson (Dagsson, 2007, pages unnumbered). In DAGSSON, H., 2007. *Is This Supposed To Be Funny?* London, UK. Michael Joseph.

Figure 4.xi. Laughing at poor design: a combi-toiletbrush-plunger — which end would you rather hold? [Online] Image available at: https://www.boredpanda.com/blog/wp-content/uploads/2015/11/poor-design-decisions-52__605.jpg [Accessed 27 Jan 2022].

Figure 4.xii. Three incongruous designs: (left) Enrico Salis' 'Archetype' coffee table; (centre) Bert Jones incongruous mugs with exaggerated characteristics to their form; and (right) a chicken wearing 3d-printed nylon 'T-Rex' arms (available on Etsy). [Online] Available at: https://www.journal-du-design.fr/design/table-basse-archetype-par-enrico-salis-27700/, author's own image, 2024, and https://i.etsystatic.com/26833745/r/il/b61b55/2763881766/il_1588xN.2763881766_b1r6.jpg [Accessed 21 Jan 2024].

Figure 4.xiii. 'Famous characters from *The Fast Show*' in PELLY, R., HIGSON, C., WHITEHOUSE, P. & DAY, S., 2020. 'Lockdown? Suit You, Sir!' The Fast Show Characters on the Covid Era. [Online] Image available at: https://www.theguardian.com/tv-and-radio/2020/aug/27/the-fast-show-just-a-load-of-blooming-catchphrases-charlie-higson-paul-whitehouse-simon-day [Accessed 19 Dec 2023].

Figure 4.xiv. A selection of rather taboo or 'gross' humorous design: (top left) a charging cable featuring a mechanical dog that 'humps' an iPhone as a living dog might another dog, or a human leg; (top centre left) 'Twister' patterned sheets; (centre left) the 'Good Boy Floor Lamp' by Sebastien Burdon — note the faeces floor-switch; (top centre and centre) two models/toys, available on Etsy — a bootleg Hotwheels toy of the Titan submersible that imploded in 2023, killing all passengers onboard, and a model of the 1986 Chernobyl nuclear power plant disaster featuring an exposed nuclear core that glows and effervesces mist to humidify one's room; (top right and right) two exceptionally unusual 'butt plug' designs — a 'taco-holder' and a pair of taxidermy squirrel heads; and bottom row — a 'Cat Tongue Brush' from PETCYY that enables a cat owner to groom their pet by 'licking' it. [Online] Images available at: https://m.media-amazon.com/images/I/61IdOeRBGvL._SL1500_.jpg, https://cf.geekdo-images.com/Z077DzDpzx1IRAAULy_s1A__imagepage/img/Z3zLSh36YfeiRa20jqgEf-rExus=/fit-in/900x600/filters:no_upscale():strip_icc()/pic399854.jpg, https://i.etsystatic.com/5734324/r/il/c419e5/5305827309/il_1588xN.5305827309_fcfl.jpg, https://m.media-amazon.com/images/I/61zPFFt9esL._AC_SX679_.jpg, https://i.etsystatic.com/17824412/r/il/ef78a5/6146573585/il_1588xN.6146573585_q4e4.jpg, https://i.etsystatic.com/11984841/r/il/3e68b8/2298718783/il_1588xN.2298718783_ropo.jpg, https://img.ifunny.co/images/4870669b0f5da97118fda250c39525c15241ec119f280a66d2a540394c6c6a4b_1.webp, https://m.media-amazon.com/images/I/71xdTpA3BUL._AC_SX522_.jpg, https://www.amazon.co.uk/Shedding-Grooming-Massage-Licking-Surprise/dp/B09BKSJM38 and https://m.media-amazon.com/images/I/71XU8Aqxl8L._AC_SL1500_.jpg [Accessed 25 April 2024].

Figure 4.xv. 'Click Bait' (Humphries, 2023). Author's own text and composition using an image from: 'It's Not What it Looks Like! The Apparently X-Rated Photos that are Actually TOTALLY Innocent (When You Stare Hard Enough)' in McDERMOTT, K., 2024. [Online] Available at: https://www.dailymail.co.uk/femail/article-5174355/Photos-look-rude-arent.html [Accessed 19th Feb 2024].

Figure 4.xvi. A treasured 'nice' plant pot from the author's house (author's own image, 2024).

Figures in Chapter 5). Route to a Solution: Understanding Humour and Laughter, in Terms of Design and Material Culture, Through Theories of Entanglement.

Figure 5.i. A 'teardown' image showing the major component blocks of an iPhone 15 Pro Max. [Online] Available at: https://fdn.gsmarena.com/imgroot/news/23/11/iphone-16-graphene-heat-sink-rumor/-660/gsmarena_001.jpg [04 Sept 2022].

Figure 5.ii. Detail of the main processor board from Figure 5.X (in the top left of the image). [Online] Available at: https://valkyrie.cdn.ifixit.com/media/2023/09/24120000/iphone_15_pro_max_a17_pro.jpg [04 Sept 2022].

Figure 5.iii. A camera screw from an iPhone 15 Pro Max. [Online] Available at: https://valkyrie.cdn.ifixit.com/media/2023/09/24120350/Camera_screw_comparison2_37x_C_C-1-1-1200x800.jpg [04 Sept 2022].

Figure 5.iv. A teardown image of the toaster that Thwaites purchased in 2009. In THWAITES, T., 2011. *The Toaster Project*. New York, USA : Princeton Architectural Press, pp.16-17.

Figure 5.v. Thwaites' toaster, 2009. In THWAITES, T., 2011. *The Toaster Project*. New York, USA : Princeton Architectural Press, pp.182-183.

Figure 5.xi. A Hodderian tanglegram for 'clay entanglements' (bottom right) "in the first part of the sequence of occupation at Çatalhöyük". In HODDER, I., 2012. *Entangled: An Archaeology of the Relationships Between Humans and Things*. Malden, MA: Wiley-Blackwell, pp.181).

Figures in Chapter 6). Proposition: A Revised Strategy for Understanding Gelastic Design.

Figure 6.i. The Sony Bravia XR A90J Master Series 4K OLED Smart Television (Sony, 2024). [Online] Available at: https://www.sony.ee/image/158b65b9cc92dc4cb276117dc38642d3?fmt=pjpeg&wid=2028&hei=792&bgcolor=F1F5F9&bgc=F1F5F9 [05 Sept 2022].

Figure 6.ii. The Andrea 1-F-5 produced by Andrea Radio Corp in 1939. [Online] Image available at: https://www.earlytelevision.org/images/andrea_1f5.jpg [05 Sept 2022].

Figure 6.iii. The Kuba 'Comet', designed by Gerhard Kubetschek in 1957. [Online] Image available at: https://www.dorotheum.com/fileadmin/_processed_/3/c/csm_Kuba-Komet_cdaa1b6f6a.webp [05 Sept 2022].

Figure 6.iv. The Unisonic 6900 ZX. [Online] Image available at: https://i.ebayimg.com/images/g/Cq0AAOSw4MFmzRhR/s-l1200.jpg [05 Sept 2022].

Figures in Chapter 7). Speculative Testing with the Revised Strategy.

Figure 7.i. Steve Coogan (left) as ‘Alan Partridge’, and Rebecca Front (right) playing the character ‘Yvonne Boyd’ (BBC, 1994). [Online] Image available at: https://www.amazon.co.uk/gp/video/detail/B00FAP15MW/ref=atv_hm_vid_c_baeECJ_1_8 [05 Sept 2022].

Figure 7.ii. Seated from left to right: comedic actors Steve Coogan playing ‘Alan Partridge’ (clear parallels with Lawley), Melanie Hudson playing 'Nina Vanier’ (a French version of Janet Street-Porter), Rebecca Front playing ‘Yvonne Boyd’ (a caricature of Westwood), and Patrick Marber playing ‘Phillippe Lambert’ (rather than including an equivalent to Russel Harty, Marber’s character is closely aligned with Lanier and Boyd, in opposition to Partridge), (BBC, 1994). [Online] Image available at: https://www.amazon.co.uk/gp/video/detail/B00FAP15MW/ref=atv_hm_vid_c_baeECJ_1_8 [05 Sept 2022].

Figure 7.iii. Actor/singer/celebrity Harry Stiles wearing a ‘twin set and pearls’ inspired outfit on the red carpet at the 40th annual Brit Awards in the O2 Arena, London, UK, 2020. In McLAREN, B., 2020. Wait, Harry Styles And Florence Pugh Are Starring In A Film Together? No, we're not joking. [Online] Available at: https://graziadaily.co.uk/celebrity/news/harry-styles-florence-pugh-film/ [Accessed 31 Mar 2023].

A professor is interviewing a candidate for the opportunity to begin doctoral research…

Professor: “I’ve seen lots of positives in your application, but please tell me something negative about yourself”

Candidate: “I’m too honest”

Professor: “hmmm, I don’t really think that’s a negative”

Candidate: “Yeah? Well, I don’t give a shit what you think”

(Anon)

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11). Bibliography

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AAKER, J. & BAGDONAS, N., 2020. *Humour, Seriously: Why Humour is a Superpower at Work and in Life*. New York, USA: Penguin Business/Random House.

ABDULASALAM, T. & JA'AFAR, I. H., 2021. Pragmatic Analysis of Racial Humor in Online Discourse. *International Journal of Linguistics, Literature and Culture*, 7(6), pp.489-498. Scientific and Literature Open Access Publishing.

ADAMS, D., 1978. The Hitchhiker's Guide to the Galaxy: The Secondary Phase. https://hitchhikers.fandom.com/wiki/Secondary_Phase

ADAMS, D., 1980. *The Restaurant at the End of the Universe*. London, UK: Pan Books.

ADAMSON, G., 2007. *Thinking Through Craft*. Oxford, UK: Berg Publishers.

ADAMSON, G. (ed), 2010. *The Craft Reader.* Oxford, UK: Berg Publishers.

ADAMSON, G., RIELLO, G. & TEASLEY, S., 2011. *Global Design History*. Abingdon, UK: Routledge.

ADRIAENSEN, B., BRICKER, A.B., GODIOLI, A. & LAROS, T., 2023. Humor and the Law: Laughter as Critique / The Limits of Laughter. *Law, Culture and the Humanities*, 0(0), pp.1-12.

AFTAB, M., ENGLISH, S., LIEVESLEY, M., De Lima FILHO, M. A., RUSLI, A. H., SMITH, P. & HUNT, P., 2016. Design Entrepreneurship in Innovation. 20th DMI: Academic Design Management Conference. Inflection Point: Design Research Meets Design Practice Boston, USA, 22-29 July 2016.

AL-ATTAR, I. & LAMBART, P., 2020. Gas Turbines: A Journey Through Time. *Engineered Systems*. January, 2021.

ALBERTINA, 2008. Aby Warburg, Der Bilderatlas Mnemosyne. Exhibition held at Schloss Heilingenkruez- Gutenbrunn, May–October 2008 [Exhibition Catalogue].

ALBRIGHT, C., 2024. Navigating the 'Memosphere'. [Online] Available at https://faculty.dartmouth.edu/artsandsciences/news/2024/02/navigating-memosphere [Accessed 17 April 2024].

ALDEN, D., MUKHERJEE, A. & HOYER, W. D., 2000. The Effects of Incongruity, Surprise and Positive Moderators on Perceived Humor in Television Advertising. *Journal of Advertising*, XXIX(2), pp.1-15.

ALDERSEY-WILLIAMS, H., 2010. *British Design*. New York, USA: Five Continents Editions.

ALEKSANDROVA, E., 2020. Audiovisual Translation of Puns in Animated Films: Strategies and Procedures. *The European Journal of Humour Research*, 7(4), pp.86–105.

AMBROSE, G. & HARRIS, P., 2010. *Design Th!nking*. Lausanne: AVA Academia.

American Museum of Tort Law, 2024. Grimshaw v. Ford Motor Company. [Online] Available at: https://www.tortmuseum.org/ford-pinto/ [Accessed 12 June 2024].

AMIR, L., 2020. "Pure Joy": Spinoza on Laughter and Cheerfulness. *The Southern Journal of Philosophy,* 58(4), pp. 500-533.

ANANTHRAM, S. & CHAN, C., 2019. Institutions and Frugal Innovation: The Case of Jugaad. *Asia Pacific Journal of Management* 38(3), pp.1031-1060). Springer Science and Business Media LLC.

ANDERSON, S.P., 2011. *Seductive Interaction Design: Creating Playful, Fun, and Effective User Experiences*. Berkeley, CA, USA: New Riders Publishing.

ANDREWS, C., 2006. In KRICHTAFOVICH, I. 2006. *Humour Theory: Formula of Laughter*. Denver, USA: Outskirts Press.

ANTCZAK, K. A. & BEAUDRY, M. C., 2019. Assemblages of Practice: A Conceptual Framework for Exploring Human-Thing Relations in Archaeology. *Archaeological Dialogues*. 26, pp.87-110.

ANTONELLI, P., 1998. Nothing Cooler Than Dry. In RAMAKERS, R. & BAKKER, G. (eds.), 1998. *Droog Design*. Netherlands: 010 Uitgeverij.

ANTONELLI, P., 2005. *Safe: Design Takes on Risk*. New York, USA: Museum of Modern Art.

ANTONOVICI, L., 2015. A Theory of Humour. Discourse as a Form of Multiculturalism. *Literature and Communication: Psychology and Education Sciences*. Arhipelag XXI Press: Tirgu Mures, pp.417-430.

APPADURAI, A. (ed.), 2011. *The Social Life of Things: Commodities in Cultural Perspective*. Cambridge, UK: Cambridge University Press.

ARCA: Design Futuring, 2024a. Design Futuring Research. [Online] Available at: https://designfuturing.net/ [Accessed 20 June 2024]

ARCA: Design Futuring, 2024b. Doctoral Research Projects. [Online] Available at: https://designfuturing.net/doctoral-students/ [Accessed 20 June 2024]

ARCHER, L. B., 1979. Whatever Became of Design Methodology? *Design Studies*. 1(1), pp.17-20.

Architect and Engineer of California, 1917a. Tribute to Ernest L. Ransome. *Architect and Engineer of California*, XLIX(2), pp.101-102.

Architect and Engineer of California, 1917b. Concrete Industry Loses Pioneer Builder. *Architect and Engineer of California*, XLIX(2), pp.106.

ARIKHA, N., 2007. *Passions and Tempers: A History of the Humours*. New York, USA: Harper Collins

ARNTSON, A. E., 2006. *Graphic Design Basics*. Belmont, USA: Wadsworth Publishing Co.

ARRINGTON, T. & FREDERICK, M., 2018. *101 Things I Learned in Advertising School*. New York, USA: Crown.

ARSLAN, D. 2008. Dodo Arslan. In FIELL, C. & FIELL, P. 2008. *Design Now!* Cologne, Germany: Taschen, pp.50-55.

Art Journal 1839-1912, 1867. Ransome's Patent Concrete Stone. *British Periodicals*, 68, pp.192.

ARTHUR, B.W., 2010. *The Nature of Technology: What it is and How it Evolves*. London, UK: Penguin Books.

ASENSIO, P. (ed), 2002. *Product Design*. New York, USA: TeNeues.

ASIMOV, I. & CÔTÉ, J-M., 1986. *Futuredays: A Nineteenth-Century Vision of the Year 2000*. London, UK: Virgin Books.

ASIMOV, I., 1991. *Isaac Asimov's Treasury of Humor*. Boston, USA: Mariner Books.

ASIMOV, I., 2009. In WAINER, H. & SHAUN LYSEN, S., 2009. *A Window on Data Can be a Window on Discovery*. American Scientist, 97(4), pp.272.

ASIMOV, I. (ed) & JEPPSON, J. O. (ed), 1985. *Laughing Space: Anthology of Science Fiction Humour*. London, UK: Houghton Mifflin Harcourt.

ASIS, I., 2001. *Yamanote*. London, UK: Pocko Editions.

ATEN, J., 2020. Steve Jobs Once Prank Called a Starbucks, and It's an Incredible Lesson in Emotional Intelligence. [Online] Available at https://www.inc.com/jason-aten/steve-jobs-once-prank-called-a-starbucks-its-an-incredible-lesson-in-emotional-intelligence.html#:~:text=To%20highlight%20the%20ease%20at,number%2C%22%20he%20quickly%20added. [Accessed 28 May 2009].

ATTARDO, S., (ed.), 2015. *Encyclopaedia of Humor Studies*. Thousand Oaks, California, USA: Sage Publications, Inc.

ATTARDO, S., 2022. *The Routledge Handbook of Language and Humour*. New York, USA: Routledge.

ATTARDO, S., (ed.), 2024. *Humor 2.0: How the Internet Changed Humor*. London, UK: Anthem Press.

ATTARDO, S. & ERGÜL, H., 2015. Humour in Ancient Egypt. In Attardo, S., (ed.), 2015: *Encyclopaedia of Humor Studies*. Thousand Oaks, California, USA: Sage Publications, Inc., pp.28-31.

ATKINSON, C., 2015. Self-Deprecation and the Habit of Laughter. *Florida Philosophical Review*, XV(1), pp.19-36.

ATKINSON, P., 2000. The (In)Difference Engine: Explaining the Disappearance of Diversity in the Design of the Personal Computer. *Journal of Design History*, 13(1), pp.59-72. Oxford University Press on behalf of the Design History Society.

ATKINSON, P., 2006. Do It Yourself: Democracy and Design. *Journal of Design History*, 19(1), pp.1-10. Oxford University Press on behalf of the Design History Society.

ATKINSON, P., 2010. The Curious Case of the Kitchen Computer: Products and Non-Products in Design History. *Journal of Design History*, 23(2), pp.163-179. Oxford University Press on behalf of the Design History Society.

ATKINSON, T. & CLAXTON, G., 2000. *The Intuitive Practitioner: On the Value of Not Always Knowing What One Is Doing*. Buckingham, England: Open University Press.

ATZMON, L. & BORADKAR, P., 2017. *Encountering Things: Design and Theories of Things*. London, UK: Bloomsbury Academic.

AUYANG, S. Y., 1999. Synthetic Analysis: How Science Combats Complexity. Sydney, Australia: University of Sydney [Online] Available at: http://www.creatingtechnology.org/papers/complexity.htm [Accessed 09 Nov 2009]

ÁVILA, M., 2022. *Designing for Interdependence: A Poetics of Relating*. London, UK: Bloomsbury Visual Arts.

AYOUB, L., 1995. Old English Wæta and the Medical Theory of the Humours. *Journal of English and Germanic Philology*, 94(3), pp.332-346.

AZRIKAN, D., 1997. VNIITE, Dinosaur of Totalitarianism or Plato's Academy of Design? *Design Issues*, 15(3), pp. 45-77.

BAGESHWAR, B., R. & ZAFAR, S., 2023. Beyond Laughter and Smiles: Analytical Paradigms in Social Media COVID-19 Humour Studies, *The European Journal of Humour Research*, 11(1), pp.95-116.

BAICHTAL, J. & MENO, J., 2011. *The Cult of LEGO*. San Francisco, USA: No Starch Press.

BAILEY, C., 2005. The Global Future of Design History. *Journal of Design History*, 18(3), pp.231-233. Oxford University Press on behalf of the Design History Society.

BAKAR, F., 2020. Appropriate and Relevant Humour in the University Classroom: Insights From Teachers and Students. *European Journal of Humour Research*, 7(4), pp.137–152.

BALL, R. & NAYLOR, M., 2005. *Form Follows Idea: An Introduction to Design Poetics*. UK: Black Dog Publishing.

BAMGBOSE, G.A., 2020. Beyond Rhythm and Lyrics: Pragmatic Strategies of Verbal Humour in Nigerian Hip-Hop. *The European Journal of Humour Research*, 7(4), pp.16-31.

BANHAM, R., 1980. *Theory and Design in the First Machine Age*. Cambridge, MA: The MIT Press.

BANHAM, R., 1983. Ransome at Bayonne. *Journal of the Society of Architectural Historians*, 42(4), pp. 383-387.

BARAD, K. M., 2007. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham, USA: Duke University Press.

BARDZELL, S., BARDZELL, J., FORLIZZI, J., ZIMMERMAN, J. & ANTANITIS, J., 2012. Critical Design and Critical Theory: The Challenge of Designing for Provocation. *Proceedings of the 2012 Designing Interactive Systems Conference, ACM:* In the Wild. DIS'20, 11–15 June, 2012, Newcastle, UK, pp.1901-1913.

BARLEY, N., 1992. The Global Future of Design History. *Journal of Design History*, 5(2), pp.103-111. Oxford University Press on behalf of the Design History Society.

BARON, K., 2022. A Rare Interview with Jordan Mooney, Punk's Enigmatic Front-Woman. Dazed. [Online] Available at https://www.dazeddigital.com/fashion/article/32470/1/a-rare-interview-with-jordan-punk-s-enigmatic-frontwoman [Accessed 14 May 2024].

BARRETT, T., 2008. *Why Is That Art? Aesthetics and Criticism of Contemporary Art*. Oxford: Oxford University Press.

BARRINGER, D., 2009. *There's Nothing Funny About Design*. New York: Princeton Architectural Press.

BARKER, C., 2008. *Cultural Studies: Theory and Practice*. London, UK: Sage Publications.

BARKER, T. P., 2008. Disclosure and Inscription: Heidegger, Derrida, and the Technological Difference. PhD thesis, University of Warwick, UK.

BARTOS, R., 1981. Ads That Irritate May Erode Trust in Advertised Brands. *Harvard Business Review*, 59(4), pp.138-140.

BASALLA, G., 1988. *The Evolution of Technology*. Cambridge, UK: Cambridge University Press.

BATES, A. & GLICKFELD, E., 2014. *Dirty Furniture: Couch* (1/6). London, UK: Dirty Furniture.

BATES, A. & GLICKFELD, E., 2015. *Dirty Furniture: Table* (2/6). London, UK: Dirty Furniture.

BATES, A. & GLICKFELD, E., 2016. *Dirty Furniture: Toilet* (3/6). London, UK: Dirty Furniture.

BATES, A. & GLICKFELD, E., 2018. *Dirty Furniture: Closet* (4/6). London, UK: Dirty Furniture.

BATES, A. & GLICKFELD, E., 2021. *Dirty Furniture: Phone* (5/6). London, UK: Dirty Furniture.

BATES, A. & GLICKFELD, E., 2023. *Dirty Furniture: Bed* (6/6). London, UK: Dirty Furniture.

BAUM, N., 2022. Solving the Wrong Problem. *The Journal of Medical Practice Management (MPM)*, 37(4), pp.183-185. Tampa, Florida, USA: American Association for Physician Leadership.

BAUMER, E. P. S., BLYTHE, M., & TANENBAUM, T. J., 2020. Evaluating Design Fiction. *Proceedings of the 2020 Designing Interactive Systems Conference, ACM: Ridiculous, Absurd, and Fictitious Design,* pp.1901-1913. DIS'20.

BAYAZIT, N., 2004. Investigating Design: A Review of Forty Years of Design Research. *Design Issues*, 20(1), pp. 16-29.

BEARD, F.K., 2007. *Humor in the Advertising Business: Theory, Practice, and Wit*. USA: Rowman & Littlefield Publishers.

BEARD, M., 2014. *Laughter in Ancient Rome: On Joking, Tickling, and Cracking Up*. Berkeley: University Of California Press.

BECKETT, S. (2020). Knowledge Conditioned by the Void: On Complexity and the Design Problem. *Design Issues*, 36(2), pp.6-17.

BEECH, J., 2004. Redneck and Hillbilly Discourse in the Writing Classroom: Classifying Critical Pedagogies of Whiteness. *College English*, 67(2), pp.172-186.

BEEGAN, G. & ATKINSON, P., 2008. Professionalism, Amateurism and the Boundaries of Design. *Journal of Design History*, 21(4), Ghosts of the Profession: Amateur, Vernacular and Dilettante Practices and Modern Design (Winter, 2008), pp.231-233. Oxford University Press on behalf of the Design History Society.

BELL, N., D., 2013. Responses to Incomprehensible Humor. *Journal of Pragmatics*, 57, pp.176-189.

BELL, N., 2015. *We Are Not Amused*. Berlin, Germany: Walter de Gruyter GmbH & Co KG.

BENNETT, R. J., 2010. *Vibrant Matter: A Political Ecology of Things*. Durham: Duke University Press

BENSON-ALLOT, C. A., 2015. *Remote control*. London, UK: Bloomsbury.

BENTON, C., 1990. Le Corbusier: Furniture and the Interior. *Journal of Design History*, 3(2/3), pp.103-124. Oxford University Press on behalf of the Design History Society.

BENTON, T., 1990. Dreams of Machines: Futurism and l'Esprit Nouveau. *Journal of Design History*, 3(1), pp.19-34. Oxford University Press on behalf of the Design History Society.

BERGER, J., 1972. *Ways of Seeing*. London, UK: BBC.

BERGSON, H,. 2008. *Laughter: An Essay on the Meaning of the Comic* (translated by C. Brereton and F. Rothwell). UK. Dodo Press.

BERK, E., 2018. A Kind of Disassembled and Reassembled, Postmodern Collective and Personal Self: Agency and the Insulin Pump. *Journal of Material Culture*, 23(04), pp.448-458. SAGE Publications.

BETTS, P., 2004. *The Authority of Everyday Objects: A Cultural History of West German Industrial Design*. Berkeley, USA: University of California Press.

BHATTACHARYA, S. & BHATTACHARYA, S., 2020. Innovation System of India. In Carayannis, E. G. (ed.), 2020. *Encyclopaedia of Creativity, Invention, Innovation and Entrepreneurship*. Cham, Switzerland: Springer, pp.1316-1326.

BIERUT, M., 2012. *Seventy-nine Short Essays on Design*. United States: Princeton Architectural Press

BINDER, T., De MICHELIS, G., EHN, P., JACUCCI, G., LINDE, P. & WAGNER, I., 2011. *Design Things*. Cambridge, USA: The MIT Press.

BING, J. & HELLER, D., 2003. How Many Lesbians does it Take to Screw in a Light Bulb? *Humor: International Journal of Humor Research,* 16(2), pp.157-182.

BLACK, Z., 2020. *Laughing with Leviathan: Hobbesian Laughter in Theory and Practice*. Political Theory, 49(3), pp.431–456.

BLACKMORE, S. 1999. *The Meme Machine*. London, UK. Oxford University Press.

BLAESS, S., 2008. Steven Blaess. In FIELL, C. & FIELL, P. 2008. *Design Now!* Cologne, Germany: Taschen, pp.74-77.

BLAKESLEE, S. & RAMACHANDRAN, V.S., 1999. *Phantoms in the Brain: Human Nature and the Architecture of the Mind*. London, UK. Harper Perennial (Harper Collins).

BLASZCZYK, R., 2019. *Imagining Consumers*. Baltimore, USA: Johns Hopkins University Press.

BLOCK, A. E., CHRISTEN, S., GASSERT, R., HILLIGES, O. & KUCHENBECKER, K. J., 2021. The Six Hug Commandments. In Proceedings of the 2021 ACM/IEEE International Conference on Human-Robot Interaction. HRI '21: ACM/IEEE International Conference on Human-Robot Interaction.

BLOCK, A. E., SEIFI, H., HILLIGES, O., GASSERT, R., & KUCHENBECKER, K. J., 2021. In the Arms of a Robot: Designing Autonomous Hugging Robots with Intra-Hug Gestures. ACM Transactions on Human-Robot Interaction, 1(1). Association for Computing Machinery.

BLOCKLEY, D., 2012. *Engineering*. United Kingdom: Oxford University Press.

BLOOM, D.A., 2022. Laughter is Perhaps the Best Pandemic Medicine. *Pediatric Radiology*, 52, pp.1024-1025.

BLYTHE, M., ANDERSEN, K., CLARKE, R. & WRIGHT, P., 2016. Anti-Solutionist Strategies: Seriously Silly Design Fiction. Problem-Solving or Not? The Boundaries of HCI Research. #chi4good, CHI 2016, San Jose, CA, USA.

BLYTHE, M. (ed) & MONK, A. (ed), 2018. *Funology 2: From Usability to Enjoyment (Human–Computer Interaction Series)*. New York, USA: Springer.

BOEHNER, K., VERTESI, J., SENGERS, P. & DOURISH, P., 2007. CHI 2007 Proceedings: Designing for Specific Cultures April 28th - May 3rd, 2007. San Jose, CA, USA, pp.1077-1086.

BOFINGER, K., 2011. *Wicked! Design on the Edge of Bad Taste*. Basel, Switzerland: Birkhäuser Architecture.

BORADKER, P., 2010. *Designing Things: A Critical Introduction to the Culture of Objects*. London, UK: Bloomsbury Academic.

BORDO, S., 2021. *TV*. New York, USA: Bloomsbury Publishing.

BORGE, V., 2014 in ABRANTES, R., 2014. Laughter is the Shortest Distance Between Two People. [Online] Available at: https://ethology.eu/laughter-is-the-shortest-distance-between-two-people/ [Accessed 20 Aug 2024].

BOUROULLEC, R. & BOUROULLEC, E., 2008. Ronan and Erwan Bouroullec. In FIELL, C. & FIELL, P. 2008. *Design Now!* Cologne, Germany: Taschen, pp.78-83.

BOUCOUVALAS, M., 1997. Intuition: the Concept and the Experience. In Robbie Davis-Floyd (Editor), P. Sven Arvidson (Editor), 1997. *Intuition: The Inside Story: Interdisciplinary Perspectives*. Edition. Routledge, pp3-19.

BOYD, B., 2004, Laughter and Literature: A Play Theory of Humor. *Philosophy and Literature*, 28, pp.1–23.

BRADBURY, D., 2020. *Mid-Century Modern Design*. London, UK: Thames & Hudson.

BRADLEY, H., 2015. *Design Funny: A Graphic Designer's Guide to Humor*. Cincinnati, USA: HOW Books.

BRANZI, A., 1985. We are the Primitives. In MARGOLIN, V., 1989. *Design Discourse: History, Theory, Criticism*. Chicago: University of Chicago Press. Pp. 37-41.

BREMMER, J., 1997. Jokes in Ancient Greek Culture. In *A Cultural History of Humour*. Cambridge, UK: Polity Press.

BREMMER, J. & ROODENBURG, H. (eds). 1997. *A Cultural History of Humour*. Cambridge, UK: Polity Press.

BRETT, D., 1988. The Interpretation of Ornament. *Journal of Design History*, 1(2), pp.103-111. Oxford University Press on behalf of the Design History Society.

British Museum, The, 2024. A Greek Theatre Mask. [Online] Available at http://www.teachinghistory100.org/objects/about_the_object/greek_theatre_mask [Accessed 20 Jan 2024].

BROMMAGE, T., 2015. Just Kidding, Folks!: An Expressivist Analysis of Offensive Humor. *Florida Philosophical Review,* XV(1), pp.66-77.

BROWN, B., 2001. Thing Theory. *Critical Inquiry*, 28(1), pp.1-22.

BROWN, B., 2004. *Things*. Chicago: University Of Chicago Press.

BROWN, K. D., 1998. Design in the British Toy Industry Since 1945. *Journal of Design History*, 11(4), pp.323-333. Oxford University Press on behalf of the Design History Society.

BROWN. T., CHRISTENSEN, C.M., NOOYI, I. & GOVINDARAJAN, V., 2020. *Harvard Business Review's Ten Must Reads on Design Thinking*. Boston, USA: Harvard Business Review Press.

BROWN, V.A., HARRIS, J.A. and RUSSELL, J.Y., 2010. *Tackling Wicked Problems through the Transdisciplinary Imagination*. London: Earthscan.

BROWNE, M., 1998 ‘Who needs jokes? Brain Has a Ticklish Spot’, *New York Times*, 10 March.

BROWNFIELD, R., 2024. *From Detroit to Microsoft: The Energetic Rise of Steve Ballmer*. UK: Amazon.

BROWNIE, B., 2014. A New History of Temporal Typography: Towards Fluid Letterforms. *Journal of Design History*, 27(2), pp.167-181. Oxford University Press on behalf of the Design History Society.

BRRYBNDS, 2014. Cool To Do Drugs Pencils — Yellow. [Online] Available at: https://shop.brrybnds.com/product/cool-to-do-drugs-pencil [Accessed 16 Jun 2024].

BRUZZONE, A. A. & D'ADDONA, D. M., 2019. Mind, Machines and Manufacturing: A Philosophical Essay on Machining. *Procedia CIRP*, 79, pp.580-585). Elsevier BV.

BRYANT, G.A. AND AKTIPIS, C.A., 2014. The Animal Nature of Spontaneous Human Laughter. *Evolution and Human Behaviour*, 35, pp.327-335.

BRYANT, G.A., FESSLER, D.M.T., FUSAROLI, R., CLINT, E., AMIR, D., CHÁVEZ, B., DENTON, K.K., DÍAZ, C., DURAN, L.T., FANĆOVIĆOVÁ, J., FUX, M., GINTING, E.F., HASAN, Y., HU, A., KAMBLE, S.V., KAMEDA, T., KURODA, K., LI, N.P., LUBERTI, F.R., PEYRAVI, R., PROKOP, P., QUINTELIER, K.J.P., SHIN, H.J., STIEGER, S., SUGIYAMA, L.S., VAN DEN HENDE, E.A., VICIANA-ASENSIO, H., YILDIZHAN, S.E., YONG, J.C., YUDITHA, T. AND ZHOU, Y., 2018. The Perception of Spontaneous and Volitional Laughter Across 21 Societies. *Psychological Science*, 29(9), pp.1515-1525.

BRYANT, L. R., 2011. *The Democracy of Objects*. Michigan, USA: Open Humanities Press.

BUCHANAN, R., 1992. Wicked Problems in Design Thinking. *Design Issues*, 8(2), pp.05-21.

BUCHANAN, R., 1995. *Discovering Design: Explorations In Design Studies*. Chicago, USA: University of Chicago Press.

BUCHANAN, R., 2004. Human-Centered Design: Changing Perspectives on Design Education in the East and West. *Design Issues*, 20(1), pp.30-39.

BUCHANAN, R., DOORDAN, D. & MARGOLIN, V. (eds.), 2010. *The Designed World: Images, Objects, Environments*. Oxford, UK: Berg.

BUCHANAN, R., 2004. Human-Centered Design: Changing Perspectives on Design Education in the East and West. *Design Issues*, 20(1), pp.30-39.

BUCQUOYE, M. E. & VAN DEN STORM, D., 2008. *Forms with a Smile*. Belgium: Stichting Kunstboek BVBA.

BUCQUOYE, M. E. & VAN DEN STORM, D., 2009. *Forms for Pleasure*. Belgium: Stichting Kunstboek BVBA.

von BUSCH, O. et al. (2016) *Dark Designs: Critical Cases on Design in Dark Times*. New York: New Praxis Press.

BUSH, A., 1997. Criticism and the Discerning Eye. *Design Issues*, 13(2), pp. 16-23.

BURDON, S., 2024. Art. [Online] https://www.whatshisname.co.uk/art/ [Accessed 12 June 2024].

BURGDORF, J. & PANKSEPP, J., 2001. Tickling Induces Reward in Adolescent Rats. *Physiology & Behavior,* 72, pp.167-173.

BURKE, K., L., 2017. Laughter in Keas. *American Scientist*, 105(3), pp.139.

BURKHARDT, F., 1986. Tendencies of German Design Theories in the Past Fifteen Years (translated by P. Nelles). *Design Issues*, 3(2), pp.31-36. MIT Press.

BURTON, R., 2009. *The Anatomy Of Melancholy.* Milton Keynes, UK: General Books LLC.

BUSCH, O.V., 2022. *Making Trouble: Design and Material Activism (Designing in Dark Times)*. London, UK: Bloomsbury Visual Arts.

BUTCHER, M., 1997. Eel-Traps without Eels. *Journal of Design History*, 10(4), Craft, Culture and Identity (1997), pp.417-429. Oxford University Press on behalf of the Design History Society.

BUZON, M. R., SMITH, S. T. & SIMONETTI, A., 2016. Entanglement and the Formation of the Ancient Nubian Napatan State. *American Anthropologist*, 118(2), pp.284-300). Wiley.

CAI, M., 2008. Philogelos Jokes. [Online] Available at https://languagemuseum.org/category/exhibits/virtual/worlds-oldest-joke-book/ [Accessed 27 Jan 2024].

CAIRNS, J., FELDMAN, L. & PALMISANO, F., 2021. Anchorage and Lap Capacity of Square Twisted Reinforcement for Assessment of Existing Structures. *Structural Concrete,* 22(5), pp.2813-2828.

CALVIN, W.H. 1998. *How Brains Think: Evolving Intelligence, Then & Now.* London, UK: Phoenix, div. of Orion Books Ltd.

Cambridge Dictionary, 2024. Humour [Online] Available at https://dictionary.cambridge.org/dictionary/english/humour [Accessed 4 Jan 2024].

CAMERON, A. (ed.), 2004. IdN Special 04: The Art of Experimental Interaction Design. Hong Kong: Systems Design.

Campaign, 2024. About Campaign. [Online] Available at: https://www.campaignlive.co.uk/about-us [Accessed 20 Aug 2024].

CAMPBELL, D. W., WALLACE, M. G., MODIRROUSTA, M., POLIMENI, J. O., McKEEN, N. A. & REISS, J. P., 2015. The Neural Basis of Humour Comprehension and Humour Appreciation: The Roles of the Temporoparietal Junction and Superior Frontal Gyrus. *Neuropsychologia*. 79, pp.10–20.

CAMPBELL, H. C., 1917. *The Ransome Book: How to Make and How to Use Concrete.* New York, USA: Ransome Concrete Machinery Co.

CANDLIN, F. and GUINS, R., 2009. *The Object Reader*. London: Routledge.

CARAYANNIS, E. G. (ed.), 2020. *Encyclopaedia of Creativity, Invention, Innovation and Entrepreneurship*. Cham, Switzerland: Springer.

CARAHER, W., 2019. Slow Archaeology, Punk Archaeology, and the 'Archaeology of Care'. *European Journal of Archaeology*, 22(3), pp.372–385.

CARELMAN, J., 1997. *Catalogue D'Objets Introuvables* (Catalogue of Extraordinary Objects). Paris, France: Le Cherche Midi.

CARLI, R., 2023. Is This 'Fascist' Laughter? Notes on the Ethics of Humor. *The Southern Journal of Philosophy*, 0(0), pp.1–12.

CARR, A., 2013. Because Of Steve Jobs's First Public iPhone Call, Starbucks Still Gets Orders For 4,000 Lattes. [Online] Available at https://www.fastcompany.com/3006147/because-steve-jobss-first-public-iphone-call-starbucks-still- [Accessed 28 May 2009].

CARR, J. & GREEVES, L. 2007. *The Naked Jape: Uncovering the Hidden World of Jokes. London*, UK: Penguin.

CARR, J., 2011. Tweet [Online] Available at: https://x.com/#!/jimmycarr/status/52656171399659520 [Accessed 30 July 2024].

CARRELL, A., 2008. Historical Views of Humor. In Raskin, V., (ed.), 2008. *The Primer of Humor Research*. New York, USA: Mouton De Gruyter, pp.303-332.

CARROLL, N., 2014. *Humour: A Very Short Introduction.* Oxford, UK: Oxford University Press.

CARVALHO, L. & YEOMAN, P., 2019. Connecting the Dots: Theorizing and Mapping Learning Entanglement Through Archaeology and Design. *British Journal of Educational Technology*, 50(3), pp.1104-1117.

CASSELMAN, B., 2016. The Legend of Abraham Wald. American Mathematical Society. [Online] Available at https://www.ams.org/publicoutreach/feature-column/fc-2016-06 [Accessed 30 April 2024].

CATANESE, L., 2012. Thomas Lamb, Marc Harrison, Richard Hollerith and the Origins of Universal Design. *Journal of Design History*, 25(2), pp.206-217. Oxford University Press on behalf of the Design History Society.

CATHCART, T. & KLEIN, D., 2007. *Plato and a Platypus Walk into a Bar... Understanding Philosophy Through Jokes*. New York, USA: Abrams Image.

CATHCART, T. & KLEIN, D.M., 2009. *Heidegger and a Hippo Walk through Those Pearly Gates: Using Philosophy (and Jokes!) to Explain Life, Death, the Afterlife, and Everything in Between*. New York, USA: Viking.

CAZAMIAN, L., 2010. *The Development of English Humour*. LaVergne, USA: Kessinger Publishing.

CEKAITE, A. & ANDRÉN, M., 2019. Children's Laughter and Emotion Sharing With Peers and Adults in Preschool. *Frontiers in Psychology*, 10(852), pp.1-19.

CHADHA, A., 2019. Jugaad Time: Ecologies of Everyday Hacking in India By Amit S.Rai. Durham, NC: Duke University Press, 2019. In *Visual Anthropology Review*, 35(2), pp.203-204.

CHALMERS, J. & BOOKS, L., 2011. *Push Stitchery: 30 Artists Explore the Boundaries of Stitched Art*. New York USA: Lark Books U.S.

CHANDRASEKARAN, A., VIJAYAKUMAR, A. K., ANTOL, S., BANSAL, M., BATRA, D., ZITNICK, C. L. & PARIKH, D., 2016. We are Humor Beings: Understanding and Predicting Visual Humor. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR),* pp.4603-4612.

CHANG, F. F. Y. & LOWE, B., 2020. Placing Products in Humorous Scenes: Its Impact on Brand Perceptions. *European Journal of Marketing*, 55(3) 649-670.

CHAPMAN, A. J. & FOOT, H. C. (eds.), *Humor and Laughter: Theory, Research and Applications*. New Brunswick, U.S.A: Transaction Publishers.

CHARITONIDOU, M., 2022. Ugliness in Architecture in the Australian, American, British and Italian Milieus: Subtopia Between the 1950s and the 1970s. *City, Territory and Architecture*, 9(1), Springer Science and Business Media LLC., pp.1-21.

CHARNY, D. (2011). *Power of Making: The Importance of Being Skilled*. London: V&A Publishing and the Crafts Council.

CHARTRAND, H. H., 1989. The Crafts in a Post-Modern Market. *Journal of Design History*, 2(2/3), pp.93-105. Oxford University Press on behalf of the Design History Society.

CHAUCER, G., 2008. *The Riverside Chaucer*. Oxford, UK: Oxford University Press.

CHAUDHARY, T., GOEL, M. & MAMIDI, R., 2021. Towards Conversational Humour Analysis and Design. In: 11th Humor Research Conference. International Institute of Information Technology, 26-27 February 2021. Hyderabad, India.

CHENG, D., AMARNANI, R., LE, T. AND RESTUBOG, S., 2018. Laughter Is (Powerful) Medicine: the Effects of Humor Exposure on the Well-being of Victims of Aggression. *Journal of Business and Psychology*, 34, pp.389-402.

CHERKASKY, T., 2004. Design Style: Changing Dominant Design Practice. *Design Issues*, 20(3), pp.25-39.

CHEUNG, V., 2007. *(Art)ifact.* Victionary.

CHRISTENSEN, M., MICHEL, R. & JONAS, W. (eds.), 2021. *NERD - New Experimental Research in Design 2*. Basel, Switzerland: Birkhäuser.

CLAESSON, KOIVISTO & RUNE, 2008. Claesson, Koivisto, Rune. In FIELL, C. & FIELL, P. 2008. *Design Now!* Cologne, Germany: Taschen, pp. 90-95.

CLARK, E., 2019. Teaming Up to Take On the Tech Giants. Los Angeles, USA: WWD.com [Online] Available at http://ezproxy.cardiffmet.ac.uk/login?url=https://www.proquest.com/trade-journals/teaming-up-take-on-tech-giants/docview/2312050857/se-2?accountid=15588 [Accessed 27 March 2024].

CLARK, H. & BRODY, D., (eds.), 2009a. *Design Studies: A Reader*. Oxford, UK: Berg.

CLARK, H. & BRODY, D., 2009b. The Current State of Design History. *Journal of Design History*, 22(4), pp.303-308. Oxford University Press on behalf of the Design History Society.

CLARK, P., 1992. Ben Bowden's 'Bicycle of the Future', 1946. *Journal of Design History*, 5(3), pp.227-235. Oxford University Press on behalf of the Design History Society.

CLARK, P. & FREEMAN, J., 2000. *Design*. Lewes, UK: Simon & Schuster.

CLARKE, A., 2008. *The Pattern Recognition Theory of Humour*. Cumbria, UK: Pyrrhic House.

CLARKE, A., 2010. *The Faculty of Adaptability: Humour's Contribution to Human Ingenuity*. Cumbria, UK: Pyrrhic House.

CLARKE, A. J., 2016. Design for Development, ICSID and UNIDO: The Anthropological Turn in 1970s Design. *Journal of Design History*, 29(1), Special Issue: Design Dispersed, pp.43-57. Oxford University Press on behalf of the Design History Society.

CLARKE, P. & SAUERS, J., 1996. *Pundemonium: A Step by Schlep Guide to Humour's Lowest Form*. Port Melbourne, Australia: Reed International Books/William Heinemann Australia.

CLASSEN, A. (ed.), 2010. *Laughter in the Middle Ages and Early Modern Times: Epistemology of a Fundamental Human Behavior, Its Meaning, and Consequences*. [e-book] De Gruyter, Inc. ProQuest Ebook Central.

CLAXTON, G., 2000. The Anatomy of Intuition. In Atkinson, T. & Claxton, G. (Eds.), 2000. *The Intuitive Practitioner: On the Value of Not Always Knowing What One is Doing*. Buckingham, UK: Open University Press. pp. 32-52.

CLEESE, J., 2021. John Cleese on Fawlty Towers. In ‘What’s Funny About…’ BBC Radio 4, Series 2, Episode 5, Broadcast on 20 Oct 2021. [Online] Available at: https://www.bbc.co.uk/sounds/play/m0010p13 [Accessed 20 Oct 2021].

CLEMENS, J., 2016. Pull My Finger. In BATES, A. & GLICKFELD, E., 2016. *Dirty Furniture: Toilet (3/6)*. London, UK: Dirty Furniture, pp.76-85.

CLIFT, R., 2016. Don’t Make Me Laugh: Responsive Laughter in (Dis)Affiliation. *Journal of Pragmatics*, 100, pp.73-88.

CNBC, 2007a. Steve Ballmer Interviewed by Scott Wapner for CNBC News. [Online] Available at: https://www.youtube.com/watch?v=eywi0h_Y5_U&t=34s [Accessed 6th May 2024].

CNBC, 2007b. Microsoft's Ballmer Not Impressed with Apple iPhone: CNBC. [Online] Available at: https://www.cnbc.com/id/16671712 [Accessed 6th May 2024].

COBONPUE, K., 2008. Keith Cobonpue. In FIELL, C. & FIELL, P. 2008. *Design Now!* Cologne, Germany: Taschen, pp.96-101.

COHEN, T., 1999. *Jokes: Philosophical Thoughts on Joking Matters*. Chicago, USA: University of Chicago Press.

COLARUSSO, G., 2022. Improbabilita (Improbability). [Online] https://www.giuseppecolarusso.it/improbabilita_ [Accessed 12 June 2024].

COLBORNE, G., 2011. *Simple and Usable: Web, Mobile, and Interaction Design*. Berkeley, CA: New Riders Publishing

COLEBROOK, C., 2002. *Gilles Deleuze*. London, UK: Routledge.

COLES, A. (ed.), 2007. *Design and Art*. London, UK: Whitechapel Art Gallery.

COLES, A., 2012. *The Transdisciplinary Studio*. New York, USA: Sternberg Press.

COLLINS, M., 2004. *Eccentric Contraptions*. Newton Abbot, UK: David & Charles.

COLLINS, M., 2005. *Ingenious Gadgets: Guess the Obscure Purpose of Over 100 Eccentric Contraptions*. UK: David & Charles.

COLLOPY, F., 2019. Why the Failure of Systems Thinking Should Inform the Future of Design Thinking. *Design Issues*, 35(2), pp.97-100. MIT Press.

COLOMBO, F. L., 2017. What is Life? Exploring Mies van der Rohe’s Concept of Architecture as a Life Process. *The Journal of Architecture*, 22(8), Routledge, pp.1267-1286.

CONNOLLY, S., 2002. *Vivienne Westwood*. Oxford, UK: Heinemann Library, Reed Educational and Professional Publishing Ltd.

CONNOLLY, W., 2013. The 'New Materialism' and the Fragility of Things. *Millennium: Journal of International Studies*, 41(3), pp.399-412.

Contemporary Design (Symposium) 2007. Geneva. *AC/DC Contemporary Art/ Contemporary Design* (English and French Edition). JRP Ringier.

COOK, J., 2012. Bellwether Interview Methodology. [Online] Available at: https://aea365.org/blog/joelle-cook-on-the-bellwether-interview-methodology/ [Accessed 12 June 2024].

COOLE, D.H. & FROST, S., 2010. *New Materialisms: Ontology, Agency, and Politics*. Durham, NC: Duke University Press.

COOPER, A., A., (Earl of Shaftesbury), 2011. An Essay on the Freedom of Wit and Humour [Online] Available at: https://www.earlymoderntexts.com/assets/pdfs/shaftesbury1709a_1.pdf [Accessed 23 Nov 2023].

COOPER, C., 2004. *Patently Absurd: The Most Ridiculous Devices Ever Invented*. London: Robson.

CORBUSIER, 1986. *Towards a New Architecture*. New York, USA: Dover Publications, Inc.

Corning, 2024. A Look Behind Corning® Gorilla® Glass. [Online] Available at: https://www.corning.com/gorillaglass/worldwide/en/a-look-behind-corning-gorilla-glass.html [Accessed 28 June 2024].

COSENTINO, S., SESSA, S. AND TAKANISHI, A., 2016. Quantitative Laughter Detection, Measurement, and Classification — A Critical Survey. *IEEE Reviews in Biomedical Engineering*, 9, pp.148-162.

COSTANZO, D. R., 2018. Robert Venturi: 1925–2018. *Architectural Research Quarterly* 22(4), pp. 284-289. Cambridge, UK: Cambridge University Press (CUP).

COURLAND, R., 2011. *Concrete Planet*. USA: Prometheus.

COX, J., 2009. Microsoft's Mobile Turnaround: What is at Stake. Network World. Southborough, USA. [Online] Available at http://ezproxy.cardiffmet.ac.uk/login?url=https://www.proquest.com/trade-journals/microsofts-mobile-turnaround-whats-at-stake/docview/223734299/se-2?accountid=15588 [Accessed 27 March 2024].

CRASSET, M., 2008. Matali Crasset. In FIELL, C. & FIELL, P. 2008. *Design Now!* Cologne, Germany: Taschen, pp.106-111.

CRAWFORD, S. C., 2004. Actor Network Theory. In Ritzer, G. (ed.), 2004. *Encyclopaedia of Social Theory*. USA: Sage Publications Inc., pp.1-3.

Creative Industries Council, 2019. The Value Of The UK Design Industry [Online] Available at: https://www.thecreativeindustries.co.uk/facts-figures/industries-design-design-facts-and-figures-the-value-of-the-uk-design-industry#:~:text=The%20UK%20Design%20sector%20%2D%20economic%20snapshot&text=There%20are%20163%2C000%20UK%20design,are%20educated%20to%20degree%20level. [Accessed 12 June 2024].

CRESSMAN, D., 2009. A Brief Overview of Actor-Network Theory: Punctualization, Heterogeneous Engineering & Translation. ACT Lab/Centre for Policy Research on Science & Technology (CPROST) School of Communication, Simon Fraser University. Burnaby, Canada.

CRITCHLEY, S., 2002. *On Humour*. Abingdon, UK: Routledge.

CRITCHLEY, S., 2005. Did You Hear the Joke About the Philosopher Who Wrote a Book About Humour? In: LUNN, F., and MUNDER, H. (Eds.). 2005. *When Humour Becomes Painful*. Zurich, Switzerland: JRP Ringier. pp. 44–51.

CROSS, N., 1997 Creativity in Design: Analyzing and Modelling the Creative Leap. *Leonardo*, 30(4), pp.311-317. The MIT Press, USA.

CROSS, N., 1999. Design Research: A Disciplined Conversation. *Design Issues*, 15(2), pp.5-10. MIT Press, USA.

CROSS, N., 2001. Designerly Ways of Knowing: Design Discipline Versus Design Science. *Design Issues*, 17(3), pp. 49-55.

CROSS, N., 2004a. Expertise in Design: An Overview. *Design Studies,* 25(5), pp.427-441. Elsevier BV.

CROSS, N., 2004b. Editorial. Design Studies Special Issue: Expertise in Design. *Design Studies*, 2595), pp.425-426. Elsevier BV.

CROSS, N., 2005. Editorial. *Design Studies,* 26(1), pp.1-3. Elsevier BV.

CROSS, N., 2007a. *Designerly Ways of Knowing*. Basel, Switzerland: Birkhäuser.

CROSS, N., 2007b. Forty Years of Design Research. *Design Studies,* 28(1), pp.1-4. Elsevier BV.

CROSS, N., 2010. Review: Design Expertise, Bryan Lawson and Kees Dorst. *Design Studies*, 31(2), pp.203-205. Elsevier BV.

CROSS, N., 2011. *Design Thinking: Understanding How Designers Think and Work*. Oxford, UK: Berg.

CROSS, N., 2018a. Developing Design as a Discipline. *Journal of Engineering Design,* 29(12), pp.691-708. Informa UK Ltd.

CROSS, N., 2018b. A Brief History of the Design Thinking Research Symposium Series. *Design Studies*, 57, pp.160-164. Elsevier BV.

CROSS, N., 2019. Editorial: Design as a Discipline. *Design Studies,* 65, pp.1-5. Elsevier BV.

CROSS, N., 2023. Design thinking: What just happened? *Design Studies,* 86, p.101187. Elsevier BV.

CROSS, N., 2023. *Design Thinking: Understanding How Designers Think and Work*. 2nd edition. London, UK: Bloomsbury.

CROW, D., 2010. *Visible Signs: an Introduction to Semiotics in the Visual Arts*. Lausanne: AVA Publishing SA.

CSIKSZENTMIHALYI M. & HALTON, E. 1981. *The Meaning of Things: Domestic Symbols and the Self*. Cambridge, UK: Cambridge University Press.

CULLEN, J., 2009. The Three Minds Argument. *Journal of Evolution and Technology*, 20(1), pp.51–60.

CUNÍ. B., 2011, One Coffee Cup a Day. [Online] https://www.cunicode.com/works/one-coffee-cup-a-day [Accessed 12 June 2024].

CUPCHIK, C. G., 2002. The Evolution of Psychical Distance as an Aesthetic Concept. *Culture & Psychology,* 8(2), pp.155-187. London, UK: SAGE Publications.

DABS, P., 2021. *Product Design Styling*. London, UK: Lawrence King.

DAGSSON, H., 2006a. *Avoid Us*. Reykjavik, Iceland: JPV Publishers.

DAGSSON, H., 2006b. *Should You Be Laughing At This?* London, UK. Michael Joseph.

DAGSSON, H., 2007. *Is This Supposed To Be Funny?* London, UK. Michael Joseph.

DAGSSON, H., 2008. *Is This Some Kind Of Joke?* London, UK. Michael Joseph.

DAGSSON, H., 2013a. *I Hate Dolphins*. Reykjavik, Iceland: Ókeibæ.

DAGSSON, H., 2013b. *My pussy is hungry*. Reykjavik, Iceland: Ókeibæ.

DAHLMAN, C., SARWAR, F., BÅÅTH, R., WAHLBERG, L. & SIKSTRÖM, S., 2015. Prototype Effect and the Persuasiveness of Generalizations. *Review of Philosophy and Psychology,* 7(1), pp.163-180. Springer Science and Business Media LLC.

DALE, R. & WEAVER, R., 1993. *Machines in the Office*. London, UK: British Library Press.

Dallas Morning News, 2009. Steve Ballmer, 2007: "There's no chance that the iPhone is going to get any significant market share. No chance.". Dallas, USA: Newstex. [Online] Available at http://ezproxy.cardiffmet.ac.uk/login?url=https://www.proquest.com/blogs-podcasts-websites/steve-ballmer-2007-theres-no-chance-that-iphone/docview/189674927/se-2?accountid=15588 [Accessed 27 March 2024].

DALSGAARD, P. & DINDLER, C., 2014. Between Theory and Practice: Bridging Concepts in HCI Research. CHI 2014: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems. April 2014. Toronto, ON, Canada. Pp.1635-1644.

DANCHEV, A., 2011. *100 Artists' Manifestos*. London: Penguin.

DARWIN, C., 1999. *Expression of the Emotions in Man and Animals* (200th Anniversary edn). Fontana.

DAVIES, C., 2016. Smells like teen spirit: Channelling subcultural traditions in contemporary Dr. Martens branding. *Journal of Consumer Culture*, 16(1), 192-208.

DAVIES, S., 2013. *Improve Your Life with Laughology: The Science of Laughter*. UK: Crown House Publishing.

DAVILA-ROSS, M., ALLCOCK, B., THOMAS, C. AND BARD, K.A., 2011. Aping Expressions? Chimpanzees Produce Distinct Laugh Types When Responding to Laughter of Others. *Emotion (American Psychological Association)*, 11(5), pp.1013-1020.

DAVIS, J. L., 2020. *How Artifacts Afford: The Power and Politics of Everyday Things*. Cambridge, USA: The MIT Press.

DAVIS-FLOYD, R. & ARVIDSON, P. S. (Eds), 1997. *Intuition: The Inside Story: Interdisciplinary Perspectives*. New York, USA: Routledge.

de BONT, C. & LIU, S. X., 2017. Breakthrough Innovation Through Design Education: Perspectives of Design-Led Innovators. *Design Issues*, 33(2), pp.18-30. MIT Press, USA.

de GOEY, H., HILLETOFTH, P. AND ERIKSSON, L., 2017. Design-Driven Innovation: Making Meaning for Whom?'. *The Design Journal*. 20(sup1), S479-S491. Informa UK Limited.

de GOEY, H., HILLETOFTH, P. AND ERIKSSON, L., 2019. Design-Driven Innovation: A Systematic Literature Review. *European Business Review*. 31(1), pp.92-114. Emerald.

De JUAN, A., & CULLARS, J., 2000. Three Essays on Design. *Design Issues*, 16(2), pp.45-61.

De VITA, E., 2012. Jugaad Innovation. *Third Sector*. 709, pp.21.

DEELY, J., 2001. Umwelt, Semiotica, 134(1), pp.125-135. In DE LANDA, M., 2000. *A Thousand Years of Nonlinear History*. New York, USA: Swerve Editions.

Defense Technical Information Center, 2024. A Reprint of 'A Method of Estimating Plane Vulnerability Based on Damage of Survivors'. [Online] Available at https://apps.dtic.mil/sti/citations/ADA091073 [Accessed 30 April 2024].

DeLANDA, M., 1997. *A Thousand Years of Nonlinear History*. New York, USA: Zone Books.

DeLANDA, M., 2006. *A New Philosophy of Society: Assemblage Theory and Social Complexity*. London, UK: Continuum Books.

DELANEY, C., 2011. Humor-Centered Design: Using Humor as a Rhetorical Approach in Design. Thesis, Carnegie Mellon University, USA.

DEMIRBILEK, O. & SENER, B., 2003. Product Design, Semantics and Emotional Response. *Ergonomics*, 46(13/14), pp.1346-1360.

DENCIK, L., 2006. *Shift: Design As Usual - or a New Rising?* Stockholm, Sweden: Arvinius Forlag.

DER, L. & FERNANDINI, F. (eds)., 2016. *Archaeology of Entanglement*. UK: Routledge.

DERKS, P., 1995. *In CHAPMAN, A. J. & FOOT, H. C.* (eds.), *Humor and Laughter: Theory, Research and Applications*. New Brunswick, U.S.A: Transaction Publishers.

DERKS, P., STALEY, R. E., & HASELTON, 1998. "Sense" of Humour: Perception, Intelligence, or Expertise? In RUCH, W., 1998. *The Sense of Humor: Explorations of a Personality Characteristic*. Berlin: Mouton De Gruyter.

Design Council, N.D. How To Commission A Designer: Step 4 — Brief Your Designer. [online] Available at: https://www.designcouncil.org.uk/news-opinion/how-commission-designer-step-4-brief-your-designer [Accessed 28 April. 2020].

Design Issues, 2024. Design Issues. [Online] Available at: https://direct.mit.edu/desi [Accessed 17 June 2024].

The Design Journal, 2024. The Design Journal: An International Journal for All Aspects of Design. [Online] https://eadresearch.org/design-journal/ [Accessed 17 June 2024].

DEWEY, J., 2005. *Art as experience. New York: Perigee Books.*

DICKENSON, C., 2011. Tweet [Online] Available at: https://x.com/#!/CharliDickenson [Accessed 30 July 2024].

DILLON, B., 2004. Collected Works: Aby Warburg's Mnemosyne Atlas. *Frieze*, 80. Also [online] Available at: http://www.frieze.com/issue/article/collected_works/ [Accessed 05 August 2011].

DILNOT, C., 1984a. The State of Design History, Part I: Mapping the Field. *Design Issues*, 1(1), pp.4-23. The MIT Press.

DILNOT, C., 1984b. The State of Design History, Part II: Problems and Possibilities. *Design Issues*, 1(2), pp.3-20. The MIT Press.

DILNOT, C., 2009. Some Futures for Design History? *Journal of Design History*, 22(4), The Current State of Design History (2009), pp.377-394. Oxford University Press on behalf of the Design History Society.

DILNOT, C., FRY, T. & STEWART, S., 2015, *Design and the Question of History*. UK: Berg Publishers.

DILNOT, C. & SÁNCHEZ-MORENO, L., 2019. John Heskett's Industrial Design: An Interview at Middlesex Polytechnic, 1981: Part Two: The Emergence of the Role of the Design and the Designer in the Industrial Economy. *Design Issues* 35(2), pp.46-59). MIT Press.

DIONIGI, A. & GOLDBERG, A., 2020. Highly Sensitive Persons, Caregiving Strategies and Humour: The Case of Italian and Israeli Medical Clowns. *The European Journal of Humour Research*, 7(4), pp.1-15.

DiSALVO, C., 2015. *Adversarial Design (Design Thinking, Design Theory)*. Massachusetts, USA: The MIT Press.

DIX, A., 2004. Design Focus: Cultural probes. [online] Available at:<http://www.hcibook.com/e3/casestudy/cultural-probes/> [Accessed 05 March 2013].

Van DOLEN W. M., De RUYTER, K. & STREUKENS, S., 2008. The Effect of Humor in Electronic Service Encounters. *Journal of Economic Psychology*, 29. pp.160-179.

DOBLIN, J., 1959. The 100 "Best Designed" Products. *Fortune Magazine*, April, 1959, pp.135-141.

DOLOUGHAN, F. J., 2002. The Language of Reflective Practice in Art and Design. *Design Issues*, 18(2), pp.57-64.

DONALD, C., DURY, G., THORP, S., DONALD, S. & 'Viz Readers', 1994. *The Original and Best Letterbocks 'Top Tips': Pearls of Thrift and Wisdom from the Pages of Viz*. London, UK: John Brown Publishing Ltd.

DOORDAN, D. P., 1996. *Design History: An Anthology*. Cambridge, MA, USA: The MIT Press.

DORMER, P., 1997. *The Culture of Craft: Status and Future.* Manchester, UK: Manchester University Press.

DORST, K., 2006. Design Problems and Design Paradoxes. *Design Issues*, 22(3), pp.4-17, MIT Press, USA.

DORST, K. & CROSS, N., 2001. Creativity in the Design Process: Co-Evolution of Problem–Solution. *Design Studies*, 22, pp.425-437. UK: Elsevier Science Ltd.

DRAYSON, H., 2018. Design(ing) and the Placebo Effect — A Productive Idea. *Design Issues,* 34(3), pp.17-27. MIT Press.

DREYFUSS, H., 2003. *Designing for People*. New York: Allworth Press.

DRU, J-M. 2015. *The Ways to New: 15 Paths to Disruptive Innovation*. John Wiley & Sons Inc.

DUEREN, A. L., VAFEIADOU, A., EDGAR, C. & BANISSY, M. J., 2021. The Influence of Duration, Arm Crossing Style, Gender, and Emotional Closeness on Hugging Behaviour. *Acta Psychologica,* 221, pp.103441. Elsevier BV.

DUNBAR, R., I., M., BARON, R., FRANGOU, A., PEARCE, E., VAN LEEUWEN, E.J.C., STOW, J., PARTRIDGE, G., MACDONALD, I., BARRA, V. AND VAN VUGT, M., 2011. Social Laughter is Correlated with an Elevated Pain Threshold. Proceedings of the Royal Society B: Biological Sciences, 279, pp.1161-1167.

DUNBAR, R., I., M., FRANGOU, A., GRAINGER, F. & PEARCE, E., 2021. Laughter Influences Social Bonding But Not Prosocial Generosity to Friends and Strangers. *PLoS ONE*, 16(8), pp.1-18.

DUNNE, A., 1999. *Hertzian Tales: Aesthetic Experience and Critical Design*. London, UK: Royal College of Art, CRD Research Publications.

DUNNE, A. & GAVER, W., 1997. The Pillow: Artist Designers in the Digital Age. CHI '97. *Extended Abstracts on Human Factors in Computing Systems: Looking to the Future*. ACM.

DUNNE, A. & RABY, F., 2001. *Design Noir: The Secret Life of Electronic Objects*. Basel, Switzerland: Birkhäuser.

DUNNE, A. & RABY, F., 2007. Critical Design FAQ. [Online] Available at: https://dunneandraby.co.uk/content/bydandr/13/0 [Accessed 04 Aug 2024].

DUNNE, A. & RABY, F., 2013. *Speculative Everything: Design, Fiction, and Social Dreaming*. The MIT Press.

DUPUY, J. P., 2000. *On The Origins of Cognitive Science: the Mechanisation of the Mind* (translated by DeBevoise). Princeton, USA: Princeton University Press.

DURFEE, T. & ZEIGER, M., 2018. *Made Up: Design's Fictions*. New York, USA: Actar.

DURRANT, A. C., VINES, J., WALLACE, J., & YEE, J. S. R., 2017. Research Through Design: Twenty-First Century Makers and Materialities. *Design Issues,* 33(3), pp.3-10). MIT Press.

DURY, G., JONES, D., THORP, S. & 'Viz Readers', 2012. *Top Tips 2, from the pages of Viz: 1000 More Hilarious Household Hints in a Reasonably Priced Book*. London, UK: Dennis Publishing Ltd.

DZIEWIOR, Y. & RUF, B. (eds), 2005. *Sarah Lucas*. Ostfildern-Ruit, Germany: Hatje Cantz.

EAGLETON, T., 2019. *Humour*. New Haven, USA: Yale University Press.

EASTLAKE, C., 2003. Hints on Household Taste. In GORMAN, C., 2003. *The Industrial Design Reader*. New York: Allworth Press, pp.25-28.

EBENDORF, R. W., 2003. *1000 Rings*. New York, USA: Lark Books.

EBERHART, M., 2003. *Why Things Break: Understanding the World by the Way It Comes Apart*. New York: Harmony Books.

ECO, U., 2010. *On Beauty: A History of a Western Idea*. London, UK: MacLehose Press.

ECO, U., 2011. *On Ugliness*. London, UK: MacLehose Press.

EDGE, D. & BLACKWELL, A. F., 2009. Peripheral Tangible Interaction by Analytic Design. Proceedings of the Third International Conference on Tangible and Embedded Interaction (TEI'09), Feb 16-18, 2009, pp.Cambridge, UK.

EDWARDS, C., 2014. "Multum in Parvo": 'A Place for Everything and Everything in its Place'. Modernism, Spacesaving Bedroom Furniture and the Compactom Wardrobe. *Journal of Design History*, 27(1), pp.17-37. Oxford University Press on behalf of the Design History Society.

EGER, A. O. & EHLHARDT, H., 2018. *On the Origin of Products: The Evolution of Product Innovation and Design*. Cambridge, UK: Cambridge University Press.

Egypt Museum, 2024. Ostracon of a Cat Waiting on a Mouse. [Online] Available at https://egypt-museum.com/ostracon-of-cat-waiting-on-mouse/ [Accessed 20 Jan 2024].

EJHR, 2024. European Journal of Humour Research. [Online] https://europeanjournalofhumour.org/ejhr [Accessed 13 June 2024].

EL-ATTAR, A.-A.M.M., MOHAMED, A.A., HASAN, M.A. AND ABDEL-RAOOF, A.M., 2021. LC-Tandem Mass Spectrometry for Quantifying Three Drugs Simultaneously Utilized for Treating Chlamydia Trachomatis Infection in Rabbit's Aqueous Humor:

Experimental Central Composite Aided Design Augmented Lean Six Sigma. *Microchemical Journal,* 169, 106571, pp.1-7.

ELIAS, N., 2017. Essay on Laughter. *Critical Inquiry*, 43, pp.281-304.

ELYEA, C., 2010. Push, Pull, or Imitate Maxwell Smart? [online] Available at: http://chriselyea.com/design-lessons-learned/badly-designed-doors/ [accessed 20 March 2012].

ENDLER, J. A. & DAY, L. B., 2006. Ornament Colour Selection, Visual Contrast and the Shape of Colour Preference Functions in Great Bowerbirds, Chlamydera Nuchalis. *Animal Behaviour* 72(6), pp.1405-1416). Elsevier BV.

ENGEL, U., 2015. 'Fit for its purpose': Nikolaus Pevsner Argues for the Modern Movement. *Journal of Design History*, 28(1), Special Issue: Between Avant-Garde and Commercialism: Reconsidering Émigrés and Design (2015), pp.15-32. Oxford University Press on behalf of the Design History Society.

ENGLISH, S., 2009. Enhancing the Reflective Capabilities of Professional Design Practitioners. Undisciplined! Design Research Society Conference 2008, 16-19 July 2008, Sheffield Hallam University, Sheffield, UK.

ENGLISH, S., 2010. Multiple Perspective Problem Framing. How Do Designers Think About Situations To Reveal Hidden Opportunities? PhD Thesis, Newcastle, UK: Northumbria University.

ENGLISH, S., 2024. Multiple Perspective Problem Framing method: A Practical Guide. Iconet Ltd. Ideas-Lab.

ERHARD, M., KRENN, M., & ZEILINGER, A., 2020. Advances in High-Dimensional Quantum Entanglement. *Nature Reviews Physics,* 2(7), pp.365-381.

ERLHOFF, M., 2004. *Product Design.* Berlin, Germany: Feierabend.

ERLHOFF, M. & JONAS, W. (eds.), 2018. *NERD – New Experimental Research in Design*. Basel, Switzerland: Birkhäuser.

ERLHOFF, M. & MARSHALL, T., 2008. *Design Dictionary: Perspectives on Design Terminology*. Basel, Switzerland: Birkhäuser Verlag.

ERRAZURIZ, S., 2004. Birds. [Online] https://sebastian.studio/design-birds [Accessed 12 June 2024].

ERVIN-TRIPP, S.M., 2009. *Humor in Interaction*. Neal R. Norrick & Delia Chiaro (eds.) Netherlands: Benjamins, John Publishing Company.

EVANS, J., 2017. Apple's iPhone: 10 Years Old and Only Getting Started. Computerworld.com. Framingham, USA: Foundry. [Online] Available at http://ezproxy.cardiffmet.ac.uk/login?url=https://www.proquest.com/other-sources/apple-s-

iphone-10-years-old-only-getting-started/docview/1856942630/se-2?accountid=15588 [Accessed 27 March 2024].

EWANS, M., 2015. Ancient Greek Comedy. In Attardo, S., (ed.), 2015. *Encyclopaedia of Humor Studies*. Thousand Oaks, California, USA: Sage Publications, Inc., pp.31-34.

EWIN, R. E., 2001. Hobbes on Laughter. *The Philosophical Quarterly*, 51(202), pp.29-40.

FAGAN, B. M. & DURRANI, N., 2019. *What We Did in Bed: A Horizontal History*. New Haven, USA: Yale University Press.

FAIRCHILD, J., 1989. *Chic Savages: The New Rich, The Old Rich, And The World They Inhabit*. New York, USA: Simon & Schuster Inc.

FAIRS, M., 2011. *21st Century Design: New Design Icons from Mass Market to Avant-Garde*. Carlton Books.

FALLAN, K., 2010. *Design History: Understanding Theory and Method*. Oxford, UK: Berg.

FALLAN, K., 2013. Kombi-Nation: Mini Bicycles as Moving Memories. *Journal of Design History*, 26(1), pp.65-85. Oxford University Press on behalf of the Design History Society.

FANINI, L. & GUITTARD, A., 2021. On Single Use Plastic Straws: Pre-Ban Findings on Touristic Beaches in Crete. *Marine Pollution Bulletin*, 171, 112790, Elsevier.

FEILER, B., 2009. *Under the Big Top.* London, UK: Harper Collins.

FELS, D., BLACKLER, A. & NIEDDERER, K., 2021. Does Bouncy Equal Happy? Comparing User's Interpretations of Emotions Conveyed by One Designed Moving Object Based on the Soma-Semiotic Framework. *Applied Ergonomics*, 96. pp.1-14.

FERRY, E., 2003. 'Decorators May Be Compared to Doctors': An Analysis of Rhoda and Agnes Garrett's "Suggestions for House Decoration in Painting, Woodwork and Furniture (1876)". *Journal of Design History*, 16(1), Domestic Design Advice (2003), pp.15-33. Oxford University Press on behalf of the Design History Society.

FIELL, C. & FIELL, P., 2008. *Design Now!* Köln, Germany: Taschen.

FIELL, C. & FIELL, P., 2013. *The Story of Design*. London, UK: Goodman.

FIELL, C. & FIELL, P., 2017. *1000 Lights*. Köln, Germany: Taschen.

FIELL, C. & FIELL, P., 2023. *Chairs: 1,000 Masterpieces of Modern Design, 1800 to the Present Day. London, UK:* Welbeck Non-Fiction Ltd.

FIELL, C., FIELL, P., BINDER, K., GAINES, J. & BOSSER, J., 2017. *1000 Chairs*. Köln, Germany: Taschen.

FIELL, P. & FIELL, C., 2019. *100 Ideas That Changed Design*. London, UK: Laurence King Publishing.

FILANI, I., 2023. Book Review: Eagleton, Terry (2019) 'Humour'. *The European Journal of Humour Research*, 11(1), pp.216-217.

FINDELI, A., 1994. Ethics, Aesthetics, and Design. *Design Issues*, 10(2), pp.49-68.

FINDELI, A., 1995. Design History or Design Studies: Methodological, Epistemological and Pedagogical Inquiry. *Design Issues*, 11(1), pp.43-65.

FINEDER, M. & GEISLER, T., 2010. Design Criticism and Critical Design in the Writings of Victor Papanek (1923–1998). *Journal of Design History*, 23(1), Model, Method and Mediation in the History of Housing Design (2010), pp.99-106. Oxford University Press on behalf of the Design History Society.

FISHER, T. H., 2004. What We Touch, Touches Us: Materials, Affects, and Affordances. *Design Issues,* 20(4), pp.20-31.

FITZGERALD, T. & TAYLOR, A., 2014. *1000 Dresses : The Fashion Design Resource*. London, UK: Thames & Hudson.

FLAIG, P., 2021. Bergson's Boffo Laughter. *Journal of Cinema and Media Studies*, 60(2), pp.4-31.

FLETCHER, A., 2001. *The Art of Looking Sideways*. London, UK: Phaidon Press.

FLETCHER, D., 2010. The 50 Worst Inventions, #5 :CueCat. [Online] Available at: https://content.time.com/time/specials/packages/article/0,28804,1991915_1991909_1991857,00.html [Accessed 12 June 2024].

FLUSSER, V. & CULLARS, J., 1995a. On the Word Design: An Etymological Essay. *Design Issues*, 11(3), pp.50-53.

FLUSSER, V. & CULLARS, J., 1995b. The Designer's Glance. *Design Issues*, 11(3), pp.53-55.

FLUSSER, V. & CULLARS, J., 1995c. On Forms and Formulas. *Design Issues*, 11(3), pp.55-57.

FORD, T. E. & FERGUSON, M. A., 2004. Social Consequences of Disparagement Humor: A Prejudiced Norm Theory. *Personality and Social Psychology Review*, 8(1), pp.79-94. Department of Sociology Western Michigan University: Lawrence Erlbaum Associates, Inc.

FORLIZZI, J., & LEBBON, C., 2002. From Formalism to Social Significance in Communication Design. *Design Issues*, 18(4), pp.3-13.

FORSTER, F.M.C., 2011. *21st Century Design: New Design Icons from Mass Market to Avant-garde*. London: Carlton.

FORTY, A., 1992. *Objects of Desire: Design and Society Since 1750*. London, UK: Thames & Hudson.

FORTY, A., 1995. Debate: A Reply to Victor Margolin. *Design Issues*, 11(1), pp.16-18. The MIT Press.

FOSTER, C., 2016. *Being a Beast: Adventures Across the Species Divide*. New York, USA: Metropolitan Books, Henry Holt & Company.

FOSTER, H., 2003. *Design and Crime: And Other Diatribes*. London: Verso.

FOSTER, H., 2004. *Prosthetic Gods*. Cambridge, Mass: MIT Press.

FRANKFURT, H. G., 2005. *On Bullshit*. New Jersey, USA: Princeton University Press.

FRANKLIN, B., 2024. *The Way to Wealth*. UK: Amazon.

FRASCARA, J., 2019. The Science of Design: Tomás Maldonado, Buenos Aires 1922 – Milano 2018. *Design Issues,* 35(2), pp.93-96. MIT Press.

FRAYLING, C., 2011. *On Craftsmanship: Towards a New Bauhaus*. London: Oberon Books.

FREDENGREN, C., 2021. Beyond Entanglement. *Current Swedish Archaeology*, 29, pp.11-33.

FREDERICK, M., 2007. *101 things I learned in architecture school*. Cambridge, MA, USA: The MIT Press.

FREDRICKSON, L., 1999. Vision and Material Practice: Vladimir Tatlin and the Design of Everyday Objects. *Design Issues*, 15(1), pp.49-74.

FREUD, S., 1976. *Jokes and Their Relation to the Unconscious*. New York, USA: W. W. Norton & Co.

FREUD, S., 2002. *Civilisation and Its Discontents* (translated by D. McLintock). London, UK: Penguin.

FREUD, S., 2003. *The Uncanny*. New York, USA: Penguin Books.

FREYER, C. & STUDIO TROIKA, 2009. *Digital by Design: Crafting Technology for Products and Environments*. Thames & Hudson.

FRIED, I. WILSON, CL. MacDONALD, KA. & BEHNKE, EJ., 1998. Electric Current Stimulates Laughter. *Nature (Scientific Correspondence)*, 391, pp.650.

FRY, T., 2010. *Design as Politics*. London, UK: Berg Publishers.

FRY, T., 2012. *Becoming Human by Design*. London, UK: Berg Publishers.

FRY, T., DILNOT, C., STEWART, S., 2015. *Design and the Question of History*. New York, USA: Bloomsbury Academic.

FRY, W. F., 2010. *Sweet Madness: A Study of Humor*. Piscataway, USA: Transaction Publishers.

FUKASAWA, N. & MORRISON, J., 2007. *Super Normal: Sensations of the Ordinary.* Zürich, Switzerland: Lars Müller Publishers.

FULLER, R. B., 1981. *Critical Path.* New York, USA: St. Matin's Press.

FULTON-SURI, J., 2005. *Thoughtless Acts?: Observations on Intuitive Design*. Chronicle Books

Funny Cow Design, 2024. *1000 Pictures of Big Boobs (Funny Fake Gag Book Cover Lined Notebook Gift For Adult Men Perfect For Practical Joke)*. UK: Amazon.

FURY, A., WESTWOOD, V. & KRONTHALER, A., 2021. *Vivienne Westwood: Catwalk, the Complete Collections*. London, UK: Thames And Hudson.

GARNER, S. & EVANS, C. (eds.), 2012. *Design and Designing: The Skills and Knowledge of Creation*. London, UK: Berg Publishers.

GARVEY, P. & DRAZIN, A., 2016. Design Dispersed: Design History, Design Practice and Anthropology. *Journal of Design History*, 29(1), Special Issue: Design Dispersed (2016), pp.1-7. Oxford University Press on behalf of the Design History Society.

GAUTHIER, P., & CULLARS, J., 1999. Technological Intervention and the Malady of Happiness. *Design Issues*, 15(2), pp.40-54.

GALE, S. H., 1996. *Encyclopaedia of British Humorists: Geoffrey Chaucer to John Cleese*. New York, USA: Garland.

GALEN, 2004. *On The Natural Faculties*. La Vergne, USA: Kessinger Publishing LLC.

GAVER, W., 2002. *Designing for Homo Ludens*. Interaction Research Studio Goldsmiths, University of London.

GAVER, W. W., 2006. Designing For Our (Sur)real Lives. *Proceedings of OZCHI 2006*, November 20-24, 2006, Sydney, Australia.

GAVER, W. W., 1991. *Technology Affordances*. Cambridge, UK: Rank Xerox.

GAVER, W. W., BOUCHER, A., PENNINGTON, S., & WALKER, B., 2004. Cultural Probes and the value of uncertainty. *Interactions*, 11(5), pp.53-56.

GAVER, W. W., BOWERS, J., KERRIDGE, T., BOUCHER, A. & JARVIS N., 2009. Anatomy of a Failure: How We Knew When Our Design Went Wrong, and What We Learned From It. CHI 2009: Reflecting on Design, April 9th, 2009, Boston, MA, USA, pp.2213-2222.

GAVER, W. W., BOWERS,J., BOUCHER, A., GELLERSON, H., PENNINGTON, S., SCHMIDT, A., STEED, A., VILLARS, N., & WALKER, B., 2004. The drift table: designing for ludic engagement. CHI '04 Extended Abstracts on Human Factors in Computing Systems, April 24-29, 2004, Vienna, Austria.

GAVER, W. W., DUNNE, A., PACENTI, E., 1999. Design: Cultural Probes. *Interactions*, 6(1), pp.21-29.

GERSHWIN, I., 1939. In 'Shall We Dance', 1937. [film] Directed by Mark Sandrich. USA: RKO Radio Pictures Inc.

GERVAIS, M. & WILSON, D. S., 2005. The Evolution and Functions of Laughter and Humor: A Synthetic Approach. *Quarterly Review of Biology*, 80, pp.395-430.

GIACCARDI, E., 2005. Metadesign as an Emergent Design Culture. *Leonardo*, 38(4), pp.342-349.

GIAMARIO, P., T., 2020. Laughter as Dissensus: Kant and the Limits of Normative Theorizing Around Laughter. *Contemporary Political Theory*, 20(4), pp.795-814.

GIBBONS, J. (ed) & WINWOOD, K. (ed), 2006. *Hothaus Papers; Perspectives and Paradigms in Media Arts*. London, UK: ARTicle Press.

GIBLIN, J. C., 1987. *From Hand to Mouth*. New York, USA: Thomas Y. Crowell.

GIEBEN-GAMAL, E., 2005. Diversifying the Design History Curriculum: A Review of Recent Resources. *Journal of Design History*, 18(3), The Global Future of Design History (Autumn, 2005), pp.293-298. Oxford University Press on behalf of the Design History Society.

GILLINGHAM, J. & GRIFFITHS, R. A., 2000. *Medieval Britain*. Oxford, UK: Oxford University Press.

GIMBEL, S., 2015. Heckler Ethics. *Florida Philosophical Review*, XV(1), pp.78-87.

GINI, A., 2015. Dirty Jokes, Tasteless Jokes, Ethnic Jokes. *Florida Philosophical Review*, XV(1), pp.50-65.

GINZBURG, J., MAZZOCCONI, C. & TIAN, Y., 2020. Laughter as language. *Glossa: A Journal of General Linguistics*, 5(1): 104, pp.1-51.

GLANVILLE, R., 1999. Researching Design and Designing Research. *Design Issues*, 15(2), pp.80-91.

GODDARD, C. & LAMBERT, D., 2022. Laughter, Bonding and Biological Evolution. *The European Journal of Humour Research*, 10(2), pp.14–28.

GOLD, J. R., HEIN, C., ORILLARD, C., REGO, R. L. & PÉREZ OYARZUN, F., 2019. Complexity and Contradiction: In Memoriam Robert Venturi. *Planning Perspectives,* 34(3), pp.533-538). UK: Informa UK Limited.

GOLDBERG, H. S., 2006. *Hippocrates: Father of Medicine*. Lincoln, USA: iUniverse.

GOLDBERG, R., 1959. *How to Remove Cotton from a Bottle of Aspirin and Other Problems Solved*. New York, USA: Doubleday & Company, Inc.

GOLDBERG, R. & GARNER, P., 1983. *Rube Goldberg: A Retrospective.* New York, USA: Delilah Communications Ltd.

GOLDSTEIN, J. H. (ed.) & McGHEE, P. (ed.), 2072. *The Psychology of Humor: Theoretical Perspectives and Empirical Issues.* New York, USA: Academic Press.

GOLSBY-SMITH, T., 1996b. Fourth Order Design: A Practical Perspective. *Design Issues*, 12(1), pp.5-25. The MIT Press.

GORMAN, C., 2003. *The Industrial Design Reader*. New York: Allworth Press.

GOVIER, E., 2021. Different Ontologies: Shared Foes. *Journal of Material Culture,* 26(3), pp.321-323). SAGE Publications.

GOVIER, E. & STEEL, L., 2021. Beyond the 'Thingification' of Worlds: Archaeology and the New Materialisms. *Journal of Material Culture*, 26(3), pp.298-317.

GRANATA, F., 2013. Deconstruction Fashion: Carnival and the Grotesque. *Journal of Design History*, 26(2), pp.182-198. Oxford University Press on behalf of the Design History Society.

GRANHOLM, J. W., 1962. How to Design a Kluge. *Datamation: The Automatic Handling of Information*, 8(2). Los Angeles, USA: F. D. Thompson Publications Inc., pp.30-31.

GRANJON, P., 2009. Robotic Ears and Tail. [Online] Available at: https://www.zprod.org/zwp/robotic-ears-and-tail/ [Accessed 12 June 2024].

GRAVES, J., 1999. 'When Things Go Wrong... inside the inside': A Psychoanalytical History of a Jug. *Journal of Design History*, 12(4), pp.357-367. Oxford University Press on behalf of the Design History Society.

GREENBERG, S., 2008. *Gadget Nation: A Journey Through the Eccentric World of Invention*. USA: Sterling Publishing.

GREENGROSS, G. & MANKOFF, R., 2012. Inside "Inside Jokes": The Hidden Side of Humor. *Evolutionary Psychology*. 10(3), pp.443-456.

GREENHALGH, P., 1990. Introduction to Modernism in Design. In LEES-MAFFEI, G. (ed.) & HOUZE, R. (ed.) 2010. *The Design History Reader.* Oxford, UK: Berg. Pp. 91-103.

GREFF, J-P., 2008. *AC/DC: Contemporary Art, Contemporary Design*. Zurich, Switzerland: JRP Ringier.

GREIG, J. Y. T., 1922. *The Psychology of Laughter and Comedy*. London, UK: Unwin Bros.

GRIFFITHS, A., 2014. *21st Century Lighting Design*. London UK: Bloomsbury.

GRIP, 2008. *1000 Package Designs: A Complete Compilation Of Creative Containers*. Gloucester, USA: Hove Rockport.

GRUNER, C. R., 1978. *Understanding Laughter: The Workings of Wit and Humour*. Chicago, USA: Rowman & Littlefield Publishers.

GRUNER, C. R., 1999. *The Game of Humor: A Comprehensive Theory of Why We Laugh.* Abingdon, UK: Routledge.

GULAS, C. S. & WEINBERGER, M. G., 2006. *Humor in Advertising: A Comprehensive Analysis*. New York, USA: M.E. Sharpe, Inc.

GUNN, W., OTTO, T. & SMITH, R.C. (eds.), 2013. *Design Anthropology: Theory and Practice*. UK: Berg Publishers.

HÄBERLI, A., 2008. Alfredo Häberli. In FIELL, C. & FIELL, P. 2008. *Design Now!* Cologne, Germany: Taschen, pp.224-229.

HADID, Z., 2008. Zaha Hadid. In FIELL, C. & FIELL, P. 2008. *Design Now!* Cologne, Germany: Taschen, pp.230-241.

HAH, S., 2019. 'Why Did You Become a Linguist? Nobody Reads Your Work!' – Academic Struggles Constructed Through Humour and Laughter. *Studies in Higher Education,* 46(8), pp.1518-1532.

HALEY, A., 1995. *Alphabet: The History, Evolution and Design of the Letters We Use Today.* London, UK: Thames & Hudson Ltd.

HALLIWELL, S., 2008. *Greek laughter: A Study of Cultural Psychology From Homer to Early Christianity*. Cambridge, UK: Cambridge University Press.

HALSTRØM, P. L., 2017. Rhetorical Tools for Discovery and Amplification of Design Arguments. *Design Issues,* 33(1), pp.3-16). MIT Press.

HAMILAKIS, Y. & JONES, A. M., 2016. Archaeology and Assemblage. *Cambridge Archaeological Journal*, 27(1), pp.77–84. McDonald Institute for Archaeological Research. Cambridge University Press, UK.

HANINGTON, B., 2003. Methods in the Making: A Perspective on the State of Human Research in Design. *Design Issues*, 19(4), pp.9-18.

HANINGTON, B.M., MARTIN, B. & HANIGTON, B., 2012. *Universal Methods of Design: 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions*. USA: Rockport Publishers.

HANSEN, E., PANWAR, R. & VLOSKY, R., 2014. *The Global Forest Sector: Changes, Practices, and Prospects*. Boca Reton, USA: CRC Press (Taylor Francis Group).

HARA, K., 2015. *Ex-Formation*. Zurich, Switzerland: Lars Müller Publishers.

HARBOE, G., MASSEY, N., METCALF, C., WHEATLEY, D. & ROMANO, G., 2008. The Uses of Social Television. *Computers in Entertainment,* 6(1), pp.1-15).

HARBORT, B., 1997. Thought, Action, and Intuition in Practice-Oriented Disciplines. In Robbie Davis-Floyd (Editor), P. Sven Arvidson (Editor) , 1997. *Intuition: The Inside Story: Interdisciplinary Perspectives*. Routledge.

HARMAN, G., 2010. *Towards Speculative Realism: Essays and Lectures*. UK: Zero Books.

HARMAN, G., 2011. *The Quadruple Object*. United Kingdom: Zero Books.

HARMAN, G., 2014. Entanglement and Relation: A Response to Bruno Latour and Ian Hodder. *New Literary History*, 45, pp.37-49.

HARMAND, S., LEWIS, J. E., FEIBEL, C. S., LEPRE, C. J., PRAT, S., LENOBLE, A., BOES, X., QUINN, R. L., BRENET, M., ARROYO, R., TAYLOR, N., CLÉMENT, S., DAVER, G., BRUGAL, J-P., LEAKEY, L., MORTLOCK, R., WRIGHT, J. D., LOKORODI, S., KIRWA, C., KENT, D. V. & ROCHE, H., 2015. 3.3-million-year-old stone tools from Lomekwi 3, West Turkana, Kenya. *Nature*, 521, pp.310-326.

’t HART, M., 2007. Humour and Social Protest: An Introduction. *International Review of Social History*, 52(S15), pp.1-20. Cambridge University Press.

HAY, J., 1995. Gender and Humour: Beyond a Joke (Thesis). Victoria University of Wellington, New Zealand.

HAYBRON, D. M., 2013. *Happiness*. Oxford, UK: Oxford University Press.

HAYDEN, B., 2023. *The Biography of Steve Ballmer: The Life and Times of the Man Who Revolutionised the Tech Industry*. UK: Amazon.

HEATHCOTE, E., 2021. The Artek Stool: A Classic Design with a Twist of Existential Humour. *The Financial Times*, June 18th 2021, London, UK.

HEATHERWICK, T., 2012. *Thomas Heatherwick: Making.* London: Thames & Hudson.

HEGEL, C., 2017. Museum of Internet and the Surrealist Endpoint. *Art Papers Magazine,* 41(2), pp.54-55.

HEISLER, Y., 2013. Starbucks That Steve Jobs Prank Called Still Receives Mock Orders for 4,000 Lattes To Go. [Online] Available at https://www.networkworld.com/article/744438/data-center-starbucks-that-steve-jobs-prank-called-still-receives-mock-orders-for-4-000-lattes-to-go.html [Accessed 28 May 2009].

HEKKERT, P., 2006. Design Aesthetics: Principles of Pleasure in Design. *Psychology Science*, 48(2), pp.157-172.

HELD, 2016, Transdisciplinary Research Through Design — Shifting Paradigms as an Opportunity. In Joost, G., Bredies, K., Christensen, M., Conradi, F. & Unteidig, A. (eds.), 2016. *Design as Research: Positions, Arguments, Perspectives*. Berlin, Germany: De Gruyter, pp.186-192.

HELLER, S. & ANDERSON, G., 1991. *Graphic Wit: The Art of Humor in Design*. New York, USA: Watson-Guptill.

HELLER, S., 1996. Bonehead Design: Style as Language. *Design Issues*, 12(2), pp.61-70.

HELLMANN, C., KOZEL, N. & DUCHTING, H., 2017. 5*0 Designers You Should Know*. Munich, Germany: Prestel.

HELMS, K., FERNAEUS, Y., 2018. Humor in Design Fiction to Suspend Disbelief and Belief. In: NordiCHI 2018 Proceedings of the 10th Nordic Conference on Human-Computer Interaction. 1st-3rd October 2018. Oslo, Norway.

HELMS, K., 2020. Careful Design: Implicit Interactions with Care, Taboo, and Humor. KTH Royal Institute of Technology. Stockholm, Sweden.

HERBERT, E., 2016. *Terry Wogan, 1938-2016: A Life of Laughter.* London, UK: John Blake Publishing Ltd.

HERRING, R. 2004. *Talking cock: A Celebration of Man and His Manhood*. USA: Thunder's Mouth Press.

HESKETT, J., 1980. *Industrial design*. London, UK: Thames And Hudson.

HESKETT, J., 2001. Past, Present, and Future in Design for Industry. *Design Issues*, 17(1), pp.18-26.

HESKETT, J., 2005. *Design: A Very Short Introduction*. Oxford, UK: Oxford University Press.

HIGGIE, J., (ed.), 2006. *Artist's Joke.* London, UK: Whitechapel Art Gallery.

HIGHMORE, B. (ed), 2008. *The Design Culture Reader*. Routledge.

HILL, C., 1993. *The Soul of Wit: Joke Theory from Grimm to Freud.* USA: University of Nebraska Press.

HILL, S., 2021. In BULLEY, J. & ŞAHIN, Ö., 2021. *Practice Research - Report 1: What is Practice Research? and Report 2: How Can Practice Research Be Shared?* British Library. London, UK: PRAG-UK, pp.1.

HINDS, H., 2010. Together and Apart: Twin Beds, Domestic Hygiene and Modern Marriage, 1890-1945. *Journal of Design History*, 23(3), pp.275-304. Oxford University Press on behalf of the Design History Society.

HINDS, H., 2020. *A Cultural History of Twin Beds*. New York, USA: Routledge.

HINDE, R.A., 1974. *Biological Bases of Human Social Behaviour*. New York, USA: McGraw-Hill.

HIPPOCRATES., 2008. *The Corpus*. New York, USA: Kaplan Publishing.

HIPPOCRATES & CHADWICK, J., 1983. *Hippocratic Writings*. Harmondsworth, UK: Penguin.

HIRST, J., 1996. Values in Design: "Existenzminimum," "Maximum Quality," and "Optimal Balance". *Design Issues*, 12(1), pp.38-47.

Historic Environment Scotland, 2024. Skara Brae. [Online] Available at: https://www.historicenvironment.scot/visit-a-place/places/skara-brae/overview/ [Accessed 12 Aug 2024].

HOBBES, T. 1982. *Leviathan*. London, UK: Penguin Classics.

HOBBES, T., 2020. *The Elements of Law*. Abingdon, UK: Routledge.

HODDER, I., 2011a. Human-Thing Entanglement: Towards an Integrated Archaeological Perspective. *Journal of the Royal Anthropological Institute*, 17, pp.154-177.

HODDER, I., 2011b. Wheels of Time: Some Aspects of Entanglement Theory and the Secondary Products Revolution. *Journal of World Prehistory*, 24, pp.175–187.

HODDER, I., 2012. *Entangled: An Archaeology of the Relationships Between Humans and Things*. Malden, MA: Wiley-Blackwell.

HODDER, I., 2014. The Entanglements of Humans and Things: A Long-Term View. *New Literary History*, 45, pp.19-36.

HODDER, I., 2016. *Studies in Human-Thing Entanglement*. [Online e-book] Available at: http://www.ian-hodder. com/books/studies-human-thing-entanglement#:~: text=This%20book%2C%20published%20only%20online, application%20of%20formal%20network%20analysis [Accessed 18 May 2019].

HODDER, I., 2018. Things and the Slow Neolithic: the Middle Eastern Transformation. *Journal of Archaeological Method and Theory*, 25, pp.155–177.

HODDER, I., 2020. The Paradox of the Long Term: Human Evolution and Entanglement. *Journal of the Royal Anthropological Institute*, 26, pp.389-411.

HODDER, I. & LUCAS, G., 2017. The Symmetries and Asymmetries of Human–Thing Relations. *Archaeological Dialogues*, 24(2), pp.119–137.

HODDER, I. & MOL, A., 2016. Network Analysis and Entanglement. *Journal of Archaeological Method and Theory*, 23, pp.1066-1094.

HODGES, N.J. & LINK, A.N., 2018. Innovation by design. *Small Business Economics*. 52, pp.395-403. Springer Science and Business Media LLC.

HODGKINSON, G. P., LAGAN-FOX, J., & SADLER-SMITH, E., 2008. Intuition: A fundamental bridging construct in the behavioural sciences. *British Journal of Psychology*, 99, pp.1–27.

HOFFMAN, D., 1967. John Root's Monadnock Building. *Journal of the Society of Architectural Historians*, 26(4), pp.269-277. University of California Press on behalf of the Society of Architectural History.

HOFMANN, J., PLATT, T. AND RUCH, W., 2017. Laughter and Smiling in 16 Positive Emotions. *IEEE Transactions on Affective Computing*, 8(4), pp.495-507.

HOLLOWAY, S., 2010. *The Serious Guide to Joke Writing: How to Say Something Funny About Anything.* London, UK: Book Shaker.

HOLT, E., 2010. The Last Laugh: Shared Laughter and Topic Termination. *Journal of Pragmatics*, 42, 1513-1525.

HOLT, E., 2016. Laughter at Last: Playfulness and Laughter in Interaction. *Journal of Pragmatics*, 100, pp.89-102.

HOLT, J., 2008. *Stop Me If You've Heard This: A History and Philosophy of Jokes*. London, UK: Profile Books.

HOKE, H., 2022. *Sticker*. New York, USA, Bloomsbury Academic, Bloomsbury Publishing Inc.

HOONHOUT, H. C. M. & STIENSTA, M., 2006. Exploring Enjoyability: Which Factors in a Consumer Device Make the User Smile? In De WAARD, D., Brookhuis, K. A., SOMMER, S. M., VERWEY, W. B., 2003. *Human Factors in the Age of Virtual Reality*. Europe Chapter of the Human Factors and Ergonomics Society. Maastricht, Netherlands: Shaker Publishing BV, pp.339-353.

HORN, R., 2001. Knowledge Mapping for Complex Social Messes. A presentation to the "Foundations in the Knowledge Economy" at the David and Lucile Packard Foundation. [Online] Available at: http://www.stanford.edu/~rhorn/a/recent/spchKnwldgPACKARD.pdf [Accessed 27/02/2013]

HORNYAK, T., 2002.The Chindōgu Champion: Can Absurd Analog Gadgets Help Dispel the Digital Doldrums? J@pan Inc., April 2002. [Online] Available at https://www.japaninc.com/article.php?articleID=762 [Accessed 14 April 2024].

HORSHAM, M., 2009. 1999-2009 A Hertzian Decade. *Journal of Design History*, 22(4), pp.395-399. Oxford University Press on behalf of the Design History Society.

HOWELLS, T. (ed.), 2014. *Experimental Eating*. London, UK: Black Dog Publishing.

HUDEK, A. (ed.), 2014. *The Object*. USA: MIT Press.

HUGILL, A., 2015. *Pataphysics: A Useless Guide*. Cambridge, USA: The MIT Press.

HUIZINGA, J., 1992. *Homo Ludens: A Study of the Play-element in Culture*. Boston, USA: Beacon Press.

HUMOR, 2024. Humor: International Journal of Humour Research. [Online] Available at: https://www.degruyter.com/journal/key/humr/html [Accessed 13 June 2024].

HUMPHRIES, T., 2006. Crapestry: Putting the Crap in Tapestry Since 2006 [Online] Available at: http://crapestry.co.uk [Accessed 10 Dec 2009].

HUMPHRIES, T., 2009. An Exploration of Humour and its Potential to be Defined as a Technology at WIRAD's 1st 'National Symposium of Emerging Art & Design Researchers'. Cardiff, 2009.

HUMPHRIES, T., 2012. Considering Intuition in the Context of Design, and of Psychology. WIRAD's 2nd Emerging Researchers Symposium. Cardiff Millennium Centre, 2012.

HUMPHRIES, T., 2014. ‘Chindogu: a Fray in the Fabric of Modernist Logic?’, DART Conference. Coventry University, Coventry, UK. January 2014.

HUMPHRIES, T., 2014. Theo Humphries. [Online] Available at: http://theohumphries.com/index.html [Accessed 21 Sept 2019].

HUMPHRIES, T., 2017. Malentangled: Function Redacting Tape. Research Through Design, 2017, Edinburgh, UK.

HUMPHRIES, T., 2020. SARS Wars Toys [Online] Available at: http://sarswarstoys.com [Accessed 01 Jan 2024].

HUMPHRIES, T., 2024. go_on_graffiti [Online] Available at: https://www.instagram.com/go_on_graffiti/?hl=en-gb [Accessed 14th Feb 2024].

HUMPHRIES, T. & THOMPSON S., 2011. A Hippocratic Intuition For Balance In Warburg’s Mnemosyne Atlas. In PUNT, M. & BLASSNIGG, M. (eds.), 2011. *The Transtechnology Reader 2011*. Plymouth University.

HUPPATZ, D. J., 2015. Globalizing Design History and Global Design History. *Journal of Design History*, 28(2), pp.182-202. Oxford University Press on behalf of the Design History Society.

HURD, M. K., 1996. Ernest L. Ransome-Concrete Designer, Constructor. *Concrete International,* 18(5), pp.50-51.

HURLEY, M., DENNETT, D., & ADAMS, R. Jnr. 2011. *Inside Jokes: Using Humour to Reverse Engineer the Mind*. Cambridge, Mass, USA: MIT Press.

HUTCHESON, F., 2010. *Reflections Upon Laughter, and Remarks Upon The Fable of the Bees*. By Francis Hutcheson, ...Carefully corrected.... Gale ECCO Print Editions.

IDEO, 2024. IDEO’s 7 Simple Rules of Brainstorming. [Online] Available at: https://www.ideou.com/blogs/inspiration/7-simple-rules-of-brainstorming [Accessed 12 June 2024].

IKEDA, S., IKEDA, A., YAMAGISHI, K., HORI, M., KUBO, S., SATA, M., OKADA, C., UMESAWA, M., SANKAI, T., KITAMURA, A., KIYAMA, M., OHIRA, T., TANIGAWA, T. AND ISO, H., 2021. Longitudinal Trends in Blood Pressure Associated With the Frequency of Laughter: The Circulatory Risk in Communities Study (CIRCS), a Longitudinal Study of the Japanese General Population. *Journal of Epidemiology*, 31(2), pp.125-131.

Industrial Design Society of America (IDSA), HALLER, L. & CULLEN, C. D., 2003. *Design Secrets: Products 2 — 50 Real-Life Projects Uncovered*. Gloucester, Mass.: Rockport ; Hove.

INGLEDEW, J. (2011) *The A-Z of Visual Ideas: How to Solve Any Creative Brief*. London, UK: Laurence King Publishing.

INGOLD, T., 2010) *Making: Anthropology, Archaeology, Art and Architecture*. London: Taylor & Francis.

INWOOD, M., 1997. *Heidegger*. Oxford, UK: Oxford University Press.

IRWIN, D., 1991. Art versus Design: The Debate 1760-1860. *Journal of Design History*, 4(4), pp.219-232. Oxford University Press on behalf of the Design History Society.

IZZARD, E., 1997. Glorious. [Online] Available at: https://www.youtube.com/watch?v=M-CwPM2wHGM [Accessed 1 July 2023].

JABŁOŃSKA-HOOD, J., 2020. Conceptual Integration Theory and British Humour: An Analysis of the Sitcom Miranda. *The European Journal of Humour Research*, 7(4), pp.47-67.

JACKSON, G. W., 1962. How to Design A Kludge. *Datamation*, Los Angeles, USA: F. D. Thompson Publications, Inc.

JAMMULAMADAKA, N. P., 2020. Author(ing) from Post-Colonial Context: Challenges and Jugaad Fixes. *Qualitative Research in Organizations and Management: An International Journal*. 15(3), pp.388-401). Emerald.

JANES, L. M. & OLSON J. M., 2000. Jeer Pressure: The Behavioral Effects of Observing Ridicule of Others. *Personality and Social Psychology Bulletin*, 26(4), pp.474-485.

JANG, S., THALER, M. & FREDERICK, M., 2020. *101 Things I Learned in Product Design School*. New York, USA: Crown.

JASON, D., 2023. In WIGGINS, D., 2023. Only Fools and Horses: The Reason David Jason 'Hated' Del's Iconic Yellow Reliant Regal Van. [Online] Available at https://www.mylondon.news/news/tv/only-fools-horses-reason-david-25953983 [Accessed 26 April 2024].

JENTZSCH, S. & KERSTING, K., 2023. ChatGPT is Fun, But it is Not Funny! Humor is Still Challenging Large Language Models. Cornell University.

JOBS, S., 2007. Steve Jobs Introduces the First Generation iPhone at Macworld 2007. [Online] Available at: https://www.youtube.com/watch?v=VQKMoT-6XSg [Accessed 6th May 2024].

JOHNSON, K., 2022. *Surrealism and Design Now: From Dali to AI*. London, UK: Design Museum.

JOHNSON, G., 2023. *Vivienne Westwood*. London, UK: Welbeck Non-Fiction Ltd.

JOHNSON, J., 2023. *The Biography of Steve Ballmer — The Hidden Legacy of Microsoft's Former CEO: How He Became One of the Richest Men in the World and His Contributions to the Tech Industry*. UK: Amazon.

JOHNSON, M., 2004. *Problem Solved*. London, UK: Phaidon Press.

JOHNSON, S., 2001. *Emergence: The connected lives of ants, brains, cities and software*. London, UK: Penguin Press.

JONES, A. M., 2021. Disentangling Entanglement: Archaeological Encounters with the Concept of Entanglement. *Current Swedish Archaeology*, 29(1), pp.38-42. Sweden: Svenska Arkeologiska Samfundet.

JONES, C. A., 2005. *Eyesight Alone: Clement Greenberg's Modernism and the Bureaucratization of the Senses*. Chicago: University of Chicago Press.

JONES, J. C., 1981. *Design Methods: Seeds of Human Futures*. New York: J. Wiley.

JONES, J. C., 1991. *Designing Designing*. London, UK: Architecture Design and Technology Press.

JONES, P., 2017. The Ulm Model. *Design Issues,* 33(4), pp.96-98.

JONES, S., 2015. Anthropological Archaeology in 2015: Entanglements, Reflection, Reevaluation, and Archaeology Beyond Disciplinary Boundaries. *American Anthropologist*, 118(2), pp.301-316. American Anthropological Association.

JONES, W. M. & ASKLAND, H. H., 2012, 'Design Briefs: Is There A Standard?', *International Conference On Engineering And Product Design Education*, Artesis University College, Antwerp, Belgium, 6th & 7th September 2012.

JOOST, G., BREDIES, K., CHRISTENSEN, M., CONRADI, F. & UNTEIDIG, A. (eds.), 2016. *Design as Research: Positions, Arguments, Perspectives*. Berlin, Germany: De Gruyter.

JORDISON, S. & KEIRAN, D., 2003. *Crap Towns*. London, UK: Pan Macmillan

JORIS, Y., 1999. *Wander's Wonders: Design for a New Age*. Uitgeverij.

The Journal of Design History, 2024. Journal of Design History. [Online] Available at: https://www.designhistorysociety.org/publications/journal [Accessed 17 June 2024].

KAGAN, J., 1994. *Galen's Prophecy: Temperament in Human Nature*. New York, USA: Basic Books.

Kahve Society, 2008. *Supertoys: A Users Manual.* Bristol, UK: Arnolfini.

KALLISH, A., 2019. Design and the Creation of Value by John Heskett (review). *Design Issues*, 35(3), pp.77-79. MIT Press.

KALLIO, O. AND MASOODIAN, M., 2019. Featuring Comedy Through Ludonarrative Elements of Video Games. *Entertainment Computing*, 31, 100304, pp.1-12.

KAMILOĞLU, R. G., TANAKA, A., SCOTT, S. K. & SAUTER, D. A., 2021. Perception of Group Membership from Spontaneous and Volitional Laughter. Philosophical Transactions of the Royal Society B: Biological Sciences, 377, 20200404, pp.1-9.

KAMPRANI, K., 2020. The Uncomfortable. [Online] https://www.theuncomfortable.com/ [Accessed 12 June 2024].

KANT, I., 1911. *Critique of Judgment* (translated by J. C. Meredith), Oxford, UK: Clarendon Press.

KARAPANOS, E., ZIMMERMAN, J., FORLIZZI, J. & MARTENS, J.-B., 2009. User Experience Over Time: An Initial Framework. CHI 2009, April 4–9, 2009, Boston, Massachusetts, USA.

KARAPANOS, E., ZIMMERMAN, J., FORLIZZI, J. & MARTENS, J.-B., 2010. Measuring the Dynamics of Remembered Experience Over Time. *Interacting with Computers*, 22(5), pp.328-335. Oxford University Press (OUP).

KATJE, C., 2023. If You Invested $1000 In Apple Stock When Steve Ballmer Criticized The $500 iPhone, Here's How Much You'd Have Now. Southfield, USA: *Benzinga Newswires*, Accretive Capital LLC d/b/a Benzinga.

KATT, S. F., 2007a. A Tale of Three Steves; Opinion: Wozniak looks south; Jobs loses his bid; Ballmer slams the iPhone. *eWeek*. New York, USA: Quinstreet.

KATT, S. F., 2007b. Ballmer Wont iPhone Home. eWeek. [Online] Available at http://www.https://www.eweek.com/mobile/ballmer-wont-iphone-home/ [Accessed 27 March 2024].

KATZ, S. L., 1991. Robert Frost, Humorist. *The Robert Frost Review,* 1, pp.24-29.

KAUFMAN, S. B., KOZBELT, A., BROMLEY, M. L., & MILLER, G. R., 2008. The Role of Creativity and Humor in Human Mate Selection. In G. Geher & G. Miller (Eds.), Mating Intelligence: Sex, Relationships, and the Mind's Reproductive System (pp. 227–262). Lawrence Erlbaum Associates Publishers.

KAYE, S. M., 2008. *Medieval Philosophy*. Oxford: Oneworld.

KAWAKAMI, K. & FEARNLEY-WITTINGSTALL, H. (ed.). 1995. *101 Unuseless Japanese Inventions: The Art of Chindōgu* (translated by D. Papia). New York, USA: W. W. Norton & Co.

KAWAKAMI, K. 1997. *99 More Unuseless Japanese Inventions: The Japanese Art of Chindōgu* (translated by D. Papia). London, UK: Harper Collins.

KAWAKAMI, K. & FEARNLEY-WITTINGSTALL, H. (ed.). 2004a. *The Big Bento Box of Unuseless Japanese Inventions* (translated by D. Papia). New York, USA: W. W. Norton & Co.

KAWAKAMI, K. & FEARNLEY-WITTINGSTALL, H. (ed.). 2004b. *Bumper Book of Unuseless Japanese Inventions: The Art of Chindōgu* (translated by D. Papia). London, UK: Harper Collins Publishers.

KAZMIERCZAK, E. T., 2003. Design as Meaning Making: From Making Things to the Design of Thinking. *Design Issues*, 19(2), pp.45-59.

KELLY, K., 2011. *What Technology Wants*. London, UK: Penguin.

KELLER, C., 1979. *The Best of Rube Goldberg*. USA: Prentice Hall.

KERR, S. T., 1983. Inside the black box: Making design decisions for instruction. *British Journal of Educational Technology*, 14(1), 45-58.

KEYSER, P., 1992. A New Look at Heron's "Steam Engine". *Archive for History of Exact Sciences*, 44(2), pp.107-124. Springer, New York, USA.

Kikkerland Design Inc., 2024. Who We Are. [Online] Available at: https://kikkerland.com/pages/about-us [Accessed 26 June 2024].

KINROSS, R., 1988. Herbert Read's "Art and Industry": A History. *Journal of Design History*, 1(1), pp.35-50. Oxford University Press on behalf of the Design History Society.

KIRKHAM, P., 1998. Humanizing Modernism: The Crafts, 'Functioning Decoration' and the Eameses. *Journal of Design History*, 11(1), Craft, Modernism and Modernity (1998), pp.15-29. Oxford University Press on behalf of the Design History Society.

KLANTEN, R., S. EHMANN, S., & HELLIGE, H. (eds.), 2006. *All Allure*. Germany: Die Gestalten Verlag.

KLANTEN, R., BOURQUIN, N. & EHMANN, S. (eds.), 2008. *Data Flow: Visualising Information in Graphic Design*. Germany: Die Gestalten Verlag.

KLEIN, G., 2004. *The Power of Intuition: How to Use Your Gut Feelings to Make Better Decisions at Work*. Crown Business.

KLEIN, S. 2007. *Art and Laughter*. London, UK: I. B. Taurus.

KLENK, N., 2018. From Network to Meshwork: Becoming Attuned to Difference in Transdisciplinary Environmental Research Encounters. *Environmental Science and Policy*, 89, pp.315–321.

KOESTLER, A., 1970. *The Act of Creation*. London: Pan Books.

KOVEL, R. & KOVEL, T., 1985. Folding Chairs Used by Ancient Egyptians. *Los Angeles Times.* Los Angeles, USA. 31 Jan 1987: 3.

KRAMER, C. A., 2015. Incongruity and Seriousness. *Florida Philosophical Review*, XV(1), pp.1-18.

KRANZ, D. L., 2008. Tracking the Sounds of Franco Zeffirelli's "The Taming of the Shrew", *Literature Film Quarterly*, 36(2), pp.94-112.

KRET, M. E., VENNEKER, D., EVANS, B., SAMARA, I. AND SAUTER, D., 2021. The Ontogeny of Human Laughter. *Biology Letters*, 17, 20210319, pp.1-5.

KRICHTAFOVICH, I. 2006. *Humour Theory: Formula of Laughter*. Denver, USA: Outskirts Press.

KRIPPENDORFF, K., 1992. Transcending Semiotics: Toward Understanding Design for Understanding. In Vihma, S. (ed.), 1992. *Objects and Images: Studies in Design and Advertising*. Helsinki, Finland: University of Industrial Arts, pp.24-47.

KRISHNAN, H. S. & CHAKRAVARTI, D., 2003. A Process Analysis of the Effects of Humorous Advertising Executions on Brand Claims Memory. *Journal of Consumer Psychology*, 13(3), pp.230-245.

KRUGER, C., 2006. Solution Driven Versus Problem Driven Design: Strategies and Outcomes. *Design Issues*. 27(5), pp.30-44. MIT Press

KOREN, L., 2008. *Wabi-Sabi: for Artists, Designers, Poets & Philosophers*. Berkeley, CA, USA: Stone Bridge Press.

KU, B., 2011. Pillow Fight. [Online] https://bryanku.com/pillow-fight [Accessed 15 June 2024].

KUDROWITZ, B. M., 2010. Haha and aha! Creativity, idea generation, improvisational humor, and product design (Doctoral dissertation). Massachusetts Institute of Technology, Cambridge, USA.

Van KUILENBURG, P., De JONG, M.D.T. & Van ROMPAY, T. J. L., 2011. That Was Funny, But What Was The Brand Again? *International Journal of Advertising*, 30(5), pp.795-814.

KUIPERS, G., 2014. Sociology. In Attardo, S., (ed.), 2015. *Encyclopaedia of Humor Studies*. Thousand Oaks, California, USA: Sage Publications, Inc., pp.711-715.

KUJALA, S., ROTO, V., VÄÄNÄNEN-VAINIO-MATTILA, K., KARAPANOS, E. & SINNELÄ, A., 2011. UX Curve: A method for evaluating long-term user experience. Interacting with Computers — British Informatics Society Limited. Elsevier B.V.

KULL, K., 1998. On Semiosis, Umwelt, and Semiosphere. *Semiotica*, 120(3), pp.299-310.

KURTZ, L. E. & ALGOE, S. B., 2015. Putting Laughter in Context: Shared Laughter as Behavioral Indicator of Relationship Well-Being. *Personal Relationships*, 22, pp. 573-590.

LaCAPRIA, K., 2021. 'Don't Do Drugs' Pencil. [Online] Available at: https://www.truthorfiction.com/dont-do-drugs-pencil/ [Accessed 16 Jun 2024].

LAMPERT, M. D., & ERVIN-TRIPP, S. M., 1998. Exploring Paradigms: The Study of Gender and Sense of Humour Near the End of the 20th Century. In RUCH, W., 1998. *The Sense of Humor: Explorations of a Personality Characteristic.* Berlin: Mouton De Gruyter.

LANGRISH, J. Z., 2004. Darwinian Design: The Memetic Evolution of Design Ideas. *Design Issues*, 20(4), pp.4-19.

LANIER, J., 2011. *You Are Not a Gadget: A Manifesto*. London: Viking Penguin.

LaPOLLA, J. S., DLUSSKY, G. M. & PERRICHOT, V., 2013. Ants and the Fossil Record. *Annual Review of Entomology*. 58(1), pp.609-630.

LARGE, P., 2001. Communication Among All People, Everywhere: Paul Arthur and the Maturing of Design. *Design Issues*, 17(2), pp.81-90.

LATOUR, B., 1992. 'Where Are The Missing Masses? The Sociology of a Few Mundane Artifacts', in Bijker, W. E. and Law, J. (eds) *Shaping Technology/Building Society: Studies in Sociotechnical Change*, Cambridge, MA, MIT Press, pp. 225-58.

LATOUR, B., 1993. *We Have Never Been Modern*. USA: Harvester Wheatsheaf, Harvard Books.

LATOUR, B., 2007. *Reassembling the Social*. New York, USA. Oxford University Press.

LAVAN, N., SCOTT, S. K. & McGETTIGAN, C., 2015. Laugh Like You Mean It: Authenticity Modulates Acoustic, Physiological and Perceptual Properties of Laughter. *Journal of Nonverbal Behavior*, 40, pp.133-149.

LAVAN, N., SHORT, B., WILDING, A. & McGETTIGAN, C., 2018. Impoverished Encoding of Speaker Identity in Spontaneous Laughter. *Evolution and Human Behavior*, 39, pp.139-145.

LAW, J., 1992. Notes on the Theory of the Actor-Network: Ordering, Strategy and Heterogeneity. *Systems Practice*, 5, pp.379-93.

LAW, J. (ed.) & HASSARD, J. (ed.), 1999. *Actor Network Theory and After.* Malden, MA: Blackwell Publishers/Sociological Review.

LEAKY, R., 1996. *Human Origins*. London, UK: Phoenix, div. of Orion Books Ltd.

LEAR, E., 1883. In GALE, S. H., 1996. *Encyclopaedia of British Humorists: Geoffrey Chaucer to John Cleese*. New York, USA: Garland, pp.645.

LECHTE, J., 2003. *Key Contemporary Concepts: from Abjection to Zeno's Paradox*. London, UK: Sage Publishing.

LECKIE, B., 2021. Desire Paths: Nineteenth-Century Studies … *Nineteenth-Century Contexts*, 43(5), pp.581–587. UK: Informa UK Limited.

LeCUYER, A. & DEAN, B., 1979. Humour Needed to Inspire Design. *Building Design* (Archive: 1969-2014); Tonbridge Issue 432, (Feb 9, 1979): pp.30.

LEE, D., 2017. 'Sweating bullets' - The Inside Story of the First iPhone [Online] Available at: https://www.bbc.co.uk/news/technology-38552241 [Accessed 7th May 2024].

LEE, J., 1995. *The History of Clowns*. New York, USA: Writers and Readers Inc.

LEES-MAFFEI, G., 2003. Introduction: Studying Advice: Historiography, Methodology, Commentary, Bibliography. *Journal of Design History*, 16(1), Domestic Design Advice (2003), pp.1-14. Oxford University Press on behalf of the Design History Society.

LEES-MAFFEI, G., 2008. Introduction: Professionalization as a Focus in Interior Design History, Craft and Art. *Journal of Design History*, 21(1), Interior Design 1870-1970 (Spring, 2008), pp.1-18. Oxford University Press on behalf of the Design History Society.

LEES-MAFFEI, G., 2009. The Production—Consumption—Mediation Paradigm. *Journal of Design History*, 22(4), pp.351-376. Oxford University Press on behalf of the Design History Society.

LEES-MAFFEI, G. (ed.) & HOUZE, R. (ed.) 2010. *The Design History Reader*. Oxford, UK: Berg.

LEES-MAFFEI, G. & SANDINO, L., 2004. Dangerous Liaisons: Relationships between Design, Craft and Art. *Journal of Design History*, 17(3), pp.207-219. Oxford University Press on behalf of the Design History Society.

Le GOFF, J., 1997. Laughter in the Middle Ages. In BREMMER, J. & ROODENBURG, H. (eds). 1997. *A Cultural History of Humour.* Cambridge, UK: Polity Press, pp-40-53.

LEHMANN-WILLENBROCK, N. & ALLEN, J.A., 2014. How Fun Are Your Meetings? Investigating the Relationship Between Humor Patterns in Team Interactions and Team Performance. *Journal of Applied Psychology*, 99(6), pp.1278-1287.

LEISHMAN, D., 2013. Precarious Design. *Leonardo Electronic Almanac*, 19(4). San Francisco, USA: Leonardo, the International Society for the Arts, Sciences and Technology.

LEONG, B. D., & CLARK, H., 2003. Culture-Based Knowledge Towards New Design Thinking and Practice: A Dialogue. *Design Issues*, 19(3), pp.48-58.

LEONIDAS, H., CHRISTINA, B. & YORGOS, Z., 2009. The Effects of Culture and Product Type on the Use of Humor in Greek TV Advertising: An Application of Speck's Humorous Message Taxonomy. *Journal of Current Issues & Research in Advertising*, 31(1), pp 43-61.

LEPINE, M. & LEIGH, M., 2007. *Pets With Tourette's*. London, UK: Summersdale Publishers.

LEWIS, E., 2018. Building a Hero's Engine (Aeolipile) Using an Engineers Metal Lathe (Boxford). [Online] Available at https://www.youtube.com/watch?v=sA_DeB7Uxeo [Accessed 30 April 2024].

LEWIS, J., 2020. How Transdisciplinary is Design? An Analysis Using Citation Networks. *Design Issues*. 36(1), pp.30-44. MIT Press

LEWIS, T., AMINI, F. & LANNON, R., 2001. *A General Theory of Love*. New York, USA: Knopf Doubleday Publishing Group.

LICHTMAN, S. A., 2005. Reconsidering the History of Design Survey. *Journal of Design History*, 22(4), The Current State of Design History (2009), pp.341-350. Oxford University Press on behalf of the Design History Society.

LIDWELL, W., HOLDEN, K. & BUTLER, J., 2010. *Universal Principles of Design: 125 Ways to Enhance Usability, Influence Perception, Increase Appeal, Make Better Design Decisions, and Teach through Design*. Beverly, Mass: Rockport Publishers.

Lil-Lets, 2024. History Of Tampons: Who Invented Tampons? [Online] Available at: https://www.lil-lets.com/uk/hub/history-of-tampons-who-invented-tampons/ [Accessed 15 Dec 2024].

LINGWOOD, G. & Turner Duckworth, 2024. *I Love It. What Is It? London, UK:* Phaidon.

LIPPITT, J., 1995a. Humour and Incongruity. *Cogito,* 8(2), pp.147-153. Philosophy Documentation Center.

LIPPITT, J., 1995b. Humour and Superiority. *Cogito,* 9(1), pp.54-61. Philosophy Documentation Center.

LIPPITT, J., 1995c. Humour and Release. *Cogito,* 9(2), pp.169-176. Philosophy Documentation Center.

Little Inventors, 2024. Little Inventors. [Online] Available at: https://www.littleinventors.org/ [Accessed 12 Sept 2024].

LLOYD, G. E. R. (Ed), 1984. *Hippocratic Writings*. London and New York: Penguin Books.

LO BARCO, T., CORONA, L., SOLAZZI, R., FIORINI, E., GALATI, G., COSSU, A., PROIETTI, J., FRANCIONE, S., DALLA BERNARDINA, B., DARRA, F., & CANTALUPO, G., 2023. Gelastic Seizures and "Smiling Spasms": A Peculiar Ictal Pattern. *Epileptic Disorders*, 25(2), pp.269-273.

LOCKWOOD, D., 2021. *Fooled by the Winners. Austin*, USA: Greenleaf Book Group.

LOCKYER, S. & PICKERING, M. (eds), 2009. *Beyond a Joke: The Limits of Humour*. Basingstoke, UK: Palgrave Macmillan.

LOOS, A., 1997. *Ornament and Crime: Selected Essays*. Riverside, USA: Ariadne Press.

LU, C.-C., 2020. Humorous Product Styles and Pleasure: Positive-Negative and Overt-Subtle Dimensions of Humour. *The Design Journal*. 23(2), pp.175-198. Informa UK Ltd.

LUCAS, G., 1995. The Changing Face of Time: English Domestic Clocks from the Seventeenth to Nineteenth Century. *Journal of Design History*, 8(1), pp.1-9. Oxford University Press on behalf of the Design History Society.

LUDDEN, G. D., SCHIFFERSTEIN, H. N. & HEKKERT, P., 2007. Effects of Visual-Auditory Incongruity on Product Expression and Surprise. *International Journal of Design*, 1(3), pp.29-39.

LUDDEN, G. D., SCHIFFERSTEIN, H. N., & HEKKERT, P., 2007. Surprising the Senses. *The Senses and Society*, 2(3), pp.353-362. Informa UK Ltd.

LUDDEN, G. D., SCHIFFERSTEIN, H. N. & HEKKERT, P., 2008. Surprise as a Design Strategy. *Design Issues*, 24(2), 28-38.

LUDDEN, G. D., SCHIFFERSTEIN, H. N., & HEKKERT, P., 2008. Visual–Tactual Incongruities in Products as Sources of Surprise. *Empirical Studies of the Arts*, 27(1), pp.61-87. SAGE Publications.

LUDDEN, G. D., SCHIFFERSTEIN, H. N. & HEKKERT, P., 2012. Beyond Surprise: A Longitudinal Study on the Experience of Visual-Tactual Incongruities in Products. *International Journal of Design*, 6(1), pp.1-23.

LUDDEN, G. D., KUDROWITZ, B. M., SCHIFFERSTEIN, H, N. & HEKKERT, P., 2012. Surprise and Humor in Product Design: Designing Sensory Metaphors in Multiple Modalities. Humor, 25(3), pp.285-309. Walter de Gruyter.

LUDUSAN, B. & WAGNER, P., 2022. Laughter Entrainment in Dyadic Interactions: Temporal Distribution and Form. *Speech Communication*, 136, pp.42-52.

LUIS, W., 2023. *Beyond Bytes and Billions: The Steve Ballmer Legacy.* UK: Amazon.

LUNN, F. (ed.) & MUNDER, H. (ed.) 2005. *When Humour Becomes Painful*. Zurich, Switzerland: JRP Ringier.

LUPTON, E. (ed.), 2005. *D.I.Y.: Design it yourself.* New York, USA: Princeton Architectural Press.

LUPTON, E., 2017. *Design Is Storytelling*. New York, USA: Cooper Hewitt, Smithsonian Design Museum.

LYNCH, O. H., 2002. Humorous Communication: Finding a Place for Humor in Communication Research. *Communication Research*, 12(4), pp.423-445.

LYOTARD, J-F. 1991. *The Inhuman*. (translated by G. Bennington and R. Bowlby). Cambridge, UK: Polity Press.

LYTTLE, J., 2001. The Effectiveness of Humor in Persuasion: The Case of Business Ethics Training. *The Journal of General Psychology*, 128(2), pp.206-216.

LYTTLE, J., 2007. The Judicious Use and Management of Humor in the Workplace. *Business Horizons*, 50(3), pp.239-245). Elsevier BV.

LYTTLE, J., 2010. Getting Serious About Humor Research. *Journal of Psychosocial Nursing and Mental Health Services*, 48(11), pp.6). SLACK, Inc.

MACDONALD, C-M., 2004. A Chuckle a Day Keeps the Doctor Away: Therapeutic Humor and Laughter. *Journal of Psychosocial Nursing and Mental Health Services*, 42(3), pp.18-25

MACHLES, D., 1998. Informatics: Avoiding the Millennium Bug. *AAOHN Journal*, 46(5), pp.263-265. Los Angeles, USA: SAGE Publications.

MACIUIKA, J. V., 2000. Adolf Loos and the Aphoristic Style: Rhetorical Practice in Early Twentieth-Century Design Criticism. *Design Issues*, 16(2), pp. 75-86.

MacLARTY, L. & English, S., 2010. A Postgraduate Design Learning Experience: Understanding the Effects of Community, Cultural and Contextual environment. In: CLTAD 5th Annual Conference: Challenging the Curriculum, 12-13 April 2010, Berlin, Germany.

MADIGAN, T. J., 1999, Philosophy and Humour: An Introduction. *Philosophy Now*, #25, pp.9. London, UK:Anja.

MADDEN, C. S., 1991. Marketers Battle for Mind Share. *Baylor Business Review*, 9, Spring, 1991, pp.8.

MAFFEI, N. P. & FISHER, T., 2013. Historicizing Shininess in Design: Finding Meaning in an Unstable Phenomenon. *Journal of Design History*, 26(3), Special Issue: Shininess (2013), pp.231-240. Oxford University Press on behalf of the Design History Society.

MALAFOURIS, L., 2013. *How Things Shape the Mind: A Theory of Material Engagement*. USA: MIT Press.

MALCOM, H. (SECRETION, F. [sic], CONJUR, G.S. [sic] & ATTITUDE, S.P. [sic]), 1998. Interviews with the Dead: Using Meta-Life Qualitative Analysis to Validate Hippocrates' Theory of Humours. JAMC, Canadian Medical Association, 159(12), pp.1472-1473.

MALCOLM, N., & WITTGENSTEIN, L., 2001. *Ludwig Wittgenstein: A Memoir*. Oxford, UK: Clarendon Press.

MALDONADO, T., 1993. Industrial Design: Some Present and Future Queries: The Fourth Banham Memorial Lecture. *Journal of Design History*, 6(1), pp.1-7. Oxford University Press on behalf of the Design History Society.

MALMQVIST, K., 2015. Satire, Racist Humour and the Power of (Un)Laughter: On The Restrained Nature of Swedish Online Racist Discourse Targeting EU-Migrants Begging for Money. *Discourse & Society*, 26(6), pp.733-753.

MALPASS, M., 2012. Contextualising Critical Design: Towards a Taxonomy of Critical Practice in Product Design, PhD thesis, Nottingham Trent University, UK.

MALPASS, M., 2013. Between Wit and Reason: Defining Associative, Speculative, and Critical Design in Practice. *Design and Culture*, 5(3), pp.333-356. Informa UK Ltd.

MALPASS, M., 2015a. Criticism and Function in Critical Design Practice. *Design Issues*, 31(2), pp.59-71. MIT Press.

MALPASS, M. 2015b. Speculative Everything: Design, Fiction, and Social Dreaming. *Design and Culture*, 7(2), pp.268-270). Informa UK Ltd.s

MALPASS, M., 2016. Critical Design Practice: Theoretical Perspectives and Methods of Engagement. *The Design Journal,* 19(3), pp.473-489. Informa UK Ltd.

MALPASS, M., 2017a. *Critical Design in Context: History, Theory, and Practice*. London, UK: Bloomsbury Academic.

MALPASS, M., 2017b. Design for Life: Creating Meaning in a Distracted World. *The Design Journal*, 21(1), pp.173-176). Informa UK Ltd.

MANGEL, M. & SAMANIEGO, F. J., 1984. Abraham Wald's Work on Aircraft Survivability. *Journal of the American Statistical Association,* 79(386), pp. 259-267. Taylor & Francis, Ltd., London, UK.

MANNINEN, S., TUOMINEN, L., DUNBAR, R. I., KARJALAINEN, T., HIRVONEN, J., ARPONEN, E., HARI, R., JÄÄSKELÄINEN, I. P., SAMS, M. AND NUMMENMAA, L., 2017. Social Laughter Triggers Endogenous Opioid Release in Humans. *The Journal of Neuroscience*, 37(25), pp.6125-6131.

MANZINI, E., 1994. Design, Environment and Social Quality: From "Existenzminimum" to "Quality Maximum". *Design Issues*, 10(1), pp.37-43.

Mapp, 2021. Vivienne Westwood Leads the Way for Tailored Communications at Scale with Mapp. [Online] Available at https://mapp.com/wp-content/uploads/2022/05/Vivienne-Westwood-Case-Study.pdf [Accessed 15 May 2024].

MARENKO, B. (ed.), 2005. *DiY Survival*. London, UK: Mute.

MARGOLIN, V., 1989. *Design Discourse: History, Theory, Criticism. Chicago*: University of Chicago Press.

MARGOLIN, V., 1995a. A Reply to Adrian Forty. *Journal of Design History*, 11(1), pp.19-21. Oxford University Press on behalf of the Design History Society.

MARGOLIN, V., 1995b. Design History or Design Studies: Subject Matter and Methods. *Design Issues*, 11(1), pp. 4-15.

MARGOLIN, V., 2005. A World History of Design and the History of the World. *Journal of Design History*, 18(3), The Global Future of Design History (Autumn, 2005), pp.235-243. Oxford University Press on behalf of the Design History Society.

MARGOLIN, V., 2015. *World History of Design*. Volume 1. London, UK: Bloomsbury Academic.

MARGOLIN, V., 2017. *World History of Design*. Volume 2. London, UK: Bloomsbury Academic.

MARGOLIN, V., 2018. *The Politics of the Artificial: Essays on Design and Design Studies*. Chicago, USA: University of Chicago Press.

MARGOLIN, V., 2024. *World History of Design*. Volume 3. London, UK: Bloomsbury Academic.

MARGOLIN, V. & BUCHANAN, R., 2002. *The Idea of Design: A Design Issues Reader*. Cambridge, Mass, USA: MIT Press.

MARGOLIN, V., & MARGOLIN, S., 2002. A "Social Model" of Design: Issues of Practice and Research. *Design Issues*, 18(4), pp.24-30.

MARKOWITZ, K., 2023. Laughter in the Lab, *Nature*, 616(27), pp.849-850.

MARCUS, G., 2009. *Kluge*. London, UK: Faber & Faber.

MARS, R., 2013. 99% Invisible. Episode 81: Rebar and the Alvord Lake Bridge (podcast transcript). [Online] Available at https://99percentinvisible.org/episode/episode-81-rebar-and-the-alvord-lake-bridge/transcript/ [Accessed 06 July 2013].

MARTEINSON, D. P. G., 2017. *On the Problem of the Comic: A Philosophical Study of the Origins of Laughter*. Ottawa, Canada: Legas Ottawa.

MARTIN, B., 2012. *Humor in Craft*. USA: Schiffer Publishing.

MARTIN, G., 2024. What's the Origin of the Phrase 'A Problem Shared is a Problem Halved'? [Online] Available at: https://www.phrases.org.uk/meanings/a-problem-shared-is-a-problem-halved.html [Accessed 07 July 2024].

MARTIN, M. W., 1983. Humour and Aesthetic Enjoyment of Incongruities. *British Journal of Aesthetics*, 23(1), pp.74-85.

MARTIN, R. A. & FORD, T. E., 2018. *The Psychology of Humor: An Integrative Approach*. London, UK: Academic Press.

MARTIN, R. A. & LEFCOURT, H. M., 1984. 'Situational Humor Response Questionnaire: Quantitative Measure of Sense of Humour'. *Journal of Personality and Social Psychology,* 47(1), pp.145-155.

MARTINEZ, V. G. & ENGLISH S. G., 2015. Why Designers Won't Save the World. 11th European Academy of Design Conference: The Value of Design Research. 22nd-24th April 2015, Institute of Psychology, Paris Descartes University, France.

MARX, K., 2003. Capital: A Critique of Political Economy. In GORMAN, C., 2003. *The Industrial Design Reader*. New York: Allworth Press, pp.22-25.

MASCARÓ, M., SERÓN, F. J., PERALES, F. J., VARONA, J. & MAS, R., 2021. Laughter and Smiling Facial Expression Modelling for the Generation of Virtual Affective Behavior. In E. Kasneci (Ed.), *PLoS ONE*, 16(5), e0251057, pp.1-16

MASSAUD, J.-M., 2008. Jean-Marie Massaud. In FIELL, C. & FIELL, P. 2008. *Design Now!* Cologne, Germany: Taschen, pp.352-361.

MATHESON, R., TANGNEY, S. & SUTCLIFFE, M. (eds), 2018. *Transition In, Through and Out of Higher Education: International Case Studies and Best Practice*. Abingdon, UK: Routledge.

MATHIES, C., CHIEW, T. M. & KLEINALTENKAMP, M., 2016. The Antecedents and Consequences of Humour for Service: A Review and Directions for Research. *Journal of Service Theory and Practice*, 26(2), pp.137-162.

MATUSZAK, J., 2018. Humour in Sumerian Didactic Literature. In Rollinger, R., Madreiter, I., Lang, M. & Pappi, C. (eds.), 2018. The Intellectual Heritage of the Ancient Near East. Proceedings of the 64th Rencontre Assyriologique Internationale and the 12th Melammu Symposium, University of Innsbruck, July 16–20, 2018. Verlag der Österreichischen Akademie der Wissenschaften.

MAURER, I., 2008. Ingo Maurer. In FIELL, C. & FIELL, P. 2008. *Design Now!* Cologne, Germany: Taschen, pp.368-373.

Le MAUX, M., 2016. *1000 Sneakers: A Guide to the World's Greatest Kicks, from Sport to Street*. New York, USA: Universe.

MAZZOCCONI, C., TIAN, Y. & GINZBURG, J., 2022. What's Your Laughter Doing There? A Taxonomy of the Pragmatic Functions of Laughter. *IEEE Transactions on Affective Computing*, 13,(3), pp.1302-1321.

McALHONE, B. & STUART, D., 2004. *A Smile in the Mind*. London, UK: Phaidon Press.

McCAFFREY, T. & KRISHNAMURTY, S., 2014. The Obscure Features Hypothesis in Design Innovation'. *International Journal of Design Creativity and Innovation*. 3(1), pp.1-28. Informa UK Limited.

McCARTHY. J., 2007. *Technology as Experience*. Cambridge, MA, USA: The MIT Press.

McCARTHY, S., 2013. *The Designer as Author, Producer, Activist, Entrepreneur, Curator and Collaborator: New Models for Communicating*. Netherlands: BIS Publishers B.V.

McCULLOUGH, D., 2016. *The Wright Brothers*. London, UK: Simon & Schuster Ltd.

McDONAGH, D. (ed), HEKKERT, P. (ed), van ERP, J. (ed) & GYI, D. (ed), 2003. *Design and Emotion*. London, UK: CRC Press.

McDONALD, P., 2012. *The Philosophy of Humour (...Just Joking...)*. Penrith, UK: Humanities Books LLP.

McDOWELL, C., 2009. In Timeshift. S08, E07: 'Fashion Versus the BBC'. BBC Television, 24th Jan 2009.

McGEE, E. & SHEVLIN, M., 2009, Effect of Humor on Interpersonal Attraction and Mate Selection. *The Journal of Psychology*, 143(1), pp.67–77.

McGHEE, P., 1980. *Humor. Its Origin and Development*. W H Freeman & Co (Sd).

McGINN, C., 2008. *Mindfucking: A Critique of Mental Manipulation*. United Kingdom: Acumen Publishing.

McGRAW, A. P., SHIRO, J. L., & FERNBACH, P. M., 2015. Not a Problem: A Downside of Humorous Appeals. *Journal of Marketing Behavior*, 1(2), pp.187-208.

McGRAW, A. P. & WARREN, C., 2010. Benign Violations: Making Immoral Behavior Funny. *Psychological Science*, 21(8) 1141–1149.

McGRAW, A. P. & WARREN, C., 2015a, Benign Violation Theory. In Attardo, S., (ed.), 2015. *Encyclopaedia of Humor Studies.* Thousand Oaks, California, USA: Sage Publications, Inc., pp.75-77.

McGRAW, A. P. & WARREN, C., 2015b, Psychological Distance. In Attardo, S., (ed.), 2015. *Encyclopaedia of Humor Studies.* Thousand Oaks, California, USA: Sage Publications, Inc., pp.602-604.

McGRAW, A. P. & WARREN, C., & KAN, C., 2015. Humorous Complaining. *Journal of Consumer Research*, 41(5), pp.1153-1171.

McGRAW, A. P., WARREN, C., WILLIAMS, L. E., & LEONARD, B., 2012. Too Close for Comfort, or Too Far to Care? Finding Humor in Distant Tragedies and Close Mishaps. *Psychological Science,* 23(10), pp.1215-1223.

McGRAW, A. P., WILLIAMS, L. E., & WARREN, C., 2013. The Rise and Fall of Humor: Psychological Distance Modulates Humorous Responses to Tragedy. *Social Psychological and Personality Science,* 5(5), pp.566-572.

McKIM MALVILLE, J., 2016. Animism, Reciprocity, and Entanglement. Mediterranean *Archaeology and Archaeometry*, 16(4), pp.51-58.

McLEOD, M., 2014. Reviewed Work(s): Le Corbusier. Furniture and Interiors 1905-1965 by Arthur Rüegg and Klaus Spechtenhauser. *Journal of Design History*, 27(2), pp.182-185. Oxford, UK: Oxford University Press on behalf of the Design History Society.

McLUHAN, M., 2005. *Understanding Media: The Extensions of Man*. London, UK: Routledge.

McNISH, J. & SILCOFF, S., 2015. *Losing the Signal: The Untold Story Behind the Extraordinary Rise and Spectacular Fall of Blackberry*. London, UK: Random House Business Books.

MEIKLE, J. L., 1995. Design History for What? Reflections on an Elusive Goal. *Design Issues*, 11(1), pp.71-75.

MEIKLE, J. L., 1998. Material Virtues: On the Ideal and the Real in Design History. *Journal of Design History*, 11(3), pp.191-199. Oxford University Press on behalf of the Design History Society.

Merriam-Webster, 2024. Humor. [Online] https://www.merriam-webster.com/dictionary/humor [Accessed 14 June 2024].

MESMER-MAGNUS, J., GLEW, D. J., & VISWESVARAN, C., 2012. A Meta-Analysis of Positive Humor in the Workplace. *Journal of Managerial Psychology*, 27(2), pp.155-190.

MESMER-MAGNUS, J., GUIDICE, R., ANDREWS, M. & OECHSLIN, R., 2018. The Effects of Supervisor Humour on Employee Attitudes. *Journal of Management Development*, 37(9/10), pp.697-710. Emerald.

MESS, B., 2001. ’Analytical' or 'Synthetic' Research in the Life Sciences. *Neuroendocrinology Letters*, 22, pp.153-154.

The Metropolitan Museum of Art, 2024. Savoy. [Online] Available at: https://www.metmuseum.org/art/collection/search/484153 [Accessed 27 June 2024].

MEURER, B., 2001. The Transformation of Design. *Design Issues*, 17(1), pp.44-53.

MICHAEL, V., 2002. Reyner Banham: Signs and Designs in the Time without Style. *Design Issues*, 18(2), pp.65-77.

MICHAUD, P.-A., 2007. *Aby Warburg and the Image in Motion*. MIT Press.

MICHELSON, A., 2024, Ernest Leslie Ransome (Civil Engineer). Pacific Coast Architecture Database (PCAD) [Online] Available at https://pcad.lib.washington.edu/person/2766/#:~:text=An%20article%20in%20the%20Architect,reinforced%20concrete%20buildings%20in%20America. [Accessed 3rd Apr 2024].

MIKESELL, S., 2019. Ernest Leslie Ransome. *California History*, 96(3), pp.77-96. University of California Press in association with the California Historical Society.

MILLER, D., 2009. *The Comfort of Things*. Malden, MA, USA: Wiley, John & Sons.

MILLER, D., 2010. *Stuff*. Cambridge, UK: Polity Press.

MILLER, G., 2001, *The Mating Mind*. London, UK: Vintage.

MILLER, K. E. L., 2009. The Unuttered Punch Line: Pragmatic Incongruity and the Parsing of "What's the Difference" Jokes. Truman State University, USA. December 3, 2009. [Online] Available at: http://missourifolkloresociety.truman.edu/Missouri%20Folklore%20Studies/Miller%2520paper%2520PDF[1].pdf [Accessed 17 Nov 2010].

MILLET & PATERSON, 2012, User-Centred Design. In GARNER, S. & EVANS, C. (eds.), 2012. *Design and Designing: The Skills and Knowledge of Creation*. London, UK: Berg Publishers, pp.129-143.

MILTON, H., 1991. *Packaging design*. London, UK: Design Council.

MILTON, A. & RODGERS, P., 2013. Research Methods for Product Design. London, UK: Laurence King Publishing.

MINSKY, M., 1980. Jokes and the Logic of the Cognitive Unconscious. *A.I Memo (MIT)*, 603, pp.1-25.

MISHKIN, F. S., 2011. Over the Cliff: From the Subprime to the Global Financial Crisis. *The Journal of Economic Perspectives*, 25(1), pp.49-70.

MISHON, J., 2003. *Cartoon Workshop: Creating Humour*. UK: Collins.

MITCHELL, A. G., 2012. *Greek Vase-Painting and the Origins of Visual Humour*. Cambridge, UK: Cambridge University Press.

MITROVIĆ, I., AUGER, J., HANNA, J. & HELGASON, I., 2021. *Beyond Speculative Design: Past, Present, Future*. Split, Croatia: SpeculativeEdu, University of Split.

MITTAL, V. K. & YEGNANARAYANA, B., 2015. Analysis of Production Characteristics of Laughter. *Computer Speech & Language*, 30, pp.99-115.

MOGGRIDGE, B., 2006. *Designing Interactions*. USA: MIT Press.

MOHAN, S., 2009. Humor and Design. IIT Institute of Design. Chicago, USA.

MOK, A., 2024. Mark Zuckerberg Responds to 'Apple fanboys,' Says his Criticism of the Vision Pro is not the Same as Steve Ballmer Laughing Off the iPhone. Business Insider. New York, USA: Insider Inc.

MOLINEUX, C. N. D. N, 2019. The Role of Humour in the Evolution of Hominid Cognition and the Emergence of Language. PhD. Brunel University London.

MOLOTCH, H., 2003. *Where Stuff Comes From: How Toasters, Toilets, Cars, Computers and Many Other Things Come To Be As They Are*. Routledge.

MONTEIRO, M., 2019. *Ruined by Design: How Designers Destroyed the World, and What We Can Do to Fix It.* San Fransisco, USA: Independently published; 2019.

MORENO, L. A., & VILLALBA, E. R., 2018. Transdisciplinary Design: Tamed Complexity Through New Collaboration. *Strategic Design Research Journal*, 11(1). UNISINOS - Universidade do Vale do Rio Dos Sinos.

MORREALL, J. 1983. *Taking laughter seriously*. Albany, N.Y: State University Of New York.

MORREALL, J. (ed.), 1986. *The Philosophy of Laughter and Humor*. Albany, USA: State University of New York Press.

MORREALL, J., 2009. *Comic Relief: A Comprehensive Philosophy of Humor (New Directions in Aesthetics, No. 9)*. Hoboken, USA: Wiley-Blackwell.

MORREALL, J., 2015. Philosophy of Humour. In Attardo, S., (ed.), 2015. *Encyclopaedia of Humor Studies*. Thousand Oaks, California, USA: Sage Publications, Inc., pp.566-580.

MORREALL, J., 2020. Philosophy of Humor. Stanford Encyclopaedia of Philosophy. [Online] Available at https://plato.stanford.edu/entries/humor/#RelThe [Accessed 01 Aug 2022].

MORRIS, J., 2024. *Be Funny or Die: How Comedy Works and Why It Matters*. London, UK: Unbound Publishing.

MORRIS, R., 2009. *The Fundamentals of Product Design.* Lausanne, USA: Ingram Publisher Services.

MORTATI, M., 2015. A Framework for Design Innovation: Present and Future Discussions. *Design Issues*. 31(4), pp.4-16. MIT Press - Journals.

MOUSSAVI, F. & LÓPEZ, D.,2009. *The Function of Form*. Barcelona: Actar.

MULDER, M. P., & NIJHOLT, A., 2002. Humour Research: State of the Art. Enschede, the Netherlands: Center for Telematics and Information Technology, University of Twente.

MULLER, M. J., WILDMAN, D. M. & WHITE, E. A., 1993. Taxonomy Of PD Practices: A Brief Practitioner's Guide. *Participatory Design: Communications of the ACM*, June 1993. 36(4), pp.24-28.

MULVAUGH, J., 1998. *Vivienne Westwood: An Unfashionable Life*. London, UK: Harper Collins Publishers.

MUNDER,. 2005. Humour: The Secret of Aesthetic Sublimation. In LUNN, F. & MUNDER, H. (Eds.). 2005. *When Humour Becomes Painful*. Zurich, Switzerland: JRP Ringier. pp.12–25.

Museum of Failure, 2024. Museum of Failure. [Online] Available at: https://museumoffailure.com/ [Accessed 01 Aug 2024].

MUSTIENES, C., (ed), 2003a. *Extraordinary Objects 1*. Köln, Germany: Taschen.

MUSTIENES, C., (ed) 2003b. *Extraordinary Objects 2*. Köln, Germany: Taschen.

MYERSON, J. (ed.), 1994. *Design Renaissance: Selected Papers from The International Design Congress, Glasgow, Scotland*. Horsham, UK: Open Eye / Chartered Society of Designers.

MYERSON, G., 2000. *Heidegger, Habermas and the Mobile Phone*. Cambridge, UK: Icon Books Ltd.

MYERSON, J., 2001. *IDEO: Masters of Innovation.* Laurence King Publishing.

NAM, T. & KIM, C., 2011. Design by Tangible Stories: Enriching Interactive Everyday Products with Ludic Value. *International Journal of Design*, 5(1), pp.85-98.

NASH, C. M., 2015. Representation of Homosexuality. In Attardo, S., (ed.), 2015. *Encyclopaedia of Humor Studies*. Thousand Oaks, California, USA: Sage Publications, Inc., pp.342-345.

National Library of Medicine, 2022. In Brief: How Does the Prostate Work? [Online] Available at: https://www.ncbi.nlm.nih.gov/books/NBK279291/

#:~:text=The%20prostate's%20most%20important%20function,then%20expelled%20outwards%20during%20ejaculation. [Accessed 18 Sept 2024].

National Motor Museum, 2024. Reliant Regal Supervan III. [Online] Available at https://nationalmotormuseum.org.uk/vehicle-collection/reliant-regal/ [Accessed 24 April 2024].

Nature, 1922. How Laughter Evolved, and Mysterious Sea Creatures. *Nature*, 110(2759), pp. 396-397.

NAYLOR, G., 1997. Theory and Design: The Banham Factor: The Ninth Reyner Banham Memorial Lecture. *Journal of Design History*, 10(3), pp.241-252. Oxford University Press on behalf of the Design History Society.

NESI, H., 2012. Laughter in University Lectures. *Journal of English for Academic Purposes*, 11, pp.79-89.

NEUBAUER, R., BOHEMIA, E. & HARMAN, K. (2020). Rethinking Design: From the Methodology of Innovation to the Object of Design. *Design Issues*, 36(2), pp.18-27. MIT Press.

New York Times, 1998. Slogan Causes Pencil Recall. [Online] Available at: https://www.nytimes.com/1998/12/12/nyregion/slogan-causes-pencil-recall.html?smid=url-share [Accessed 15 Jun 2024].

NGAI, G., CHAN, S. C. F., NG, V. T. Y., CHEUNG, J. C. Y., CHOY, S. S. S., WINNIE W.Y. LAU, W. W. Y. & TSE, J. T. P., 2010. i*CATch: A Scalable, Plug-n-Play Wearable Computing Framework for Novices and Children. CHI 2010: Computing on the Body. April 10–15, 2010, Atlanta, USA, pp.443-452.

NGUYEN, H. K., 2020. Anything Goes with Wit and Ambiguity: Playfulness in Japanese Visual Culture. *Design Issues,* 36(2), pp.72-86. MIT Press, USA.

NICHOLAS, G., 2022. Disentangling ‘Contact’, ‘Colonialism’ and ‘Cultural Entanglement’. *Australian Archaeology*, 88(1), pp.102-103.

NICOLLE, M., 2011. *Axe Cop: Vol.1.* USA: Dark Horse Comics.

NIEDDERER, K., 2012. Exploring Elastic Movement as a Medium for Complex Emotional Expression in Silver Design. *International Journal of Design*, 6(3), pp.57-69.

NIETZSCHE, F., DEL CARO, A. (ed.) & PIPPIN, R. B. (ed.), 2006. *Thus Spoke Zarathustra: A Book for All and None*. (Translated by A. Del Caro). Cambridge, UK: Cambridge University Press.

van NIEROP, O. A., BLANKENDAAL, A. C. M. & OVERBEEKE, C. J., 1997. The Evolution of the Bicycle: A Dynamic Systems Approach. *Journal of Design History*, 10(3), pp.253-267. Oxford University Press on behalf of the Design History Society.

NIEUSMA, D., 2004. Alternative Design Scholarship: Working toward Appropriate Design. *Design Issues*, 20(3), pp. 13-24.

NIEUWENHUIS, I. & ZIJP, D., 2022. The Politics and Aesthetics of Humour in an Age of Comic Controversy. *European Journal of Cultural Studies* 25(2), pp.341-354). SAGE Publications.

NIJHOLT, A., 2018. "All the World's a Stage": Incongruity Humour Revisited. *Annals of Mathematics and Artificial Intelligence* (2020), 88, pp.405-438.

NIKOPOULOS, J. (2017). The Stability of Laughter. *HUMOR*, 30(1), pp.1-21.

NILSEN, A. P. & NILSEN, D. L. F., 2019. *The Language of Humor: An Introduction*. Cambridge, UK: Cambridge University Press.

NIU, W. & KAUFMAN, J. C., 2013, Creativity of Chinese and American Cultures: A Synthetic Analysis. *The Journal of Creative Behaviour*. 47. pp.77-87

NODDINGS, N., & SHORE, J-P., 1984. *Awakening the Inner Eye: Intuition in Education*. Columbia University Press.

NORGUET, P., 2008. Patrick Norguet. In FIELL, C. & FIELL, P. 2008. *Design Now!* Cologne, Germany: Taschen, pp.406-409.

NORMAN, D. A., 1993. *Things That Make Us Smart: Defending Human Attributes in the Age of the Machine*. Massachusetts, USA: Persus Books.

NORMAN, D. A., 1999. *The Invisible Computer: Why Good Products Can Fail, the Personal Computer Is so Complex, and Information Appliances Are the Solution*. Massachusetts, USA: MIT Press.

NORMAN, D. A., 2000. *The Design of Everyday Things*. Massachusetts, USA: MIT Press.

NORMAN, D. A., 2004. *Emotional Design: Why We Love (or Hate) Everyday Things*. Massachusetts, USA: Persus Books.

NORMAN, D. A., 2010. *Living with Complexity*. Cambridge, Massachusetts, USA: MIT Press.

NORRICK, N. R., & SPITZ, A., 2008. Humor as a resource for mitigating conflict in interaction. *Journal of Pragmatics*, 40(10), pp.1661-1686.

NOWELL, A. & Van GELDER, L., 2020. Entanglements: the Role of Finger Flutings in the Study of the Lived Lives of Upper Paleolithic Peoples. *Journal of Archaeological Method and Theory*, 27 pp.585-606. Springer Science and Business Media LLC.

NOWOTNY, H. & COHEN, M., 2010. *Insatiable Curiosity: Innovation in a Fragile Future*. Cambridge, MA, USA: MIT Press.

NUMAN, D., 2024. The Squiggle: The Process of Uncertainty. [Online] Available at: https://thedesignsquiggle.com/about [Accessed 09 Aug 2024].

NYFFENEGGER, J. & MATHYS, S, 2021. Ugly Design [Online] Available at https://www.instagram.com/uglydesign/ [Accessed 28 Mar 2024].

OED (Oxford English Dictionary), 2023a. Humour | humor (n.). Oxford University Press (OUP). [Online] Available at https://www.oed.com/dictionary/humour_n?tab=meaning_and_use&tl=true#1141997 [Accessed 17 Jan 2024].

OED (Oxford English Dictionary), 2023b. Humour | humor (n.), Etymology. Oxford University Press (OUP). [Online] Available at https://www.oed.com/dictionary/humour_n?tab=etymology [Accessed 17 Jan 2024].

OLIVIER, A., 2020. Philosophy and Laughter: Introductory Notes. *The Southern Journal of Philosophy*, 58(4), pp.490-499.

OED (Oxford English Dictionary), 2023c. Prat (n.). Oxford University Press (OUP). [Online] Available at https://www.oed.com/dictionary/prat_n3?tab=factsheet#28749818 [Accessed 28 April 2024].

OED (Oxford English Dictionary), 2023d. Risible (n.). Oxford University Press (OUP). [Online] https://www.oed.com/search/dictionary/?scope=Entries&q=risible [Accessed 18 Jun 2024].

OLIVEIRA, R., ARRIAGA, P., AXELSSON, M. & PAIVA, A., 2020. Humor-Robot Interaction: A Scoping Review of the Literature and Future Directions. *International Journal of Social Robotics*, 13, pp.1369-1383.

OLSEN, B., 2013. *In Defence of Things: Archaeology and the Ontology of Objects*. USA: Rowman & Littlefield Publishers.

OLSEN, P., 2015. BlackBerry's Famous Last Words At 2007 iPhone Launch: 'We'll Be Fine'. Forbes [Online] available at https://www.forbes.com/sites/parmyolson/2015/05/26/blackberry-iphone-book/?sh=3b2b8feb63c9 [Accessed 6th May 2024].

ORING, E., 2008. *Engaging Humor*. Champaign, IL, USA: University of Illinois Press.

O'SHANNON, D., 2016. *What Are You Laughing At? A Comprehensive Guide to the Comedic Event*. London, UK: Continuum.

OTTO, T., 2016. History In and For Design. *Journal of Design History*, 29(1), Special Issue: Design Dispersed, pp.58-70. Oxford University Press on behalf of the Design History Society.

OVEIS, C., SPECTRE, A., SMITH, P. K., LIU, M.Y. & KELTNER, D., 2016. Laughter Conveys Status. *Journal of Experimental Social Psychology*, 65, 109-115.

PACEY, P., 1992. 'Anyone Designing Anything?' Non-Professional Designers and the History of Design. *Journal of Design History*, 5(3), pp.217-225. Oxford University Press on behalf of the Design History Society.

PANKSEPP, J., 2007. Neuroevolutionary Sources of Laughter and Social Joy: Modeling Primal Human Laughter in Laboratory Rats. *Behavioural Brain Research*, 182(2), pp.231-244). Elsevier BV.

PANKSEPP J. & BURGDORF,, J., 2003. “Laughing” Rats and the Evolutionary Antecedents of Human Joy? *Physiology & Behavior*, 79(3), pp.533-547. Elsevier BV.

PALMER, J., 1994. *Taking Humour Seriously*. London, UK: Routledge.

PALMER, J. & DODSON, M., 1996. *Design and Aesthetics: A Reader*. London, UK: Routledge

PANTZAR, M., 1997. Domestication of Everyday Life Technology: Dynamic Views on the Social Histories of Artefacts. *Design Issues*, 13(3), pp. 52-65.

PAPANEK, V., 2019. *Design for the Real World*. London, UK: Thames & Hudson.

PAPIA, D. 1998. International Chindogu Society. [Online] Available at: http://www.rosemaryroad.org/ctnst3/chindogu.html [Accessed 17 Nov 2009].

PARKER, I. 1989. *The Crisis in Modern Social Psychology – and How to End it*. London, UK: Routledge.

PARSONS, G., 2015. *The Philosophy of Design*. Cambridge, UK: Polity Press.

PARSONS, T., 2009. *Thinking Objects: Contemporary Approaches to Product Design*. Lausanne, Switzerland: Ava Publishing.

PARVULESCU, A., 2017. Even Laughter? From Laughter in the Magic Theater to the Laughter Assembly Line. *Critical Inquiry,* 43, pp.506-527.

PATIL, K. & ATHAVANKAR, U., 2022. Design Precedents to Design Innovation: Category-Based Reasoning in Problem-Solving. *The Design Journal*. 25(1), pp.62-85. Informa UK Limited.

PCmag, 2024. Memoji. [Online] Available at: https://www.pcmag.com/encyclopedia/term/memoji#:~:text=(ME%20eMOJI)%20A%20customizable%20Animoji,design%20an%20avatar%20of%20themselves. [Accessed 6th May 2024].

PEARCE, H., 2009. *Conundrums: Typographic Conundrums*. USA: It Books.

PEARSON, L. F., 2010. *Amusement Machines*. Oxford, UK: Shire Publications Ltd.

PENNER, B., 2001. A World of Unmentionable Suffering: Women's Public Conveniences in Victorian London. *Journal of Design History*, 14(1), pp.35-51. Oxford University Press on behalf of the Design History Society.

PENSON, R. T., PARTRIDGE, R. A., RUDD, P., SEIDEN, M.V., NELSON, J. E., CHABNER, B. A. & LYNCH, T. J. Jr., 2005. Update: Laughter: The Best Medicine? *The Oncologist*, 10, pp.651–660.

PEPPERELL, R. 1997. *The Post-Human Condition*. Exeter, UK: Intellect Books.

PEPPERELL, R. and PUNT, M. 2000. *The Postdigital Membrane: Imagination, Technology and Desire*. Bristol, UK: Intellect Books.

PEPPERELL, R., 2005. Posthumans and Extended Experience. *Journal of Evolution and Technology*, 14(1), pp.27-41.

PÉREZ, R., 2022. *The Souls of White Jokes: How Racist Humor Fuels White Supremacy.* USA: Stanford University Press.

PÉREZ-GÓMEZ, A., 1999. Hermeneutics as Discourse in Design. *Design Issues*, 15(2), pp.71-79.

PETRELLI, D., WHITTAKER, S. BROCKMEIER, J., 2008. AutoTopography: What Can Physical Mementos Tell us about Digital Memories? CHI 2008 Proceedings: Stories and Memories. April 5-10, 2008, Florence, Italy, pp.53-62.

PETROSKI, H., 1992. *The Evolution of Useful Things.* New York: Knopf.

PETROSKI, H., 2006. *Success through Failure: The Paradox of Design*. Princeton, USA: Princeton University Press.

PETROSKI, H., 2008. *The Toothpick: Technology and Culture*. UK: Vintage.

PETROV, D., MARCHALIK, D., 2023. From Literature to Medicine: Laughter is the Best Medicine. *The Lancet*, 401, pp.1844.

PETRY, M., 2012. *The Art of Not Making: The New Artist/Artisan Relationship*. Thames & Hudson.

PFISTER, F., YUN, J., SOHN, B. & LIM, Y.-K., 2011. Pleasurable & Emotionally-Enriched Experience: An Exploration Through Light. In Proceedings of the Conference of International Association of Societies of Design Research (pp.1-9). Delft, the Netherlands: Delft University of Technology.

PHAIDON PRESS (eds), 2009. *10,000 Years of Art*. London: Phaidon Press.

PICKERING, M. & LOCKYER, S., 2009. *Beyond a Joke: The Limits of Humour*. Basingstoke, UK: Palgrave Macmillan.

PILASTRO, E., 2023. Would You Laugh at the Oldest Joke in History? [Online] Available at: https://www.guinnessworldrecords.com/news/2023/10/would-you-laugh-at-the-oldest-joke-in-history-759519 [Accessed 20 Nov 2023].

PINKER, S. 2008. *The Seven Words You Can't Say on Television*. London, UK: Penguin.

PINXIT, V., 2019. Navigating the Methodology of an Interdisciplinary Art and Design Practice with Conscious Bridging. *The International Journal of Art & Design Education*, 38(2), pp.416-429.

PIRSIG, R.M., 1999. *Zen and the Art of Motorcycle Maintenance*. London: Vintage.

PITTS, M. & VERSLUYS, M. J., 2021. Objectscapes: A Manifesto for Investigating the Impacts of Object Flows on Past Societies. *Antiquity*, 95(380), pp.367-381.

PLESSEN, C. Y., FRANKEN, F. R., STER, C., SCHMID, R. R., WOLFMAYR, C., MAYER, A.-M., SOBISCH, M., KATHOFER, M., RATTNER, K., KOTLYAR, E., MAIERWIESER, R. J. & TRAN, U. S., 2020. Humor Styles and Personality: A Systematic Review and Meta-Analysis on the Relations Between Humor Styles and the Big Five Personality Traits. *Personality and Individual Differences*, 154, 109676, pp.1-9.

POL, G., PARK, C.W. & REIMANN, M., 2012. Humor Versus Aesthetics in Product Design: Their Impact on Ownership Pride. In: GÜRHAN-CANLI, Z., OTNES, C. & ZHU, R (J). (eds.), 2012. *Advances in Consumer Research*, 40(1), pp.308-312. Association for Consumer Research, Duluth, Minnesota.

POLIMENI, J. & REISS, J. P., 2006. The First Joke: Exploring the Evolutionary Origins of Humor. *Evolutionary Psychology*, 4, pp.347-366

POLIMENI, J., 2015. Jokes Optimise Social Norms, Laughter Synchronises Social Attitudes: An Evolutionary Hypothesis on the Origins of Humour. *The European Journal of Humour Research*, 4(2), pp.70-81.

PONTON, H., OSBORNE, A., THOMPSON, N. & GREENWOOD, D., 2020. The Power of Humour to Unite and Divide: A Case Study of Design Coordination Meetings in Construction. *Construction Management and Economics*, 38(1), pp.32-54.

POTTS, R., 2018. *Souvenir*. New York, USA: Bloomsbury Academic, Bloomsbury Publishing Inc.

PORTER, L., 1930. The Lure of Medical History: Hippocratic Medicine. *California and Western Medicine*, 32(3), pp.181-183.

POYNOR, R., 2006. *Designing Pornotopia: Travels in Visual Culture*. New York, USA: Princeton Architectural Press.

PRABHU, J. & JAIN, S. 2015. Innovation and Entrepreneurship in India: Understanding Jugaad. *Asia Pacific Journal of Management*, 32(4), pp.843-868. Springer Science and Business Media LLC.

PRAKASH, J., CHATTERJEE, K., SRIVASTAVA, K., CHAUHAN, V. S., 2020. Jugaad: An Indi-Genius Problem-Solving Approach. *Indian Psychiatry Journal*. 28, pp.312-314.

PRESTON, G., 2023. From Kin to Clippy — The Worst Microsoft Products Not Named Windows. Computerworld.com [Online] Available at http://ezproxy.cardiffmet.ac.uk/login?url=https://www.proquest.com/trade-journals/microsofts-mobile-turnaround-whats-at-stake/docview/223734299/se-2?accountid=15588 [Accessed 27 March 2024].

PRINZ, J., 2017. Against Outsider Art. *Journal of Social Philosophy*. 48(3), pp.250-272. Wiley.

PROKOPY, S., 2003. Up, Up, and Away. *Concrete Products,* 106(1), pp.26.

PROVINE, R. R. & YONG, Y. L., 1991. Laughter: A Stereotyped Human Vocalization. *Ethology,* 89, pp.115-124.

PROVINE, R. R., 1996. Laughter. *American Scientist*, 84(1), pp.38-47.

PROVINE, R. R., 2000. *Laughter: A Scientific Investigation.* London, UK. Faber & Faber.

PROVINE, R. R., 2015. Laughter as a Scientific Problem: An Adventure in Sidewalk Neuroscience. *Journal of Comparative Neurology / Research in Systems Neuroscience*, 524, pp.1532-1539.

PROVINE, R. R., 2016. Laughter as an Approach to Vocal Evolution: The Bipedal Theory. *Psychonomic Bulletin & Review*, 24, pp.238-244.

PRYOR, L., 2022. Funny Money: Using Humor in Financial Advertising. Brogan & Partners. [Online] Available at https://brogan.com/blog/funny-money-using-humor-in-financial-advertising/ [Accessed 01 June 2024].

PUNT, M., 1998. Accidental Machines: The Impact of Popular Participation in Computer Technology. *Design Issues*, 14(1), pp.54-80.

PUTNAM, T., 1988. The Theory of Machine Design in the Second Industrial Age. *Journal of Design History*, 1(1), pp.25-34. Oxford University Press on behalf of the Design History Society.

PUTNAM, T., 2005. Foreword: Design and Polity in Comparative Perspective. *Journal of Design History*, 20(2), Design and Polity Under and After the Ottoman Empire (Summer, 2007), pp.89-92. Oxford University Press on behalf of the Design History Society.

PYE, D., 2000. *The Nature and Aesthetics of Design*. London, UK: A & C Black Publishers.

PYNT, J. & HIGGS, J., 2008. Nineteenth-Century Patent Seating: Too Comfortable to Be Moral? *Journal of Design History*, 21(3), pp.277-288. Oxford University Press on behalf of the Design History Society.

QUINTILIAN, 2009. Institutio Oratoria (translated by H. E. Butler). [Online] Available at: https://penelope.uchicago.edu/Thayer/E/Roman/Texts/Quintilian/Institutio_Oratoria/6C*.html#3 [Accessed 28th Dec 2023].

RAI, A. S., 2019. *Jugaad Time: Ecologies of Everyday Hacking in India*. Durham, USA: Duke University Press.

RAMACHANDRAN, V. S., 1998. The Neurology and Evolution of Humor, Laughter, and Smiling: The False Alarm Theory. *Medical Hypotheses,* 51, pp.351-354.

RAMACHANDRAN, V. S. & BLAKESLEE, S., 1999. *Phantoms in the Brain: Human Nature and the Architecture of the Mind*. London, UK: Harper Perennial.

RAMAKERS, R. & BAKKER, G. (eds.), 1998. *Droog Design*. Netherlands: 010 Uitgeverij.

RAMAKERS, R. & BAKKER, G. (eds.), 2006. *Simply Droog.* Amsterdam, Netherlands: Droog.

RAMAZZINI, C., 2016. The Global Health Dimensions of Asbestos and Asbestos-Related Diseases. *Journal of Occupational Health*, 58(2), pp.220-223.

RAMS, D., 1989. Omit the Unimportant. In MARGOLIN, V., 1989. *Design Discourse: History, Theory, Criticism*. Chicago: University of Chicago Press. Pp. 111-113.

RAMS, D., CEES DE JONG (ed.), KLEMP, K. (ed.), MATTIE, E. (ed.), 2017. *Ten principles for good design: Dieter Rams.* The Jorrit Maan collection. Munich, Germany: Prestel.

RAMS, D. 2020. *Weniger, Aber Besser (Less, But Better)*. Berlin, Germany: Gestalten.

RANSOME, E. L. & SAURBREY, A., 2018. '*Reinforced Concrete Buildings; A Treatise on the History, Patents, Design and Erection of the Principal Parts Entering Into a Modern Reinforced Concrete Building'*. USA: Franklin Classics.

RANSON, B., 1989. Craftwork, Ideology and the Craft Life Cycle. *Journal of Design History*, 2(2/3), pp.77-92. Oxford University Press on behalf of the Design History Society.

RAO, P., 2004. Ranked: The 15 Best-Selling Mobile Phones of All Time. [Online] Available at https://www.visualcapitalist.com/top-15-most-sold-mobile-phones-all-time/ [Accessed 6th May 2024].

RAPP, A., 1951. *The Origins of Wit and Humour.* USA: E. P. Dutton & Co. Inc.

RASKIN, V. 2008. *The Primer of Humor Research*. New York, USA: Mouton De Gruyter.

RATH, S. & MOHAPATRA, M. S., 2013, Brand Recognition and Advertising Effectiveness: Study of Youth Responses for Select Print Advertisements. *Journal of Contemporary Management Research*, 7(2), pp.82-88.

RAZUMNIKOVA, O. M., 2020. Divergent versus Convergent Thinking. In Carayannis, E. G. (ed.), 2020. *Encyclopaedia of Creativity, Invention, Innovation and Entrepreneurship*. Cham, Switzerland: Springer, pp.759-765.

REDSTRÖM, J., 2017. *Making Design Theory*. Cambridge, USA: The Mit Press.

REES, J., 2015. *Refrigerator*. London, UK: Bloomsbury.

REISER, M. (ed.), 2011. *The Mobile Audience: Media Art and Mobile Technologies.* Amsterdam, Netherlands: Radopi B.V. pp.

REISINGER, B., 2017a. Remembering the iPhone Launch 10 Years Later. Fortune. [Online] available at https://fortune.com/2017/01/09/apple-iphone-10th-anniversary/ [Accessed 6th May 2024].

REISINGER, B., 2017b. That Time Steve Ballmer Laughed at the iPhone. Fortune. [Online] available at https://fortune.com/2017/01/10/steve-ballmer-apple-iphone/ [Accessed 6th May 2024].

REN, Y., ZHANG, Y. & LU, X., 2014. Funny Design Research of Household Products. *Applied Mechanics and Materials*, 654, pp.396-399.

REYNOLDS, G., 2008. *Presentation Zen: Simple Ideas on Presentation Design and Delivery*. San Francisco, USA: New Riders.

RIAL, M., 2019. *Am I Overthinking This? Over-Answering Life's Questions in 101 Charts*. San Francisco, USA: Chronicle Books.

RICCINI, R., 1998. History from Things: Notes on the History of Industrial Design. *Design Issues*, 14(3), pp.43-64.

RICHARD, F. G., 2010. Recharting Atlantic Encounters. Object Trajectories and Histories of Value in the Siin (Senegal) and Senegambia. *Archaeological Dialogues*, 17(1), pp.1-27. Cambridge University Press (CUP).

RICHARDSON, A., 1993. The Death of the Designer. *Design Issues*, 9(2), pp.34-43.

RIESER, M. (ed.), 2011. *The Mobile Audience: Media Art and Mobile Technologies.* Netherlands: Rodopi Press.

RISSER, R. E., 2017. Insiders Curating Outsider Art. *Museum Anthropology,* 40(1), pp.79-87.

RITCHEY, T., 2011a. *Wicked Problems – Social Messes: Decision Support Modelling with Morphological Analysis (Risk, Governance and Society)*. New York, USA: Springer.

RITCHEY, T., 2011b. Modelling Alternative Futures with General Morphological Analysis. [online] Available at: <http://www.swemorph.com/pdf/wfr-ritchey.pdf> [Accessed 18 March 2012].

RITCHEY, T., 2012. Outline for a Morphology of Modelling Methods. *Acta Morphologica Generalis*, 1(1), pp.1-20.

RITCHEY, T., LÖVKVIST-ANDERSEN, A-L., OLSSON, R., STENSTRÖM, M., 2004. Modelling Society's Capacity to Manage Extraordinary Events. [online] Available at: <http://www.swemorph.com/pdf/sra.pdf> [Accessed 18 March 2012].

RITTEL, H. W. J. & WEBBER, M. M., 1973. Dilemmas in a General Theory of Planning. *Policy Sciences*, 4(2), pp.155-169. Published by: Springer.

ROBERTS, A., 2016. Humour is a Funny Thing. *The British Journal of Aesthetics*, 56(4), pp.355-366. Oxford University Press (OUP).

ROBERTS, A., 2019. *A Philosophy of Humour*. Cham, Switzerland: Palgrave Pivot.

ROBERTS, E. M. & TAPANILA, L., 2006. A New Social Insect Nest from the Upper Cretaceous Kaiparowits Formation of Southern Utah. *Journal of Palaeontology*, 80(4), pp.768-774. Cambridge University Press (CUP).

ROBERTSON, D. C. & BREEN, B., 2014. *Brick by Brick: How LEGO Rewrote the Rules of Innovation and Conquered the Global Toy Industry*. London, UK: Random House Business Books.

ROBINSON, H. 1966. *The Penguin Heath Robinson*. Harmondsworth, UK: Penguin Books Ltd.

ROBINSON, W. H., 1975. *Inventions*. London, UK: Gerald Duckworth & Co. Ltd.

ROBINSON, W. H., 1977. *Absurdities*. London, UK: Gerald Duckworth & Co. Ltd.

ROBINSON, W. H. & BEARE, G. (ed.), 2007. *Heath Robinson: Contraptions*. London, UK: Duckworth Overlook.

ROBINSON, W. H. & BEARE, G. (ed.), 2015. *Heath Robinson's Great War: The Satirical Cartoons*. Oxford, UK: The Bodleian Library.

ROBINSON, W. H., 1979. *Railway Ribaldry: Being 96 Pages of Railway Humour*. London, UK: Gerald Duckworth & Co. Ltd.

ROBSON, K., PITT, L. & BERTHON, P. R., 2015. “Yes, and...”: What Improv Theater can Teach Service Firms. *Business Horizons* 58(4), pp.357-362). Elsevier BV.

ROECKELEIN, J. E., 2015. In Attardo, S., (ed.), 2015. *Encyclopaedia of Humor Studies*. Thousand Oaks, California, USA: Sage Publications, Inc., pp.340-342.

ROJAS, F., ENGLISH, S., YOUNG R. & SPENCER, N. 2015. Making Mindfulness Explicit in Design Education. In: LearnxDesign, The 3rd International Conference for Design Education Researchers, DRS/CUMULUS/Design-ed, 2015, Chicago, Illinois, USA, pp.1-15.

ROJAS, F., ENGLISH, S., YOUNG R. & SPENCER, N. 2016. Bridging Mindfulness and Design. In: *UD16 – SUR/VIVAL*, 22-23 July 2016, Aveiro, Portugal.

ROSS, R., 2005a. *Patently Erotic: Tear-away Bras, Couple's Chairs, Vibrating Condoms and Other Patented Strokes of Genius*. London: Robson Books.

ROSS, R., 2005b. *Patently Ridiculous: Scuba-Diving Dogs, Beerbrellas, Musical Toothpaste, and Other Patented Strokes of Genius*. London: Robson Books.

ROTH, S., 1999. The State of Design Research. *Design Issues*, 15(2), pp.18-26.

ROUNAK, J., 2024. Mark Zuckerberg Hits Back At 'Apple Fanboys' For Comparisons To Steve Ballmer's iPhone Dismissal Over Vision Pro Critique: 'I'm Not Laughing At Them’. Southfield, USA: Benzinga Newswires, Accretive Capital LLC d/b/a Benzinga.

Royal Society of Arts (RSA), 1999. *On Design and Innovation: A Selection of Lecturers Organised by the Royal Society for the Encouragement of Arts, Manufactures and Commerce*. Aldershot, UK: Gower Publishing Company.

RUCH, W. (ed.), 1998. *The Sense of Humor: Explorations of a Personality Characteristic*. Berlin: Mouton De Gruyter.

RUCH, W., 2008. Historical Views of Humor. In Raskin, V., (ed.), 2008. *The Primer of Humor Research*. New York, USA: Mouton De Gruyter, pp.303-332.

RUSKIN, J., 2018. *The Seven Lamps of Architecture*. Adansonia Press.

RYAN, D., 1997. Enzo Mari and the Process of Design. *Design Issues*, 13(3), pp. 29-36.

SAGAN, C., 1993. *Broca’s Brain: Reflections on the Romance of Science*. New York, USA: Presidio Press.

SAGMEISTER, S. & WALSH, J., 2018. *Sagmeister & Walsh: Beauty*. London, UK: Phaidon Press, Incorporated.

SAN, S. T., BARNES, E. H. & CALDWELL, P. H. Y., 2021. Urinary Incontinence During Laughter in Children: Is It Giggle Incontinence? *Journal of Paediatrics and Child Health*,

57, pp.1971-1975.

SANDINO, L., 2004. Here Today, Gone Tomorrow: Transient Materiality in Contemporary Cultural Artefacts. *Journal of Design History*, 17(3), Dangerous Liaisons: Relationships between Design, Craft and Art (2004), pp.231-233. Oxford University Press on behalf of the Design History Society.

SANDINO, L., 2006. Introduction Oral Histories and Design: Objects and Subjects. *Journal of Design History*, 19(4), pp.275-282. Oxford University Press on behalf of the Design History Society.

SAUCIER, C. J. & WALTER, N., 2021. Dissecting a Frog: A Meta-Analytic Evaluation of Humor Intensity in Persuasion Research. *Annals of the International Communication Association*, 45(4), pp.258-283.

SAVAGE, B. M., LUJAN, H. L., THIPPARTHI, R. R. & DiCARLO, S. E., 2017. Humor, Laughter, Learning, and Health! A Brief Review. *Advances in Physiology Education*, https://doi.org/10.1152/advan.00030.2017.

SCHICK, T. Jr. & VAUGHN, L., 2002. *How to Think About Weird Things*. USA: McGraw-Hill Higher Education.

SCHOELL-GLASS, C., 2001. "Serious Issues": The Last Plates of Warburg's Picture Atlas Mnemosyne. In WOODFIELD, R., 2001. *Art History as Cultural History: Warburg's Projects*. Routledge. pp.183.

SCHRAG, C. O., 1997. *The Self after Postmodernity*. Yale University, USA: Yale University.

SCHWARZ, U., HOFFMANN, S. AND HUTTER, K., 2015. Do Men and Women Laugh About Different Types of Humor? A Comparison of Satire, Sentimental Comedy, and Comic Wit in Print Ads. *Journal of Current Issues & Research in Advertising,* 36, pp.70-87.

SCHWARTZMAN, M., 2011. *See Yourself Sensing: Redefining Human Perception.* Black Dog Publishing.

SCIAMA, L. D. (ed.), 2016. *Humour, Comedy and Laughter: Obscenities, Paradoxes, Insights and the Renewal of Life*. : New York, USA: Berghahn Books Inc.

SCRUTON, R., 2001. *Kant*. Oxford, UK: Oxford University Press.

SANDERS, B. 1995. *Sudden Glory: Laughter as Subversive History*. Boston, USA: Beacon Press.

SCHOUWENBERG, L. 2011. *Hella Jongerius: Misfit*. London, UK: Phaidon Press.

SCOTT, S. K., LAVAN, N., CHEN, S. & McGETTIGAN, C., 2014. The Social Life of Laughter. *Trends in Cognitive Sciences*, 18(12), pp.618-620.

SEAGO, A., & DUNNE, T., 1999. New Methodologies in Art and Design Research: The Object as Discourse, *Design Issues,* 15(2), pp.11-17.

SCOTT, J. C., 1987. *Weapons of the Weak: Everyday Forms of Peasant Resistance*. New Haven, USA: Yale University Press.

SEDDON, J., 2007. The Architect and the 'Arch-Pedant': Sadie Speight, Nikolaus Pevsner and ‘Design Review'. *Journal of Design History*, 20(1), pp.29-41. Oxford University Press on behalf of the Design History Society.

SELLERS, D., 2024. The iPhone Topped the Global Smartphone Market in 2023 Hitting Record High Market Share. [Online] Available at https://appleworld.today/the-iphone-topped-the-global-smartphone-market-in-2023-hitting-record-high-market-share?#:~:text=The%20fourth%20quarter%20(4Q23)%20saw,18.8%25%20market%20share%20in%202022. [Accessed 8th May 2024].

SEMERARI, G. S., 2016. Towards an Archaeology of Disentanglement. *Journal of Archaeological Method and Theory*. 24, pp.542-578. Springer Science and Business Media. New York, USA.

SENNETT, R., 2009. *The Craftsman.* London, UK: Penguin Books.

SEUSS, 2020. *One Fish, Two Fish, Red Fish, Blue Fish*. UK: London, UK: Harper Collins.

SHAHEEN, R., 2020. Identifying and Assessing Creativity. In Carayannis, E. G. (ed.), 2020. *Encyclopaedia of Creativity, Invention, Innovation and Entrepreneurship*. Cham, Switzerland: Springer, pp.1142-1161.

SHAKESPEARE, W., ~1909. *The Works of William Shakespeare*. The Globe Edition. Clark, W. G. & Wright W. A (eds.). MacMillan’s Globe Library. London, UK: MacMillan & Co.

SHANTHI, R., 2023. Ford CEO Brushes Off Cybertruck, But Tesla Fans Fire Back With Steve Ballmer's Infamous iPhone Misjudgment. Southfield, USA: Benzinga Newswires, Accretive Capital LLC d/b/a Benzinga.

SHARMA, S. D., 2009. *China and India in the Age of Globalization*. Cambridge, UK: Cambridge University Press.

SHAROV, A. A., 2001. Umwelt theory and pragmatism. *Semiotica*, 134, pp.211-228.

SHIELDS, P. M. & RANGARAJAN, N., 2013). *A Playbook for Research Methods: Integrating Conceptual Frameworks and Project Management*. Stillwater, USA: New Forums Press Inc.

SHRIGLEY, D., 2004: *Kill Your Pets*. London, UK: Red Stone.

SHRIGLEY, D., 2008. *Grip*. London, UK: Redstone Press.

SHRIGLEY, D., 2019. *ERR*. London, UK: Book Works.

SILLS, L., 2015. "He Approves This Message": Presidential Self-Deprecating Humor. *Florida Philosophical Review*, XV(1), pp.37-49.

SIM, S., 2001. *Lyotard and the Inhuman*. Cambridge, UK: Icon Books Ltd.

SIMON, H. A., 1996. *The Sciences of the Artificial*. Cambridge, USA: MIT Press.

SIMON, J., 2006. *William Wegman: Funney / Strange [sic]*. New Haven, USA: Yale University Press.

SINGH, A., 2013. *Managing Emotion in Design Innovation*. Boca Raton, USA: CRC Press.

SINGH, R., GUPTA, V. & MONDAL, A., 2012. Jugaad — From 'Making Do' and 'Quick Fix' to an Innovative, Sustainable and Low-Cost Survival Strategy at the Bottom of the Pyramid. *International Journal of Rural Management* 8 (1-2), pp.87-105. SAGE Publications.

SLACK, L., 2006. *What is Product Design?* Mies, Switzerland: RotoVision.

SLAUGHTER, P., 2015, Mind Share. *Home Furnishings Business*, 10(1), pp.20-22.

SLOBODA, S., 2008. "The Grammar of Ornament": Cosmopolitanism and Reform in British Design. *Journal of Design History*, 21(3), pp.223-236. Oxford University Press on behalf of the Design History Society.

SLINKACHU, 2008. *Little People in the City: the Street Art of Slinkachu*. London, UK: Pan Macmillan.

SMITH, D., 2021. *100 Inspirational Quotes by Leonardo DaVinci.* UK: Amazon.

SMITH, M., 1930. The Nervous Temperament. *British Journal of Psychology*, 10, 77-99. In STELMACK, R. M. & STALIKAS, A., 1991. Galen and the Humour Theory of Temperament. *Personality and Individual Differences*, 12(3), pp.255-263.

SMITH, N. & WALTERS, P., 2017. Desire Lines and Defensive Architecture in Modern Urban Environments. *Urban Studies,* 55(130, pp.2980-2995). SAGE Publications.

SNYDER, E. E., 1991. Sociology of Sport and Humor. *The International Review for the Society of Sport*, 26(2), pp.119-131.

SOLLI, B., 2018. Reindeer-hunting, Materiality, Entanglement and Society in Norway. *Journal of Glacial Archaeology*. 3(1), pp.1-26.

SPALDING, R. & PARKER, C., 2013. *Historiography*. Manchester, UK: Manchester University Press.

SPARKE, P., 2009. *The Genius of Design*. Quadrille Publishing Ltd.

SPECK, P .S., 1991. 'The Humorous Message Taxonomy: A Framework for the Study of Humorous Ads', *Current Issues and Research in Advertising*, 13(1–2), pp.1-44.

SPIELMANN, N., 2014. How Funny Was That? Uncovering Humor Mechanisms. *European Journal of Marketing*, 48(9/10), pp.1892-1910.

SPOOL, J., 2012. Jared Spool on usability and intuitive design [online] Available at: http://www.netmagazine.com/interviews/jared-spool-usability-and-intuitive-design [Accessed 18 March 2012].

SPOTTS, H. E., WEINBERGER, M. G. & PARSONS, A. L., 1997. Assessing the Use and Impact of Humor on Advertising Effectiveness: A Contingency Approach. *Journal of Advertising*, 26(3), pp17-32.

STACK, S., 2014. *21st Century Dodos.* London, UK: Harper Collins.

STANGOS, N., 1994. *Concepts of Modern Art: From Fauvism to Postmodernism*. New York, USA: Thames and Hudson.

STASZOWSKI, E. & TASSINARI, V., 2020. *Designing in Dark Times: An Arendtian Lexicon*. London: Bloomsbury Visual Arts.

STELMACK, R. M. & STALIKAS, A., 1991. Galen and the Humour Theory of Temperament. *Personality and Individual Differences*, 12(3), pp.255-263.

STEVENS, K., 2019. *Fake*. New York, USA: Bloomsbury Academic, Bloomsbury Publishing Inc.

STOCK, O. & STRAPPARAVA, C., 2003. Getting Serious About the Development of Computational Humor. Proceedings of the 18th International Joint Conference on Artificial Intelligence. August 2003, pp.59-64.

STOCKHAMMER, P. W., 2012. Performing the Practice Turn in Archaeology. *Transcultural Studies*. 1. pp.7-42.

STONE, G. C., 2013. *A Glossary of the Construction, Decoration and Use of Arms and Armor in All Countries and in All Times*. Newburyport, USA: Dover Publications.

STOTT, A., 2005. *Comedy*. Abingdon, UK: Routledge.

STRICKLER, Z., 1999. Elicitation Methods in Experimental Design Research. *Design Issues*, 15(2), pp.27-39.

SU, K., 2014. *Crap Taxidermy*. UK: Octopus Publishing Group.

SUDJIC, D., 2009. *The Language of Things*. UK: Penguin Group.

SUGA, Y., 2003. 'Purgatory of Taste' or Projector of Industrial Britain? The British Institute of Industrial Art. *Journal of Design History*, 16(2), pp.167-185. Oxford University Press on behalf of the Design History Society.

SULLIVAN, L. H., 1896. The Tall Office Building Artistically Considered. In Lippincott's Magazine (March 1896), pp.403-409. [Online] Available at: https://archive.org/details/tallofficebuildi00sull [Accessed 18 Sept 2024].

SUN TZU, 2009. *The Art of war* (translated by L. Giles). Pax Librorum Publishing House.

SURI, J. F., 2005. *Ideo. Thoughtless Acts? Observations on Intuitive Design*. San Francisco, USA: Chronicle Books.

SZAMEITAT, D.P., SZAMEITAT, A.J. & WILDGRUBER, D., 2022. Vocal Expression of Affective States in Spontaneous Laughter Reveals the Bright and the Dark Side of Laughter. *Scientific Reports*, 12, 5613, pp.1-12.

TAKOVSKI, A., 2021. Lubricating Culture Awareness and Critical Thinking Through Humour. *The European Journal of Humour Research*. 9(4), pp.1–19.

TALAMI, F., VAUDANO, A.E. AND MELETTI, S., 2019. Motor and Limbic System Contribution to Emotional Laughter across the Lifespan. *Cerebral Cortex*, 30, pp.3381-3391.

TANAHASHI, K., 1987. *Penetrating Laughter*. New York, USA: Overlook Press.

TAYLOR, A. H., ELLIFFE, D., HUNT, G. R., & GRAY, R. D., 2010. Complex cognition and behavioural innovation in New Caledonian crows (Proceedings of the Royal Society of Biological Sciences), [online] Available at: http://rspb.royalsocietypublishing.org/content/suppl/2010/04/20/rspb.2010.0285.DC1.html [Accessed 18 Dec 2011].

TAYLOR, R., 2017. Reflecting on RTD 2015: Making Connections to Doing Research Through Design. *Design Issues*, 33(3), pp.79-92. MIT Press — Journals.

TENNER, E., 1997. *Why Things Bite Back: Predicting the Problems of Progress*. London, UK: Fourth Estate.

TERZIDIS, K., 2007. The Etymology of Design: Pre-Socratic Perspective. *Design Issues*, 23(4), pp.69-78.

THABTO, 2024. Thabto / Pikkii. [Online] Available at https://www.thabto.co.uk/pages/about-us [Accessed 31 May 2024].

THACKARA, J., 1989. *Design After Modernism: Beyond the Object*. UK: Thames & Hudson.

THARP, B. M. & THARP, S. M., 2018. *Discursive Design*. Cambridge, USA: MIT Press.

THARP, B. M. & THARP, S. M., 2024. Umbrellas for the Civil but Discontent Man. [Online] Available at: https://stamps.umich.edu/work/22397 [Accessed 26 June 2024].

THEIDING, K. A., 2006. Anxieties of Influence: British Responses to Art Nouveau, 1900-04. *Journal of Design History*, 19(3), pp.215-231. Oxford University Press on behalf of the Design History Society.

THOMAS, E. F., McGARTY, C., SPEARS, R., LIVINGSTONE, A. G., PLATOW, M. J., LALA, G. & MAVOR, K., 2020. 'That's Not Funny!' Standing Up Against Disparaging Humor. *Journal of Experimental Social Psychology*, 86, 103901, pp.1-17.

THOMAS, N., 1991. *Entangled Objects – Exchange, Material Culture & Colonialism in the Pacific*. Harvard University Press.

THOMPSON, S., 2009. A Research Degree by Practice, Surely Not? A Reflection Upon My Recent Experience of Constructing My Successful PhD 'Metathesis'. In WIRAD 1st National Symposium for Emerging Art & Design Researchers. Newport, Wales, UK April 2009. WIRAD: UK.

THOMPSON, S., 2008. 'Artifacts, Technicity and Humanisation: Industrial Design and the problem of Anoetic Technologies', PhD thesis, University of Plymouth, UK.

THWAITES, T., 2011. *The Toaster Project*. New York, USA : Princeton Architectural Press.

THWAITES, T., 2016. *GoatMan: How I Took a Holiday from Being Human*. *New York*, USA: Princeton Architectural Press.

TIGERMAN, B., 2007. 'I Am Not a Decorator': Florence Knoll, the Knoll Planning Unit and the Making of the Modern Office. *Journal of Design History*, 20(1), pp.61-74. Oxford University Press on behalf of the Design History Society.

Timeshift. S08, E07. 'Fashion Versus the BBC'. BBC Television, 24th Jan 2009.

TIMKEN-ZINKANN, R. F., 1968. Black Bile. A Review of Recent Attempts to Trace the Origin of the Teachings on Melancholia to Medical Observations. *Medical History*, 12(3), pp.288–292.

TINDEMANS, K., 2012. The Fourth Wall, or the Rift Between Citizen and Government. In *Bastard or Playmate?* Amsterdam, Netherlands: Amsterdam University Press, pp. 31–42.

TORAN, N., 2001. Accessories for a Lonely Man. [Online] Available at: http://noamtoran.com/NT2009/projects/accessories-for-lonely-men [Accessed 09 Nov 2009].

Transtechnology Research, 2024a. Transtechnology Research. [Online] https://www.transtechresearch.net/ [Accessed 20 June 2024]

Transtechnology Research, 2024b. Theo Humphries. [Online] https://www.transtechresearch.net/research/phd-research/phd-candidates/theo-humphries/ [Accessed 20 June 2024]

TREGONING, J., 2021. Laughter is the Best Medicine. Coronavirus Diary Month 11: Reckoning with Gallows Humour. *Nature,* 591, pp.165.

TRIGGS, T., 2009. Designing Graphic Design History. *Journal of Design History*, 22(4), The Current State of Design History (2009), pp.325-340. Oxford University Press on behalf of the Design History Society.

TRUMBLE, A., 2004. *A Brief History of the Smile*. New York, USA: Perseus Books

TSAI, M.-N., WU, C.-L., CHANG, Y.-L. & CHEN, H.-C., 2018. Humor Styles in Marriage: How Similar Are Husband and Wife? *Psychological Reports*, 122(6), pp.2331-2347.

TSAMI, V., 2020. Metapragmatic Stereotypes and Humour: Interpreting and Perceiving Linguistic Homogeneity in Mass Culture Texts. *The European Journal of Humour Research*, 7(4), pp.68-85.

TUHUS-DUBROW, R., 2017. *Personal Stereo*. New York, USA: Bloomsbury Academic, An Imprint Of Bloomsbury Publishing Inc.

TWEMLOW, A., 2016. The Soft Sell. In BATES, A. & GLICKFELD, E., 2016. *Dirty Furniture: Toilet (3/6)*. London, UK: Dirty Furniture, pp.89-97.

University of Wolverhampton, 2008. The World's Ten Oldest Jokes Revealed [Online] Available at: https://www.wlv.ac.uk/news-and-events/latest-news/2008/august-2008/the-worlds-ten-oldest-jokes-revealed.php [Accessed 20 Nov 2023].

URCID, J., 2017. The Concept of the Wheel in Ancient Mesoamerica. English translation from the Spanish version originally printed in Arqueología Mexicana: Las Costas de México en la Época Prehispánica, 2017, 147(XXV), (Mexican Archeology: The Coasts of Mexico in Pre-Hispanic Times, 2017, 147(XXV). [Online] Available at https://www.mexicolore.co.uk/aztecs/home/the-concept-of-the-wheel-in-ancient-mesoamerica [Accessed 29 April 2024].

UWEN, G. O., 2023. Every Corona is Not a Virus: A Semiotic Analysis of Coronavirus Memetic Humour. *The European Journal of Humour Research*, 11(1), pp.117-142.

van DIJK, W. & OUWERKERK, J. W., 2014. S*chadenfreude: Understanding Pleasure at the Misfortune of Others*. Cambridge, UK: Cambridge University Press.

VAN, M.L., 2004. *1000 Rings: Inspiring Adornments for the Hand*. New York: Lark Books.

VARELA-RIVERA, J., FERNANDEZ-BAQUEIRO, L., ALCOCER-CANCHE, R., RICALDE-JIMENEZ, J. & CHIM-MAY, R., 2018. Shear and Flexural Behavior of Autoclaved Aerated Concrete Confined Masonry Walls. *ACI Structural Journal,* 115(5). American Concrete Institute. Pp1443-1452.

VATOMSKY, S. & HUH, B., 2009. *Fail Nation: A Visual Romp Through the World of Epic Fails*. New York, USA: HarperCollins Publishers.

VEATCH, T. C., 1998. A Theory of Humor. *HUMOUR: International Journal of Humor Research*, 11(2), pp.161-215.

VENIS, J., 2015. The Dysfunctional Machine: Chindogu Meets Pataphysics. *The International Journal of New Media, Technology, and the Arts* (9). Otago Polytechnic, New Zealand.

VENLET, D., 2008. Danny Venlet. In FIELL, C. & FIELL, P. 2008. *Design Now!* Cologne, Germany: Taschen, pp.522-525.

VENUS, J., 2011. Chindogu: Not So Useless After All. *The International Journal of the Arts in Society*, 5(5), pp.189-202.

VENUS, J., 2015. The Dysfunctional Machine: Chindogu Meets Pataphysics. *The International Journal of New Media, Technology, and the Arts*, 9(3-4), pp.189-202.

VERBEEK, P.-P., 2005. *What Things Do: Philosophical Reflections on Technology, Agency, and Design*. (Translated by R. P. Crease). University Park, USA: Pennsylvania State University Press.

VERBEEK, P-P., & KOCKELKOREN, P., 1998. The Things That Matter. *Design Issues*, 14(3), pp.28-42.

VERMOREL, F., 1997. *Fashion & Perversity: A Life of Vivienne Westwood and the Sixties Laid Bare*. London, UK: Bloomsbury.

VIERA, J. S. C., MARQUES, M. R. C., NAZARETH, M. C., JIMINEZ, P. C. & CASTRO, I. B. On Replacing Single-Use Plastic with So-Called Biodegradable Ones: The Case with Straws. *Environmental Science & Policy*, 106, pp.177-181, Elsevier.

VIRILIO, P., 2000. *Polar Inertia*. London, UK. Sage Publications.

VISSER, M., 1992. *The Rituals of Dinner*. Penguin.

VITALE, S., 2016. Cultural Entanglements on Kos During the Late Bronze Age: A Comparative Analysis of 'Minoanisation' and 'Mycenaeanisation' at the 'Serraglio', Eleona, and Langada. In Gorogianni, E. (ed), Pavúk, P. (ed), Girella, L. (ed), 2016. *Beyond*

Thalassocracies: Understanding Processes of Minoanisation and Mycenaeanisation in the Aegean. Oxbow Books, Ltd., pp.75-93.

Vivienne Westwood [the brand], 2023. Store Locator. [Online] Available at https://www.viviennewestwood.com/storelist/?srsltid=AfmBOooigVmXlB5FLoeDwoMxewc9zF1ac82ycbHwa64WrLs99zSk-qbM [Accessed 19 Dec 2023].

Vivienne Westwood [the brand], 2024. Westwood World: The Story so Far. [Online] Available at https://www.viviennewestwood.com/en-gb/westwood-world/the-story-so-far/ [Accessed 15 May 2024].

Viz, 2003. *Viz: Roger Mellie's Ad Break*. London, UK: Boxtree.

Viz, 2005. *Viz Presents Roger's Profanisaurus Rex*. London, UK: Dennis Publishing.

VORHAUS, J., 1994. *The Comic Toolbox: How to be Funny Even if You're Not*. Los Angeles, USA: Silman-James Press.

VRABEL, J.K., ZEIGLER-HILL, V. & SHANGO, R.G., 2017. Spitefulness and Humor Styles. *Personality and Individual Differences,* 105, pp.238–243.

WAINWRIGHT, O., 2015. Carbuncle Cup: Walkie Talkie Wins Prize for Worst Building of the Year. [Online] Available at: https://www.theguardian.com/artanddesign/architecture-design-blog/2015/sep/02/walkie-talkie-london-wins-carbuncle-cup-worst-building-of-year [Accessed 28 July 2024].

Van Der WAL, C.N. & KOK, R.N., 2019. Laughter-Inducing Therapies: Systematic Review and Meta-Analysis. *Social Science & Medicine*, 232, pp.473-488.

WALD, A., 1943. 'A Method of Estimating Plane Vulnerability Based on Damage of Survivors'. Statistical Research Group/National Defense Research Committee, Applied Mathematics Panel, Centre for Naval Analyses, Alexandria, USA. Approved for public release: 1980.

WALLIS, W. A., 1980. The Statistical Research Group, 1942-1945. *Journal of the American Statistical Association,* 75(370), pp. 320-330. Taylor & Francis, Ltd., London, UK.

WALKER, J. A., 1990. *Design History and the History of Design*. London, UK: Pluto Press.

WALKER, L. J, 2015. What If You Assume Wrong? TCA Regional News. Chicago, USA: Tribune Content Agency LLC. [Online] Available at http://ezproxy.cardiffmet.ac.uk/login?url=https://www.proquest.com/wire-feeds/what-if-you-assume-wrong/docview/1694863677/se-2?accountid=15588 [Accessed 27 March 2024].

WALKER, S., 2011. *The Spirit of Design: Objects, Environment and Meaning*. Washington, DC, USA: Taylor & Francis.

WALKER, S., 2017. *Design for Life: Creating Meaning in a Distracted World*. Abingdon, UK: Routledge.

WARREN, C. & McGRAW, A. P., 2015(a), Appreciation of Humour. In Attardo, S., (ed.), 2015. *Encyclopaedia of Humor Studies,* pp.52-55.

WARREN, C., & McGRAW, A. P., 2015(b). What Makes Things Humorous? *Proceedings of the National Academy of Sciences*, 112(23), pp.7105-7106.

WARREN, C. & McGRAW, A. P., 2016(a). Differentiating What is Humorous From What is Not. *Journal of Personality and Social Psychology*, 110(3), pp.407-430.

WARREN, C., & McGRAW, A. P., 2016(b). When Does Humorous Marketing Hurt Brands? *Journal of Marketing Behavior,* 2(1), pp.39-67.

WARREN, C., BARSKY, A. & McGRAW, A.P., 2018. Humor, Comedy, and Consumer Behavior. *Journal of Consumer Research*, 45, pp.529-552.

WARREN, C., BARSKY, A. & McGRAW, A.P., 2020. What Makes Things Funny? An Integrative Review of the Antecedents of Laughter and Amusement. *Personality and Social Psychology Review*, 25(1), pp.41-65.

WATT, S., 2014. *Ugly Animals: We Can't All Be Pandas (Ugly Animal Preservation Society)*. Stroud, UK: The History Press.

WATT, S., 2024. The Ugly Animal Preservation Society. [Online]. Available at: https://uglyanimalsoc.com/ [accessed 05 July 2024].

WAX, R., 1988. Don’t Miss Wax [Vivienne Westwood interview]. [Online] Available at: https://www.youtube.com/watch?v=sCedYlh2Gvo [Accessed 8 Sept 2024].

WEBB, J., 2010. *Design Principles*. Lausanne, Switzerland: AVA Academia.

WEBB-SUNDERHAUS, S., 2016. “Keep the Appalachian, Drop the Redneck”: Tellable Student Narratives of Appalachian Identity. *College English*, 79(1), National Council of Teachers of English.

WECHSLER, R., 2021. The Best Circular Bike Ever Made. [Online] Available at: https://robertwechsler.com/circular-bike [Accessed 15 Sept 2024].

WEEKS, M., 2007. Freud and the Economics of Laughter. *Anthology of Speech and Culture*, 28(2), pp.227-239.

WEEKS, M., 2010. Laughter is a Time Machine. *Philosophy Now*, 80, pp.1-4. [Online] Available at: https://philosophynow.org/issues/80/Laughter_is_a_Time_Machine [Accessed 13 Jan 2024].

WEEMS, S., 2014. *Ha! The Science of When We Laugh and Why*. Basic Books.

WEINSCHENK, S., 2011. *100 Things Every Designer Needs to Know About People*. Berkeley, CA: New Riders Publishing.

WEIR, A. A. S., 2005. Cognitive Psychology of Tool Use in New Caledonian Crows (Corvus Moneduloides). PhD thesis. Magdalen College Department of Zoology, University of Oxford, UK.

WEINBERGER, M. G. & GULAS, C. S., 1992. The Impact of Humor in Advertising: A Review. *Journal of Advertising*, XXI(4), pp.35-59.

WENTWORTH, R. 2015. *Making Do and Getting By.* London, UK: Hans Ulrich Obrist and Koenig Books.

WESTWOOD, V. and KELLY, I., 2014. *Vivienne Westwood*. London, UK: Picador.

WHITELEY, V., 1995. Design History or Design Studies. *Design Issues,* 11(1), pp. 38-42.

WICKBERG, D., 2016. *The Senses of Humor: Self and Laughter in Modern America*. New York, USA: Cornell University Press, 2016.

WIERZBICKA, A., 2015. The Idea of a 'Spoon': Semantics, Prehistory, and Cultural Logic. *Language Sciences*, 47, pp.66-83). Elsevier BV.

WILD, B., RODDEN, F. A., GRODD, W. & RUCH, W., 2003. Neural Correlates of Laughter and Humour. *Brain*, 126, pp.2121-2138.

WILDE, D., 2008. HipDisk: Using Sound to Encourage Physical Extension, Exploring Humour in Interface Design. International Journal of Performance Arts and Digital Media 4(1), pp.7-26.

WILDGRUBER, D., RITTER, J., JACOB, H. & KREIFELTS, B., 2018. PB5. Perspective taking during laughter perception. *Clinical Neurophysiology*, 129, pp.56-57.

WILKINS, B. S., 2002. The Spleen: Historical Review. *British Journal of Haematology*, 117(2), pp.265-274.

WILL, F., 2008. Can We Get Inside the Aesthetic Sensibility of the Archaic Past? *Contemporary Aesthetics*, 6, pp.1-12.

WIMPENNY, J. H., WEIR, A., & KACELNIK, A., 2011. New Caledonian crows use tools for non-foraging activities. *Animal Cognition*. 14(3). pp.459-464

WINGFIELD, N., 2010a. Microsoft Employees Gaga over iPhones Hide the Devices --- Steve Ballmer Sours on Apple Product; One Executive Puts his in an Industrial-Strength Blender and Destroys it. The Wall Street Journal Asia. Hong Kong: Dow Jones & Company Inc. [Online] http://ezproxy.cardiffmet.ac.uk/login?url=https://www.proquest.com/newspapers/microsoft-employees-gaga-over-iphones-hide/docview/315611761/se-2?accountid=15588 [Accessed 27 March 2024].

WINGFIELD, N., 2010b. Forbidden Fruit: Microsoft Workers Hide Their iPhones; Steve Ballmer Sours on Apple Product; Work for Ford, Drive a Ford. Wall Street Journal (Online). New York, USA: Dow Jones & Company Inc. [Online] Available at http://ezproxy.cardiffmet.ac.uk/login?url=https://www.proquest.com/newspapers/forbidden-fruit-microsoft-workers-hide-their/docview/237971436/se-2?accountid=15588 [Accessed 27 March 2024].

WINKLER, D. R., 2001. Modernist Paradigms Never Die, They Just Fade Away. *Design Issues*, 17(1), pp. 54-66.

WILCOX, D., 2015. *Variations on Normal*. London, UK: Random House UK.

WILLIS, A.-M., 2006. Ontological Designing. *Design Philosophy Papers*, 4(2), pp.69-92. Crows Nest, UK: Taylor & Francis Ltd.

WILLIS, A.-M., 2012. The Ontological Designing of Mapping. *Design Philosophy Papers*, 10(2), pp.95-104. Crows Nest, UK: Taylor & Francis Ltd.

WILLIS, A-M., 2018. *The Design Philosophy Reader*. London, UK: Bloomsbury Visual Arts.

WILSON, G., 2008. Designing Meaning: Streamlining, National Identity and the Case of Locomotive CN6400. *Journal of Design History*, 21(3), pp.237-257. Oxford University Press on behalf of the Design History Society.

Wired, 2002. CD Crack: Magic Marker Indeed. [Online] Available at: https://www.wired.com/2002/05/cd-crack-magic-marker-indeed/ [Accessed 12 June 2024].

WISE, T., 2022. Human Centered Projects and Survivorship Bias: The Perceived Success of Project Outcomes? *Beyond the Project Horizon: Journal of the Center for Project Management Innovation*, 1(1), pp.1-11. Harrisburg University of Science and Technology, USA.

WISEMAN, R., 2002. *Laughlab: The Scientific Search for the World's Funniest Joke.* New York, USA: Arrow Books.

WITMORE, C., 2021. Will The Real Materialisms Please Step Forward? *Journal of Material Culture*, 26(3), pp.318-321. SAGE Publications.

WIXON, D., HOLTZBLATR, K. & KNOX, S., 1990. Contextual Design: An Emergent View of System Design. CHI90 proceedings, April 1990.

WODEHOUSE, A., MACLACHLAN, R. & GRAY, J., 2014. The Best Form of Medicine? Using Humor to Enhance Design Creativity. *International Journal of Design Creativity and Innovation*, 2(3), pp.125-141.

Wogan, 1988. S08, E31. BBC Television, 11th March 1988 [Online] Available at: https://www.youtube.com/watch?v=sCedYlh2Gvo [Accessed 8 Sept 2024].

WOGAN, T. 1998. *Wogan on Wogan*. London, UK: Robson Books Ltd.

WOGAN, T., 2001. *Is It Me? Terry Wogan: An Autobiography*. London, UK: BBC Worldwide Ltd.

WOGAN, T. 2006. *Mustn't Grumble: The Autobiography*. London, UK: Orion Books.

WOLFENDALE, P., 2014. *Object Oriented Philosophy: The Noumenon's New Clothes*. Falmouth, UK: Urbanomic Media Ltd.

WONG, K. (ed), 2007. *[Art]ifact: Re-Recognizing the Essentials of Products*. Hong Kong: Victionary.

WOOD, A., 2016. Inspiring Quotes from Some of the World's Greatest Graphic Designers. [Online] Available at: https://www.creativeboom.com/tips/15-inspiring-quotes-from-some-of-the-worlds-greatest-graphic-designers/ [Accessed 19 Sept 2024].

WOOD, A., MARTIN, J. & NIEDENTHAL, P., 2017. Towards A Social Functional Account of Laughter: Acoustic Features Convey Reward, Affiliation, and Dominance. *PLoS ONE,* 12(8): e0183811, pp.1-19.

WOOD, A. & NIEDENTHAL, P., 2018. Developing a Social Functional Account of Laughter. *Social and Personality Psychology Compass*, 12:e12383, pp.1-14.

WOOD, A., SIEVERT, S. & MARTIN, J., 2022. Semantic Similarity of Social Functional Smiles and Laughter. *Journal of Nonverbal Behavior*, 46(4), pp.399-420. Springer Science and Business Media LLC.

WOODFIELD, R. (Ed), 2001. *Art History as Cultural History: Warburg's Projects*. Routledge.

WOODHAM, J. M., 1996. Managing British Design Reform I: Fresh Perspectives on the Early Years of the Council of Industrial Design. *Journal of Design History*, 9(1), pp.55-65. Oxford University Press on behalf of the Design History Society.

WOODHAM, J.M., 1997. *Twentieth Century Design*. Oxford: Oxford University Press.

WOODHAM, J. M., 2005. Local, National and Global: Redrawing the Design Historical Map. *Journal of Design History*, 18(3), The Global Future of Design History (Autumn, 2005), pp.257-267. Oxford University Press on behalf of the Design History Society.

WOODHOUSE, E., & PATTON, J. W., 2004. Design by Society: Science and Technology Studies and the Social Shaping of Design. *Design Issues*, 20(3), pp. 1-12.

WOOLLEY, M., 2003. Choreographing Obsolescence — Ecodesign: The Pleasure/ Dissatisfaction Cycle. In Proceedings of the International Conference on Designing Pleasurable Products and Interfaces, pp.77-81. New York, USA: ACM.

WRIGHT, A., 2007. *Glut: Mastering Information Through the Ages*. Washington DC, USA: Joseph Henry Press.

WRIGHT, D., 2008. *Patently Silly*. London, UK: Prion Books Ltd.

WRIGHT, J., 2007. *Why is that so Funny? a Practical Exploration of Physical Comedy*. London, UK: Nick Hern Books.

WRIGLEY, C., POPOVIC, V. & & CHAMORRO-KOC, M., 2008. Visceral Hedonic Rhetoric: Emerging Research in Design and Emotion. 6th Design & Emotion Conference: Dare to Desire, 6-9 October 2008, The Hong Kong Polytechnic University, pp.1-15.

XU, J., HOUSSIN, R., BERNARD, A. & CAILLAUD, E., 2013. Systemic Modelling of Knowledge for Innovation in Design. *CIRP Journal of Manufacturing Science and Technology*. 6 (2013), pp.1-12. Elsevier BV.

YAGOU, A., 2005. Unwanted Innovation: The Athens Design Centre (1961-1963). *Journal of Design History*, 18(3), The Global Future of Design History, (Autumn, 2005), pp.269-283. Oxford University Press on behalf of the Design History Society.

YELAVICH, S. & ADAMS, B. (eds.), 2014. *Design as Future-Making*. UK: Berg Publishers.

YEO, S.K., ANDERSON, A.A., BECKER, A.B. & CACCIATORE, M.A., 2020. Scientists as Comedians: The Effects of Humor on Perceptions of Scientists and Scientific Messages. *Public Understanding of Science*, 29(4), pp.408-418.

YOON, H.J., 2015. Emotional and Cognitive Responses to Nonhumorous and Humorous Threat Persuasion Public Service Advertisements. *Journal of Current Issues & Research in Advertising*, 36, pp.52-69.

YOON, H. J. & LEE, Y.-J., 2018. Gender differences in arousal priming effects on humor advertising. *International Journal of Advertising*, 38(3), pp.383-404.

YOSHIDA, A., ITOH, Y., FUJITA, K., OZAKI, M., KIKUKAWA, T., FUKAZAWA, R., KITAMURA, Y. & KISHINO, F. 2009. Funbrella: Making Rain Fun. In Proceedings of the SIGGRAPH Conference on Emerging Technologies (Article No. 10). New York, USA: ACM.

YU, Y. & NAM, T. J., 2014. Let's Giggle!: Design Principles for Humorous Products. In Proceedings of the Conference on Designing Interactive Systems, pp.275-284. New York, USA: ACM.

YU, Y. & NAM, T.-J., 2017. Products with A Sense of Humor: Case Study of Humorous Products with Giggle Popper. *International Journal of Design*, 11(1), pp.79-92.

ZEKAVAT, M., 2020. Reflexive Humor and Satire: A Critical Review. *The European Journal of Humour Research*, 7(4), pp.125-136.

ZHANG, W., SHU, J., HU, X. & MEI, Y., 2020. Research on Product Innovation Design Methods. EWRE 2020: E3S Web of Conferences. A. Ghadouani & F. Wu (eds.). 179, 02076 (2020). EDP Sciences.

ZIYAIDDINOVNA, Z. K., 2022. Humor is a Universal Phenomenon. *Eurasian Scientific Herald.* 15, pp.11-13.

ŽIŽEK, S., 2018. *Žižek's Jokes (Did You Hear the One About Hegel and Negation?)*. Cambridge, USA: Mit Press.

ZWICKY, F., 1969. *Discovery, Invention, Research - Through the Morphological Approach*. Toronto, USA: The Macmillan Company.

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12.1) Appendix 1.

Transcript: Westwood on Wogan, 1988.

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The following is a transcript of a portion of an episode of the popular BBC prime-time television chat show 'Wogan'. This transcript has been synthesised from several video recordings of varying quality. Whilst every effort has been made to account for exactly what was said at the time, this was a live event, with a live audience. Therefore, unfortunately, the presenter and guests sometimes talk over on another, and the audience laughter or applause sometimes renders interpretation of the speech difficult. Sections that were inaudible have been marked as such.

The underlined and colourised text illustrates moments when the audience are laughing. This has been done to give a richer insight into the event than plain text would.

'Wogan', Series 8, Episode 31.

First aired: 19:00, Friday, 11th of March, 1988.

Presenter:
Sue Lawley (SL) — guest presenting for the usual host, Terry Wogan.

Guests:
Russell Harty (RH)
Janet Street-Porter (JSP)
Vivienne Westwood (VW)

Fashion Models:
Sara Stockbridge (SS)
Michael Clarke
Four other unnamed models.

Main source:
[Online] available at: https://www.youtube.com/watch?v=n-TOefBXHCY [Accessed 24 April 2024].

SL: [addressing television audience at home] "[recording interrupted] …trousers, and told women to wear their bras on top of their frocks! [Audience laughs] She's currently advocating twin-sets and pearls… [pauses for effect] …for men [Audience laughs]. Please will you welcome, Vivienne Westwood".

— Music begins. VW enters. Audience applauds —

SL: “Vivienne, welcome.”

VW: “How do you do?”

SL: “Hello. [inaudible]”

VW: “It’s very nice to meet you.”

— VW shakes hands and is seated —

RH: [inaudible]

SL: “Vivienne, have, have they caught up… [distracted]

— RH stares down at VW’s shoes, and then looks at the audience. An audience member can be heard exclaiming “The shoes!” —

SL: [continues] “…we’re going to have to look at the shoes again.”

— VW places a leg across JSP’s lap, presenting her shoe for inspection. RH makes a rather incomprehensible gesture, seemingly indicating that VW’s feet smell. He then laughs, presumably to indicate that this is a playful act —

JSP: “Vivienne, they look great. They look wonderful.”

SL: “What do you call them?”

VW [parading shoes]: “They’re really great. You can stand on them on tip-toe. They’re ever so stable.”

SL: “What do you call them?”

VW: I call them ‘Rocking Horse Shoes’.”

RH: [grabbing at the rear of VW’s skirts]: “Where have you got this pelmet from, here?”

— Audience laughs —

VW: “It’s got little balls inside.”

RH: “Little balls?”

SL: “What are they made of?”

VW: “Erm… I don’t know, but you buy it from John Lewis, it’s padding.”

— Audience laughs —

SL: “It’s padding [laughs]. Wonderful.”

RH: [laughs].

SL: “[inaudible].”

VW: “I didn’t invent that, I took it from an old book. People did these things before.”

SL: “So, are all your ideas from ‘old books’?.”

VW: “I don’t think I would ever be able to produce anything as extravagant as people did in the past. People wore amazing […interruption to recording…]. The court of Louis XV, their particular church, because he used to love to see all his daughters, with their bosoms bear in church, for example. And, um, if you see some of the codpieces that people wore, they’re just so extravagant, I mean: we would’t do that…”

— JSP points at RH and they both laugh —

SL: “But tell me about… [cut short by VW].”

VW: “…As for shoes, people have gone from everything, haven’t they?”

SL: “Tell me about the twin-set and pearls *for men*. I mean: has it caught on?”

VW: “Yeah.”

SL: “I have not seen a lot of men wearing twin-sets and pearls.”

— Audience laughs —

VW: “Um… Well, people do wear them, but, I mean, I don’t sell an amazing volume of things, and um [cut short by SL].”

SL: “Have you bought one Russel?”

RH: “Not yet: I didn’t even know about them. […interruption to recording…]

JSP: “[…] They’re comfortable.”

SL: “Yours is not the rubber skirt?”

JSP: “No, no, no. But I’ve got one of Vivienne’s tops that’s like a corset that you wear with a tiny skirt. Like, a bit like the one that she’s got on but it’s all, kind of, big on the hips. It looks fabulous.”

SL: “Well I think we might going to see one of those because we’re going to look at your latest collection. I know every time you do a collection, they say ‘Crikey! Viv’s blown it’. Don’t they?

VW: “Just let me tell you about the twin-set and pearls because it’s very very nice soft knits, and it’s very very comfortable to wear, and I do think that, yes, you might see your bank manager, in five years, wearing that, yeah. Perhaps not the pearls, but the twin-set.”

SL: “It’s a good job you’ll be in the cupboard in that case.”

RH: [laughs].

SL: “They say ‘Viv’s blown it’. Ah, we don’t know if Viv’s blown it this time because this is the new collection. What’s it called?”

VW: “Well, I’d like to describe it after. It’s called ‘Time Machine’.

SL: “Time machine, here we go.”

— music begins and a model enters the stage —

SL: “Tell us about this one then.”

VW: “Well, um, the, the, um, the last collection I did was, um, ‘England Goes Pagan’. So, it’s very English, but it has pagan touches: Greek and Roman.”

SL [gesturing to the audience]: “Are people supposed to, are people supposed to laugh? I mean they’re laughing at this.”

VW: “I, I think she feels great and I don’t think she should laugh really but, err, but, um.”

— first model exits and a second model enters —

SL: “Oh, this is more orthodox, isn’t it?”

RH: “That’s alright, yeah.”

SL: “‘That’s alright’: oh, it’s got the Harty seal of approval. You’re alright. So, what’s the thinking behind this one?”

VW: “Well, I always do things that, um, capture the imagination of young people. It’s gotta a touch of adventure because it reminds you of armour, and it’s, well, the skirt looks a bit like trousers but it’s just a very cheeky school look.”

SL: “Right, I should mention the music sat this stage because we got accused of running naff music on this programme last week… [interrupted by entrance of dancer and model, Michael Clark, who is dancing a form of jig].

— Audience laughs —

SL: “Vivian… [interrupted by VW].”

— Audience applauds —

VW: “It’s brilliant. Oh Michael, that’s wonderful.”

SL: “Plaid and velvet, now that is a fashion pointer but, really, for me, do you really expect to sell those?”

VW: “Of course, yes.”

SL: “I mean, what sort of… [interrupted by VW].”

VW: “If they [meaning the audience] don’t stop laughing I shall tell the next person not to come on.”

SL: “Oh dear. [Then, directing her attention to the audience] You’re not to laugh. I know you want to laugh.”

— Audience laughs loudly —

VW: “You can laugh. You can laugh, but look as well. It’s really great.”

SL: “Is this a winter collection?”

VW: “Yeah.”

SL: “Is… [interrupted as a new model, Sara Stockbridge, enters and the audience collectively ‘whoop’ at her because she briefly raises her skirt].”

VW: [raising her voice over the noise of the audience] “I’ve never met this response before.”

SL: “What response do you normally get?”

VW: “I don’t know: people get really into it. That’s all. They think it’s just great usually.”

RH: [gesturing at the model’s skirt] “is that a lamp shade that she’s got, sort of…?”

JSP: “No it’s a crinoline.”

RH: “Oh, a crinoline, I see.”

SL: “It’s a, it’s a ‘mini-crinny’.”

RH: “How do they *feel* in it?”

JSP: “It’s really comfortable.”

VW: “It’s not a… well, of course it’s comfortable — you sit down and it just disappears.”

SL: “Here you are Russell, this is for you [referring to male model entering in tweed suit].”

RH: “This is more me, yeah. Is it called anything, that?”

VW: “It’s just a very English look. It’s got tweeds from the boarders: I just love English fabrics. And I, I think the fabric does everything. You can just make the most plain things, and, and they just… I just love this English look. Only the English can do tailoring like this.”

RH: “Yes, but it’s extraordinary that you can produce that [gesturing at tweed suit] right next to that other thing right there [gesturing at model (SS), off camera], that… [inaudible due to audience laughter]”.

SL: “He’s got [inaudible] shoes on.”

VW: “I just think, I just think that, that, um, these things are just really sophisticated. If you don’t understand that, I… [interrupted by RH].”
RH: “That is [the tweed suit], but she looks like a ‘chip shop’, that one there” [gestures again at SS].

— Audience laughs loudly as male model exits. Audience begins to applause —

JSP: “Oh, come on.”

VW: “Look, looks like a what? Come back [beckoning model]. Come back. Which one looks like a chip shop?”

SL: “This is a chip shop.”

RH: “This one, here [pointing at SS].”

SL: “This one”

VW: “Sara?”

RH: “Yeah.”

SL: “This crinoline is a chip shop?”

RH: “It looks like a chip shop, I mean, can you imagine… [interrupted by VW].”

VW: “Come back, Sara.”

RH: “Can you imagine going to Sainsbury’s in that in real life?”

— Audience laughs loudly —

SL: “Come back a minute.”

SS: [challenging RH] “It does not look like a chip shop. I look like a fairy.”

— RH leans back on the sofa, stretches his legs out, and folds his arms —

RH: “Ah. And when would you wear it?”.

SS: “I’d wear it all the time.”

RH: “All the time?”

SS: “Yes, I always wear Vivienne’s things.”

JSP: I wore one of Vivienne’s outfits: the skirt was that short with a top exactly like that, in black, to a very very grand charity ball in Yorkshire about, just before Christmas, and I was the raffle lady and I went ‘round and collected a record amount of money for the charity, dressed like that”.

SL: “Yes, but you need a huge, you need a huge personality like yours to be able to carry it off don’t you? I mean, ordinary… [cut off by VW].”

JSP: “No, there is, there is design that suits everybody”.

VW: “It depends what you want. It depends what you want. If you want all the men on the building site to whistle at you, just wear it and, and, you get a reaction. I mean…”

SL: “But, are they whistling for the right reasons?”

VW: “Of course.”

SL: “What are the right reasons for the wolf-whistling?”

VW: “That they fancy you.”

SL: “Is that why you do it? I mean, you, you design these clothes, not because they’re witty, or they’re an inspiration, but because you believe they are attractive and they make people more attractive.”

VW: “Yeah, that’s it. Yeah.”

RH: “Something like that.”

SL: “And who buys them? Apart from Janet Street-Porter?

— Audience laughs —

JSP: "[…inaudible…]. I think we're being very unfair here. Vivian's a very very successful designer…"

SL: "No no, I'm trying to… [cut off].

VW: "I'm not bothered."

JSP: [continues] "…and the most influential designer in England at the moment."

— Audience cheers —

SL: "I am… I'm not trying to be unfair, but I'm trying to understand, and I think an awful lot of people don't understand, which is why they laugh. And they're not quite sure what they ought to… we, we've confused them now, the audience, they don't know what they should be doing."

— Audience laughs —

VW: "No, they can laugh, it's alright."

SL: "You don't mind. We have not offended you, have we?"

VW: "Noooh."

SL: "We're just trying to understand where the, what the thinking is behind it. Why you believe that lots of Kirby grips in the hair or bare legs on a winter's day, is, is the right thing to advocate."

VW: "I don't think that bare legs on a winter's day… She's going to go to, to something where it'd be quite right to wear that, I mean."

RH: [points to S] "How much is that one that I find confusing?"

— Audience laughs loudly —

JSP: "He's gonna put you back in line!"

RH: "No, no, I mean the dress, not the lady."

— Audience laughs loudly —

RH: "I mean how much, how much is the… the outfit?"

VW: "I don't know, Sara bought it. I don't know how much it's worth."

RH: “Well give us a… I mean is it…?”

SL: “How much is it, Sara?”

VW: “It would be, it would be, I don’t know.”

RH: “Well, you must have a clue.”

VW: “well… one, two, three, four or five hundred pounds, complete, I should think.”

— RH falls back onto sofa with mouth wide open —

SL: “So, haven’t you… I mean, if you’re asking those sorts of prices, you’ve really left behind the people you originally began catering for which were the, you know, young folk on the streets, in the Kings Road, who just wanted a baggy or ripped t-shirt.”

VW: “No, because, yeah, you can, you can just sell a little crinoline for fifty pounds, people will buy that, if, if that’s the look that they want.”

SL: “Will they? Alright.”

VW: “Yeah, yeah. Hundreds of them.”

JSP: “But Vivienne’s clothes were always beautifully made.”

SL: “Yes, yeah, but, but what I am trying to understand… I mean, it’s a bit like you as well Janet, in a sense, isn’t it? That, that, because you have now come off the high street, as it were, and become an accepted designer, don’t you, in a sense, rather like Janet, moving into a posh BBC office: you kind of lose your street cred?”

JSP: “No, because when Vivienne started, her clothes weren’t cheap. The t-shirts were but all the clothes that, that Johnny Rotten and the S… all the wonderful bondage suits weren’t particularly cheap but they were so special, they were so beautifully made, that everybody who had style would save up to buy one.”

SL: “Yes, but they saved up to buy it because it was part of a rebellion. But now you’re part of the establishment.”

VW: “People pay more money for them now, with, with the old things, they fetch a very high price: those old things.”

SL: “So you wouldn’t agree that, that, in a sense, you’re conforming, really, by becoming a top designer.”

VW: “I don’t think it’s… I mean, I am very *careful* to try to try to keep my clothes down in price as much as possible. I would love to be able to do that. As a fashion designer, you can’t do that all the time. You have to do your cameo, you have to do your thing, then you

do more mass-market things which are touched by that, but I don't… I cannot… conceive of myself as a, a social worker in this way. You know…"

SL: [attempts to interrupt] "Russel is…?"

VW: [continues] "…but it, but it, does give… it is artistic…"

SL: [interjects] "It is."

VW: [continues] "and it, it, captures people's imagination…"

SL: "It makes us talk, I tell you."

RH: "Absolutely, yeah."

VW: [continues] "and, and, a lot of people, when they go down the street, they have to suffer quite a lot of attention sometimes, that the really don't want. But, there's… I mean, I used to do it all the time and, um, you can't help it, you just think you look too good and so you're just not going to just change. You can't. That's how you feel… [interrupted by SL]."

SL: "Russel is peeking, so have a quick peek because we've nearly finished."

RH: "A peek. I've had a quick peek already [gestures towards the fashion models."

— Audience laughs —

RH: "I'm, I'm, I'm, I'm wondering how, how highly, this is a serious question, how highly regarded you are, Vivienne Westwood, in Europe?"

VW: [eventually shrugs].

JSP: "I think that Vivienne… [interrupted by RH]."

RH: [cups hand to ear in answer to VW's silence] "Hello?"

— Audience laughs —

VW: "Well…"

JSP: "Well, Russell, Vivienne's… when Vivienne…

VW: "…I don't understand the question."

JSP [continues] "…did the crinoline, it was copied by French top-end designers."

SL: "She's been copied. She's had 'the tube' copied. She's had 'the puffball' copied. She is…

RH: “She’s it. Right.”

SL: [continues] “…one of the top designers. And on that note… We haven’t upset you, have we?”

VW: “No, no…”

SL: “Not in the least. You’re very kind.”

VW: “Listen, I don’t mind. In fact, I’m quite pleased. But I usually don’t get that kind of reaction, it’s a bit strange.

SL: “Get this reaction… ladies and gentlemen, Vivienne Westwood.”

RH: [chuckles].

— Audience applauds —

SL: [to VW] “Well done, thank you very much indeed.”

VW: “OK.”

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12.2) Appendix 2.

Transcript: Ballmer on the iPhone, 2007.

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The following is a transcript of a portion of a Microsoft press conference from 2007. The underlined and colourised text illustrates when Ballmer is laughing. This has been done to give a richer insight into the event than plain text would.

Microsoft CEO, Steve Ballmer, Laughs at the iPhone.
Televised CNBC Interview.
Location: Rockefeller Center, New York, USA.
Date: Jan 2007.

Interviewer: Scott Wapner for US news service CNBC (SW)

Interviewee: Steve Ballmer (SB)

Video Source: [Online] available at: https://www.youtube.com/watch?v=eywi0h_Y5_U&t=34s [Accessed 24 April 2024].

Other info sourced: CNBC, 2007. Microsoft's Ballmer Not Impressed with Apple iPhone: CNBC. [Online] Available at https://www.cnbc.com/amp/id/16671712 [Accessed 05 May 2024].

Glossary:
iPhone: Apple's smartphone.
Zune: a handheld portable media player (PMP), marketed by Microsoft. A rival to Apple's iPod.
Macworld: an online magazine/website focussed upon Apple Mac products and services.
iPod: Apple's famous PMP.
'Community': specifically 'Microsoft Community' which is an online forum/discussion space where Microsoft employees, software engineers, 'fans', and customers can exchange information and support concerning Microsoft products and services.

SW: "Steve, let me ask you about, er, the iPhone, and the Zoon, if I may? The Zoon was getting some traction and then Steve Jobs goes to MacWorld and he pulls out this iPhone. What was your first reaction when you saw that?"

SB: [laughing] “Five hundred dollars! Fully subsidised! With a plan! I said — that is the most expensive phone in the world and it doesn’t appeal to business customers because it doesn’t have a keyboard, which makes it not a very good email machine.”

[…feed cuts…]

SB: “Now, it may sell very well, or not. I, you know, we have our strategy. We’ve got great Windows mobile devices in the market today. We, you can get a Motorola Q phone now for ninety-nine dollars [his emphasis on the price]. It’s a very capable machine, it’ll do music, it’ll do, er, internet, it’ll do email, it’ll do instant messaging. So, I, I kind of look at that and I say — well, I like our strategy. I like it a lot.”

SW: “How do you compete with that though [the iPhone]? He’s [Jobs] sucked out a lot of the spotlight, er, in the last few weeks, because of what happened at Mac, MacWorld, not only with the iPhone, but with, er, the new iPod. I mean, how do you compete with that, with the Zune?

SB: “Right now, well, let’s take phones first. Right now, we’re [Microsoft] selling millions and millions and millions of phones a year. Apple is selling zero phones a year. In six months they’ll have the most expensive phone, by far, ever, in the market place and let’s see, you know, what’s the expression? Let’s see how the competition goes. In the case of music and entertainment players, Apple absolutely has the preeminent position [with their iPod]. We said — we want to be in this market, there’s a lot of reasons why there’s synergy with other things that we’re doing. We think we’ve got some unique innovations, particularly what we’re doing with [Microsoft] ‘Community’, with wireless networking, and we came into the market, a market in which they’re very strong, and we took, I don’t know, I think most estimates would say we took about twenty, twenty five per cent of the high-end of the market. We weren’t down at some of the lower price points, but for devices two-hundred-and-forty-nine dollars and over, we took, you know, let’s say, about twenty per cent of the market. So, I feel like we’re in the game, we’re driving our innovation hard, er, and, er, OK, we’re not the incumbent, he’s [Jobs] the incumbent in this game but, er, at the end of the day he’s going to have to keep up with, er, an agenda that we’re going to drive as well.”

SW: “And you still feel like you can be very competitive in that space?”

SB: “Sure, absolutely. If we didn’t think there was transformation going on, we wouldn’t be playing.”

12.3) Appendix 3.

Pervasiveness of 'problem solving' in UK product design programmes, 2018/2019.

NAME of UNIVERSITY	NAME of PROGRAMME	Qual.	QUOTE	Yes or no?	URL All accessed: 31/10/2018
University of the Arts London (CSM)	Product Design	BA	1). Most recently, this has informed a shift in the focus of BA Product Design students' activities away from a purely market-orientated and problem-solving approach to a more analytical and critical approach. This accommodates an increasingly complex series of reference points including those provided by related and emerging disciplines such as sociology, politics, ethics, interaction design, service design, and experience design. 2). The ability to generate and translate ideas into resolved designs is crucial. Design Studies develops your creativity with idea generation, problem solving, drawing and presentation technique, sketching and finished model making. It also helps build the project management and verbal presentation skills you'll need in order to develop and communicate your designs. 3). While significant focus remains on the practical skills necessary to successfully bring an object into physical being, students are encouraged to precede this activity by identifying appropriate problems and design outcomes that successfully meet the physical, psychological and emotional wants and needs of real people.	1	https://www.arts.ac.uk/subjects/3d-design-and-product-design/undergraduate/ba-hons-product-design-csm
Aston University, Birmingham	Industrial Product Design	BSc	Do you want to work in an innovative and enterprising arena that would challenge your creative and problem-solving abilities? Our Product Design programmes offer all these opportunities.	1	https://www2.aston.ac.uk/study/courses/industrial-product-design-bsc
Aston University, Birmingham	Product Design and Management	BSc	Do you want to work in an innovative and enterprising arena that would challenge your creative and problem-solving abilities? Our Product Design programmes offer all these opportunities.	1	
Bangor University	Product Design	BSc	Critical analysis & Problem Solving - Able to deconstruct and analyse problems or complex situations. To find solutions to problems through analyses and exploration of all possibilities using appropriate methods, rescources and creativity.	1	https://www.bangor.ac.uk/courses/undergrad/modules/XUF-1043
Bath Spa University	Furniture and Product Design	BA	You'll become a flexible problem-solver and expert collaborator who can respond to issues across disciplines	1	https://www.bathspa.ac.uk/courses/ug-furniture-and-product-design/
University of Bedfordshire	Product Design	BSc	NO MENTION	0	https://www.beds.ac.uk/howtoapply/courses/undergraduate/next-year/product-design
University of Brighton	Product Design	BSc	Find practical solutions to engineering problems	1	https://www.brighton.ac.uk/courses/study/product-design-with-professional-experience-bsc-hons.aspx

Brunel University London	Product Design	BSc	There is a distinctive specialisation towards design for analytical and observational techniques used by ergonomists and human-centred problem identification within consumer product design.	1	https://www.brunel.ac.uk/study/undergraduate/Product-Design-BSc#
Brunel University London	Product Design Engineering	BSc	Use creative approach to solve design problems or improve existing designs	1	https://www.brunel.ac.uk/about/quality-assurance/documents/programme-specifications/BSc-Product-Design-Engineering.pdf
Buckinghamshire New University	Product Design	BA	1). Ability to consider and apply the appropriate mathematical and engineering principles to a particular product design problem 2). Ability to apply a systematic approach to problem solving using appropriate design tools and techniques Design. Plus 6 other mentions.	1	https://bucks.ac.uk/__data/assets/pdf_file/0016/11653/PS-Product-Design-BA-Oct-2018.pdf
Buckinghamshire New University	Product Design	BSc	Have the ability to be positively selfanalytical and to solve design problems in practical and conceptual ways Plus 6 other mentions.	1	https://bucks.ac.uk/__data/assets/pdf_file/0025/26935/PS-Product-Design-BSc-Oct-2018.pdf
Buckinghamshire New University	Product Design: Interior Product	BSc	Have the ability to be positively self-analytical and to solve design problems in practical and conceptual ways	1	https://bucks.ac.uk/__data/assets/pdf_file/0026/26936/PS-Product-Design-Interior-Product-BA-Oct-2018.pdf
Cardiff Metropolitan University	Product Design	BA/BSc	Product designers are creative problem solvers. They respond to human needs, have ideas, rigorously test them and turn them into products ready to be manufactured and put to use.	1	http://www.cardiffmet.ac.uk/artanddesign/courses/Pages/babscproductdesign.aspx
University of Central Lancashire	Product Design	BA	DEAD LINK	0	https://www.uclan.ac.uk/study_here/undergraduate/applicants/welcome-product-design.php
University of Chester	Product Design	BA	NO SPECIFIC MENTION (but mentions product design solutions so product design problems is stongly implied).	0	https://www1.chester.ac.uk/study/undergraduate/product-design/201909
University for the Creative Arts	Product Design	BA	PROGRAMME CLOSED	0	https://www.uca.ac.uk/study/courses/ba-product-design/
University of Derby	Product Design	BA	19 mentions of problems or problem solving (in prog spec on web page)	1	https://www.derby.ac.uk/undergraduate/product-design-courses/product-design-ba-hons/

University of Derby	Product Design Engineering	BSc	19 mentions of problems or problem solving (in prog spec on web page)	1	https://www.derby.ac.uk/undergraduate/product-design-courses/product-design-engineering-bsc-hons/
University of Dundee	Product Design	BSc	Mentioned in embedded promotional programme video	1	https://www.dundee.ac.uk/study/ug/product-design/ (https://youtu.be/fvt6tdX564E)
University of East London	Product Design	BSc	Product Design is the process of developing new and exciting product solutions that play a major role in improving peoples day to day lives. Addressing social and environmental issues, solving problems to satisfy the demands of key users and target markets on local and International levels. Plus 2 other mentions.	1	https://www.uel.ac.uk/-/media/main/ace-dec-16/spec-120517/product-design-bsc-progspec.ashx
University of Edinburgh	Product Design	BA	Compulsory courses include methods of secondary research, creative idea generation techniques, design sketching, model making, workshop prototyping, problem solving, product assembly, creative electronics, manufacturing materials, computer presentation software and graphic presentation techniques. Plus 7 mentions in programme spec on web page	1	https://www.gla.ac.uk/undergraduate/degrees/productdesignengineering/whythisdegree/
Falmouth University	Sustainable Product Design	BA	Here, creative practice and research deliver informed and innovative solutions to challenging real world design problems.	1	https://www.falmouth.ac.uk/sustainableproductdesign
University of Glasgow	Product Design Engineering	BEng	If you know you have creative abilities and want to use them in your career, but also want to gain technical expertise in order to solve challenging problems in an imaginative manner, then this course if you. Upon graduation, your main strengths will lie in your capacity for creative synthesis - likely primary tasks in your future career will be the design and development management of engineering products.	1	https://www.gla.ac.uk/undergraduate/degrees/productdesignengineering/#tab=1
University of Gloucestershire	Product Design	BA	Students will develop the entrepreneurship, creative design and problem solving skills required to create solutions that fulfil the design constraints imposed by various stakeholders.	1	http://www.glos.ac.uk/courses/descriptors/pages/ct5032-innovation-and-commercial-entrepreneurship.aspx
University of Huddersfield	Product Design	BA/BSc	"Product Design is a very practical course. It's about finding big problems, and solving those problems through design." Michael Fuller, graduated Product Design 2009, now Senior Design Manager at LEGO.	1	https://courses.hud.ac.uk/full-time/undergraduate/product-design-ba-bsc-hons
Istituto Marangoni London	Product Design and Furniture	BA	NO MENTION	0	https://www.istitutomarangoni.com/en/design-courses/undergraduate/three-year/product-design-furniture-2/
Istituto Marangoni London	Design for Products	BA	Projects to encourage independent learning through investigation, enquiry and problem solving.	1	https://www.istitutomarangoni.com/en/design-courses/undergraduate/three-year/product-design/

University of Lincoln	Product Design	BA	1). Demonstrate an ability to undertake a recognised problem and generate a range of various solutions. 2). Exhibit an ability to produce effective and independent conclusions to identified problems. 3). Incorporate a broad range of management abilities to effectively solve problems.	1	http://www.lincoln.ac.uk/about/courses/prdprdub_2019-20.pdf
Liverpool John Moores University	Product Design Engineering	BSc	The programme aims to [...] equip students with a range of transferable skills and attributes in the use of computers, software packages, team working, communication, time management and problem solving methodology which will enable them to undertake responsible roles in industry and commerce. Plus 5 other mentions	1	https://prodcat.ljmu.ac.uk/KIS/35334-3500001429.pdf
London South Bank University	Product Design	BSc	Are you a problem solver? Why not learn how to design products, services and systems that answer the challenges for industry and society today?	1	http://www.lsbu.ac.uk/courses/course-finder/product-design-bsc-hons
London South Bank University	Engineering Product Design	BSc	Do you blend creative thinking with scientific insight? You could be an engineering product designer, creating products that solve everything from minor problems, like a leaky teapot, to major issues such as how to launch lifeboats faster.	1	http://www.lsbu.ac.uk/courses/course-finder/engineering-product-design-bsc-hons
Loughborough University	Product Design and Technology	BSc	Problem investigation and solving methods are explored along with development of fundamental design skills and presentation methods.	1	https://www.lboro.ac.uk/study/undergraduate/courses/a-z/product-design-and-technology/#variant
Loughborough University	Product Design Engineering	BEng	Solve challenging industrially based problems at a number of different host companies Plus 18 other mentions	1	https://www.lboro.ac.uk/media/media/study/ug/2019/downloads/wolfson-undergraduate-brochure-edited.pdf
Manchester Metropolitan University	Product Design and Technology	BSc	1). challenge our students to devise innovative solutions to current problems 2). Employers outside of design and manufacturing sectors also recognise the skills and problem-solving capacity of the product design graduate, and there may be opportunities in sales, commissioning, finance, teaching and management as well as roles managing technology to support a range of organisations.	1	https://www2.mmu.ac.uk/study/undergraduate/course/bsc-product-design-and-technology/
University of Northampton	Product Design	BSc	Creative and original design is built on the marriage of visual and technical considerations. We will teach you these skills throughout your course, developing and nurturing them through studio-based, practical problem solving activities	1	https://www.northampton.ac.uk/subjects/product-design-bsc-hons/

Nottingham Trent University	Product Design	BA	1). You will be encouraged to take risks and produce challenging and inventive solutions to a wide range of design problems and briefs 2). You will develop knowledge and comprehension of the historic, contemporary and future influences on product design in order to promote imagination and creativity in the solving of problems and the development of designed outcomes.	1	https://www.ntu.ac.uk/__data/assets/pdf_file/0025/147526/U-Course_Specification_BA_Product_Design-final.pdf
Nottingham Trent University	Product Design	BSc	1). The key aim of this course is to provide you with the principles and techniques necessary for developing product design and technological solutions to a range of practical problems. 2). In addition to providing a broader, analytical and integrated study of technologies and strategies, the course emphasizes the importance of independent learning, collaborative team working, creative problem solving and self-organisation skills. Plus two more mentions.	1	https://www.ntu.ac.uk/__data/assets/pdf_file/0026/147527/V-Course_Specification_BSc_Product_Design-final.pdf
University of Portsmouth	Product Design and Innovation	BSc	If you're creative, fascinated by the how and why of the objects you use every day, and get a kick out of solving problems, this BSc (Hons) Product Design and Innovation degree course will feed your curiosity and set you up for a career in creating and designing products.	1	https://www.port.ac.uk/study/courses/bsc-hons-product-design-and-innovation
Ravensbourne University London	Product Design	BA	1). Citizen Practitioners: tackling real-world problems 2). Personal attributes: shows commitment, enthusiasm and interest in the subject area; initiative and problem solving; ability to communicate. Plus 1 more mention.	1	https://intranet.rave.ac.uk/display/WEL/BA+%28Hons%29+Product+Design?preview=/226760612/226765788/Programme%20Specification%20Product%20Design.pdf
Sheffield Hallam University	Product Design	BA	NO MENTION	0	https://www.shu.ac.uk/courses/art-and-design/ba-honours-product-design/full-time
Sheffield Hallam University	Product Design: Furniture	BA	You leave this course with a tool kit of skills to become a creative problem solver.	1	https://www.shu.ac.uk/courses/art-and-design/ba-honours-product-design-furniture/full-time/2019
Solent University (Southampton)	Product Design	BA	1). As well as developing your creative thinking you will also receive the wrap around business and commercial understanding in order to develop successful products. Including skills in IT, creative thinking, presentation, project management, visual communication and problem-solving. 2). As a design-trained graduate, your creative-thinking, problem-solving and communication skills are in high demand among employers and open up a range of career options.	1	https://www.solent.ac.uk/courses/undergraduate/product-design-ba

Staffordshire University	Product Design	BA	NO MENTION	0	https://www.staffs.ac.uk/course/product-design-ba
University of Strathclyde	Product Design and Innovation	BSc	You'll develop a wide range of analytical and practical skills to overcome the problems encountered when turning a good idea into a best-selling product. Fundamental engineering skills enable you to understand how products work.	1	https://www.strath.ac.uk/courses/undergraduate/productdesigninnovation/
University of Strathclyde	Product Design Engineering	BEng	NO MENTION	0	https://www.strath.ac.uk/courses/undergraduate/productdesignengineeringbeng/
Teesside University	Product Design and Creative Innovation	BA	There is a strong focus on design thinking, business thinking and how design can be used to deliver solutions to real-world problems.	1	http://www.tees.ac.uk/undergraduate_courses/Design/BA_(Hons)_Product_Design_and_Creative_Innovation.cfm
Ulster University	Product and Furniture Design	BDes	NO MENTION	0	https://www.ulster.ac.uk/courses/201920/product-and-furniture-design-15384#secabout
University of Wales Trinity Saint David	Product Design	BA	1). Level 5 further enhances your ability to identify and use relevant understanding, methods and skills to address broadly-defined, complex problems. 2). You will be expected to engage in detailed research and reflective discourse in regard to an identified problem or issue, resulting in an appropriate design response to the problem context, both from a philosophical and tangible perspective.	1	https://www.uwtsd.ac.uk/ba-product-design/
University of Wales Trinity Saint David	Product Design & Technology	BSc	1). Level 5 further enhances your ability to identify and use relevant understanding, methods and skills to address broadly-defined, complex problems. 2). You will be expected to engage in detailed research and reflective discourse in regard to an identified problem or issue, resulting in an appropriate design response to the problem context, both from a philosophical and tangible perspective.	1	https://www.uwtsd.ac.uk/ba-product-design/
University of Wolverhampton	Product Design	BDes	Evaluate the appropriateness of different approaches to solving problems related to your area(s) of study and/or work.	1	https://courses.wlv.ac.uk/documents/cst_docs/AA037T31UV-Specification.pdf
			Total search returns for 'probl' (part of word):	41	
				(out of 48)	
				85.42%	Plus Chester's stong implcation… so one might argue 87.5%

12.4) Appendix 4.

Pervasiveness of ‘entanglement’ in UK product design programmes, 2018/2019.

NAME of UNIVERSITY	NAME of PROGRAMME	Qual?	QUOTE	Mention Y/N?	URL All accessed: 31/10/2018
University of the Arts London (CSM)	Product Design	BA	NO MENTION	0	https://www.arts.ac.uk/subjects/3d-design-and-product-design/undergraduate/ba-hons-product-design-csm
Aston University, Birmingham	Industrial Product Design	BSc	NO MENTION	0	https://www2.aston.ac.uk/study/courses/industrial-product-design-bsc
Aston University, Birmingham	Product Design and Management	BSc	NO MENTION	0	https://www2.aston.ac.uk/study/courses/product-design-and-management-bsc
Bangor University	Product Design	BSc	NO MENTION	0	https://www.bangor.ac.uk/courses/undergrad/modules/XUE-1043
Bath Spa University	Furniture and Product Design	BA	NO MENTION	0	https://www.bathspa.ac.uk/courses/ug-furniture-and-product-design/
University of Bedfordshire	Product Design	BSc	NO MENTION	0	https://www.beds.ac.uk/howtoapply/courses/undergraduate/next-year/product-design
University of Brighton	Product Design	BSc	NO MENTION	0	https://www.brighton.ac.uk/courses/study/product-design-with-professional-experience-bsc-hons.aspx
Brunel University London	Product Design	BSc	NO MENTION	0	https://www.brunel.ac.uk/study/undergraduate/Product-Design-BSc#
Brunel University London	Product Design Engineering	BSc	NO MENTION	0	https://www.brunel.ac.uk/about/quality-assurance/documents/programme-specifications/BSc-Product-Design-Engineering.pdf
Buckinghamshire New University	Product Design	BA	NO MENTION	0	https://bucks.ac.uk/__data/assets/pdf_file/0016/11653/PS-Product-Design-BA-Oct-2018.pdf
Buckinghamshire New University	Product Design	BSc	NO MENTION	0	https://bucks.ac.uk/__data/assets/pdf_file/0025/26935/PS-Product-Design-BSc-Oct-2018.pdf
Buckinghamshire New University	Product Design: Interior Product	BSc	NO MENTION	0	https://bucks.ac.uk/__data/assets/pdf_file/0026/26936/PS-Product-Design-Interior-Product-BA-Oct-2018.pdf
Cardiff Metropolitan University	Product Design	BA/BSc	NO MENTION	0	http://www.cardiffmet.ac.uk/artanddesign/courses/Pages/babscproductdesign.aspx
University of Central Lancashire	Product Design	BA	NO PAGE!	0	https://www.uclan.ac.uk/study_here/undergraduate/applicants/welcome-product-design.php
University of Chester	Product Design	BA	NO MENTION	0	https://www1.chester.ac.uk/study/undergraduate/product-design/201909
University for the Creative Arts	Product Design	BA	PROG. CLOSED!	0	https://www.uca.ac.uk/study/courses/ba-product-design/
University of Derby	Product Design	BA	NO MENTION	0	https://www.derby.ac.uk/undergraduate/product-design-courses/product-design-ba-hons/
University of Derby	Product Design Engineering	BSc	NO MENTION	0	https://www.derby.ac.uk/undergraduate/product-design-courses/product-design-engineering-bsc-hons/
University of Dundee	Product Design	BSc	NO MENTION	0	https://www.dundee.ac.uk/study/ug/product-design/ (https://youtu.be/fvt6tdX564E)
University of East London	Product Design	BSc	NO MENTION	0	https://www.uel.ac.uk/-/media/main/ace-dec-16/spec-120517/product-design-bsc-progspec.ashx
University of Edinburgh	Product Design	BA	NO MENTION	0	https://www.gla.ac.uk/undergraduate/degrees/productdesignengineering/whythisdegree/
Falmouth University	Sustainable Product Design	BA	NO MENTION	0	https://www.falmouth.ac.uk/sustainableproductdesign
University of Glasgow	Product Design Engineering	BEng	NO MENTION	0	https://www.gla.ac.uk/undergraduate/degrees/productdesignengineering/#tab=1
University of Gloucestershire	Product Design	BA	NO MENTION	0	http://www.glos.ac.uk/courses/descriptors/pages/ct5032-innovation-and-commercial-entrepreneurship.aspx
University of Huddersfield	Product Design	BA/BSc	NO MENTION	0	https://courses.hud.ac.uk/full-time/undergraduate/product-design-ba-bsc-hons
Istituto Marangoni London	Product Design and Furniture	BA	NO MENTION	0	https://www.istitutomarangoni.com/en/design-courses/undergraduate/three-year/product-design-furniture-2/
Istituto Marangoni London	Design for Products	BA	NO MENTION	0	https://www.istitutomarangoni.com/en/design-courses/undergraduate/three-year/product-design/
University of Lincoln	Product Design	BA	NO MENTION	0	http://www.lincoln.ac.uk/about/courses/prdprdub_2019-20.pdf
Liverpool John Moores University	Product Design Engineering	BSc	NO MENTION	0	https://prodcat.ljmu.ac.uk/KIS/35334-3500001429.pdf
London South Bank University	Product Design	BSc	NO MENTION	0	http://www.lsbu.ac.uk/courses/course-finder/product-design-bsc-hons
London South Bank University	Engineering Product Design	BSc	NO MENTION	0	http://www.lsbu.ac.uk/courses/course-finder/engineering-product-design-bsc-hons
Loughborough University	Product Design and Technology	BSc	NO MENTION	0	https://www.lboro.ac.uk/study/undergraduate/courses/a-z/product-design-and-technology/#variant

Loughborough University	Product Design Engineering	BEng	NO MENTION	0	https://www.lboro.ac.uk/media/media/study/ug/2019/downloads/wolfson-undergraduate-brochure-edited.pdf
Manchester Metropolitan University	Product Design and Technology	BSc	NO MENTION	0	https://www2.mmu.ac.uk/study/undergraduate/course/bsc-product-design-and-technology/
University of Northampton	Product Design	BSc	NO MENTION	0	https://www.northampton.ac.uk/subjects/product-design-bsc-hons/
Nottingham Trent University	Product Design	BA	NO MENTION	0	https://www.ntu.ac.uk/__data/assets/pdf_file/0025/147526/U-Course_Specification_BA_Product_Design-final.pdf
Nottingham Trent University	Product Design	BSc	NO MENTION	0	https://www.ntu.ac.uk/__data/assets/pdf_file/0026/147527/V-Course_Specification_BSc_Product_Design-final.pdf
University of Portsmouth	Product Design and Innovation	BSc	NO MENTION	0	https://www.port.ac.uk/study/courses/bsc-hons-product-design-and-innovation
Ravensbourne University London	Product Design	BA	NO MENTION	0	https://intranet.rave.ac.uk/display/WEL/BA+%28Hons%29+Product+Design?preview=/226760612/226765788/Programme%20Specification%20Product%20Design.pdf
Sheffield Hallam University	Product Design	BA	NO MENTION	0	https://www.shu.ac.uk/courses/art-and-design/ba-honours-product-design/full-time
Sheffield Hallam University	Product Design: Furniture	BA	NO MENTION	0	https://www.shu.ac.uk/courses/art-and-design/ba-honours-product-design-furniture/full-time/2019
Solent University (Southampton)	Product Design	BA	NO MENTION	0	https://www.solent.ac.uk/courses/undergraduate/product-design-ba
Staffordshire University	Product Design	BA	NO MENTION	0	https://www.staffs.ac.uk/course/product-design-ba
University of Strathclyde	Product Design and Innovation	BSc	NO MENTION	0	https://www.strath.ac.uk/courses/undergraduate/productdesigninnovation/
University of Strathclyde	Product Design Engineering	BEng	NO MENTION	0	https://www.strath.ac.uk/courses/undergraduate/productdesignengineeringbeng/
Teesside University	Product Design and Creative Innov	BA	NO MENTION	0	http://www.tees.ac.uk/undergraduate_courses/Design/BA_(Hons)_Product_Design_and_Creative_Innovation.cfm
Ulster University	Product and Furniture Design	BDes	NO MENTION	0	https://www.ulster.ac.uk/courses/201920/product-and-furniture-design-15384#secabout
University of Wales Trinity Saint Davi	Product Design	BA	NO MENTION	0	https://www.uwtsd.ac.uk/ba-product-design/
University of Wales Trinity Saint Davi	Product Design & Technology	BSc	NO MENTION	0	https://www.uwtsd.ac.uk/ba-product-design/
University of Wolverhampton	Product Design	BDes	NO MENTION	0	https://courses.wlv.ac.uk/documents/cst_docs/AA037T31UV-Specification.pdf
			Total search returns for 'entangle' (part of word):	0	
				(out of 48)	
				0.00%	

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12.5) Appendix 5.

The Ten Tenets of Chindōgu.

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"Every chindōgu is an almost useless object, but not every almost useless object is a chindōgu. In order to transcend the realms of the merely almost useless, and join the ranks of the really almost useless, certain vital criteria must be met. It is these criteria, a set of ten vital tenets, that define the gentle art and philosophy of chindōgu" (Kawakami, 1997).

1. A chindōgu cannot be for real use.
It is fundamental to the spirit of chindōgu that inventions claiming chindōgu status must be, from a practical point of view, (almost) completely useless. If you invent something which turns out to be so handy that you use it all the time, then you have failed to make a chindōgu. Try the Patent Office.

2. A chindōgu must exist.
You're not allowed to use a chindōgu, but it must be made. You have to be able to hold it in your hand and think 'I can actually imagine someone using this. Almost.' In order to be useless, it must first be.

3. Inherent in every chindōgu is the spirit of anarchy.
chindōgu are man-made objects that have broken free from the chains of usefulness. They represent freedom of thought and action: the freedom to challenge the suffocating historical dominance of conservative utility; the freedom to be (almost) useless.

4. Chindōgu are tools for everyday life.
chindōgu are a form of nonverbal communication understandable to everyone, everywhere. Specialised or technical inventions, like a three-handled sprocket loosener for drainpipes centred between two under-the-sink cabinet doors (the uselessness of which will only be appreciated by plumbers), do not count.

5. Chindōgu are not for sale.
chindōgu are not tradable commodities. If you accept money for one you surrender your purity. They must not even be sold as a joke.

6. Humour must not be the sole reason for creating a chindōgu.
The creation of chindōgu is fundamentally a problem-solving activity. Humour is simply the by-product of finding an elaborate or unconventional solution to a problem that may not have been that pressing to begin with.

7. Chindōgu is not propaganda.

chindōgu are innocent. They are made to be used, even though they cannot be used. They should not be created as a perverse or ironic comment on the sorry state of mankind.

8. Chindōgu are never taboo.
The International Chindōgu Society has established certain standards of social decency. Cheap sexual innuendo, humour of a vulgar nature, and sick or cruel jokes that debase the sanctity of living things are not allowed.

9. Chindōgu cannot be patented.
Chindōgu are offerings to the rest of the world - they are not therefore ideas to be copyrighted, patented, collected and owned. As they say in Spain, mi chindōgu es tu chindōgu.

10. Chindōgu are without prejudice.
Chindōgu must never favour one race or religion over another. Young and old, male and female, rich and poor - all should have a free and equal chance to enjoy each and every chindōgu.

(Kawakami, 1997)

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