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Max Mollon, Annie Gentes

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The Rhetoric of Design for Debate: triggering conversation with an “uncanny enough” artefact

M. Mollon, EnsadLab (France), Telecom ParisTech (France)

A. Gentes, Telecom ParisTech (France), Mines, Chair Design Theory and Methods for Innovation

Abstract

Design exploration research refers to various interaction design research practices that explore tensions issued from the interplay of science, technology, culture and society. Most of them explicitly trigger discussions and debates in the audience, for instance “critical design”, which raised the interest of members of design research communities. However its generalization suffers from a lack of shareable methodology. This paper aims at clarifying it practically and theoretically.

We claim that these practices trigger people’s reactions using a specific narrative strategy which provoke an “uncanny feeling”. By producing “uncanny enough” artefacts that embed a subtle entanglement of familiarity and unfamiliarity, designers can elicit responses from viewers. First, a review of literature on critical design texts presents the “uncanny balance” as being a recurrent design principle for the creation of these artefacts. We then present an exemplary case study produced by one of the authors, exploring communication technology—called Dog&Bone. Using classical rhetoric, we present a theoretical overview of the project. The outcome consists of a conceptual framework based on the narrative dimension of the uncanny plus the rhetorical dimension (composed of three elements: legitimacy, emotions, argumentation). We conclude that Design is a form of communication between designers and their audience.

Keywords

Debate; Uncanny; Rhetoric; Critical Design; Speculative Design

“Design exploration” research, as defined by Fallman (Fallman, 2008) is a particular kind of research through design. The artefact it produces:

> “often seeks to test ideas and to ask ‘What if?’—but also to provoke, criticise, and experiment to reveal alternatives to the expected and traditional, to transcend accepted paradigms, to bring matters to a head, and to be proactive and societal in its expression.”

These approaches are good at “problem-setting” (Schön, 1983) and “exploring possibilities outside of current paradigms”. It “is a way to comment on a phenomenon by bringing forth an artefact that often in itself, without overhead explanations, becomes a statement or a contribution to an ongoing societal discussion.” (Fallman, 2008, p.7)

While critical design has raised the interest of members of human-computer interaction (HCI) and design research communities, its generalization suffers from a lack of shareable methodology (S. Bardzell, Bardzell, Forlizzi, Zimmerman, & Antanitis, 2012). We aim at clarifying the methods practically and theoretically.

In particular, we study how critical design challenges the audience, triggering questions, discussions or even debates through design. We therefore focus on the specific relationship between the designer, the audience and the artefact, or how to convert people from being viewers to questioners. We contend that these triggering discussion practices produce what we call “uncanny enough” artefacts. After the case study produced by one of the authors, we will discuss how these practices imply a fully developed rhetorical strategy.

Literature review: designing using the narrative strategy of the uncanny

Scope of the review

We present a review of literature of critical design related texts. We are interested in how these texts strive to present the uncanny (defined below) as a narrative strategy used for the creation of artefacts that trigger discussions. We focus on texts from Design Fiction, as coined by (Bleecker, 2009) and commented by (Sterling, 2009), on Critical Design (Dunne, 1999) and on Speculative Design, term defined by (Auger, 2012), collaborator of Anthony Dunne at RCA. “Critical design will often challenge its audience’s preconceptions and expectations thereby provoking new ways of thinking about the object, its use, and the surrounding environment.” (Dunne, 1999). The same goes for design fiction defined as “the deliberate use of diegetic prototypes to suspend disbelief about change” by Sterling (Bosch, 2012), who recently added at Lift Conference 2013, “Design fiction doesn’t have users, it has an audience”. This also goes for James Auger who describes how:

> "speculative design can develop and present future or alternative technological applications” (Auger, 2012, p.29).

Description of the “the uncanny” as a narrative trick

The uncanny concept, inherited from Freud and the literature of the fantastic, is claimed by James Auger as an inspiration for his work. “Freud goes on to suggest that by using the uncanny, ‘the story-teller has a peculiarly directive power over us; by means of the moods he can put us into, he is able to guide the current of our emotions’.” (Auger, 2012, p.150). In

other words, the uncanny is a way to touch the audience, to appeal to their feelings and to engage them. He also refers to other domains: “observational comedy, psychology, horror films and illusion, for the insights they offer into the complex workings of human perception and how it can be consciously manipulated to elicit reaction”. (Auger, 2012, p.140) While other authors use other words like “strange”, “unfamiliar”, etc., the uncanny seems to be a recurring motive of critical design.

Freud’s theory of the uncanny - “unheimlich” (Freud, 2004) - stems from his double analysis of patients and literature. In his text, he studies first the way the literature of the fantastic produces a narrative so that the readers (as well as the hero in the story) do not know if, what they are told is the product of the feverish imagination of the hero, or if the hero is indeed confronted by evil forces. This narrative strategy that strikes a balance between either a natural or a supernatural explanation has been analysed by Todorov as the essence of the Fantastic (Todorov, 1970). A number of figures are related to this; the double, the mirror, … all figures that introduce a doubt about the uniqueness of an experience, or a subject. This pattern has more recently been considered as one of the major narrative potentials of pervasive computing because it gives the possibility to endow every object with a double meaning (Gentès & Jutant, 2012). Since then, this term has also been popularized in the area of super-realistic humanoid robotics. In all these instances, the “uncanny” is a complex combination of familiarity and unfamiliarity, which unsettles the audience’s emotions.

Engaging the audience with uncanny artefacts

Unfamiliarity is the starting point for the audience’s experience. Actually, because design explorations present perspectives that are fundamentally different from our everyday reality, they always seem foreign at first. As Auger remarks,

> Any experience that challenges a preconception will at first appear odd, but here the detail and finish of the artefacts, combined with the short explanations describing their functions and modes of interaction, entices the audience into exploring the concept further. (Auger, 2012, p.145)

The goal is to help the audience consider something unconventional—i.e. what could change tomorrow, or some unfamiliar, incredible, controversial (yet probable) situation. But what are the critical design strategies to engage the audience? According to Auger, a design speculation requires a “perceptual bridge” between the audience and the concept. (Auger, 2012, p.140) In other words, designers must find ways to make these perspectives seem probable. People have to believe that these scenarios could be theirs tomorrow. According to critical designers theory, the apparent probability of what seemed improbable (and unthought of) triggers an emotional state of uneasiness, verging towards interrogation. This unsettled emotion is the tipping point of engagement to generate concern, thoughts, questions and conversations or even debate.

The “strange” artefact also shows familiar features that make it more probable—providing a perceptual bridge.

How to root the unfamiliar into familiarity

As introduced previously the “perceptual bridges” fill the gap between the viewer's present state of mind—technical knowledge, psychological perception and cultural background—and the unfamiliar proposition. According to Auger:

> These “perceptual bridges” can then be stretched in precise ways: this might be a technical perception such as extrapolating how they think a technology is likely to develop; a psychological perception such as not breaking taste or behaviour taboos; or a cultural perception such as exploiting nostalgia or familiarity with a particular subject. In this way the speculations appear convincing, plausible or personal, whilst at the same time new or alternative. (Auger, 2012, p.180)

The technical, psychological, and cultural perceptions described by Auger are supported by common features throughout critical design practice:

• Tangible artefacts, familiar typology of objects;
• Narration (rhythm, plot, style…);
• Scales of complexity among a variety of media used;
• Aesthetic experience of encountering the artefact;

Tangible artefacts, familiar typology of objects

The basis of “design exploration research” is to rely on design as a main medium. The fact that the artefact exists in the material world makes a difference, as Dunne, specifies when talking about Dunne&Rabby’s work “our ideas make their way into the material world in some way; it's not enough that they end up as pure thoughts. They must be embodied in object typologies that we understand: furniture, products, clothing, buildings…” (Dunne, 2009). Using design offers a recognizable (familiar) typology of artefact that integrates well into people's lives—and help them to project its usage into their life. While designing the artefact—buildings, clothes, computing interfaces, etc.—the formal qualities given to the object, can bring back familiarity, as done with the Vital Signs project (Kerridge, 2009), “adopting other features of the design language” (p.13), or as Human Beans do with packaging. Indeed, all the media used around the artefact can help represent and explain it: photographs, videos, illustrations, diagrams, etc. They have formal and semiotic qualities (type of tools, frame, light, speed, colours, shapes, etc.) that are naturally crafted in the design process.

Narration (rhythm, plot, style…)

Once intrigued by the appearance of the artefact, the audience usually seeks a deeper understanding. Projects show that narration is another key part of the audience experience. It enhances both the familiarity and the understanding of the project, in a complex and entangled way. Thanks to rhythm, plot, style… and through a panel of media as text, audio, video, etc. narration weaves together everyday life elements and speculative elements. Julian Bleecker refers to the work of David Kirby (Kirby, 2010) in his "Design Fiction" essay (Bleecker, 2009, p.39). He mentions the ability of narration to make the strange familiar and gives the example of "The Minority Report" movie where the police prediction device is used as a very ordinary contraption: “I want to highlight what the story does so as to fill out the meaning of the clue-construction device, to make it something legible despite its foreignness”

(p.35). Narration helps to bridge the foreign with familiarity (showing familiar places, actions, etc.). It is also used for didactic purposes, for instance when introducing and explaining how works a new technology. If people find a technology or a topic foreign, it is necessary to bring a basic familiarity for the extrapolation to work. For this matter Auger proposes that "Inspiration and influence can be drawn from diverse fields such as observational comedy, psychology, horror films and illusion, for the insights they offer into the complex workings of human perception and how it can be consciously manipulated to elicit reaction." (Auger, 2012, p.140). Among other criteria previously presented, Auger proposes to rely on self-identifiable aspects of daily life, to use details to stimulate audience imagination and to take advantage of stereotypical or commonly held assumptions about a specific subject (like myths or famous science fiction) (Auger, 2012, p.164). These elements are for instance used to ground futuristic speculations into the present.

Scales of complexity among variety of media used

The criteria gathered above are often combined in order to arrange different scales of complexity in the narration. It is a way to adapt to different contexts and audiences. Good combinations allow the audience to encounter and learn more on the project through various points of entry and different trajectories among the media used. This combination can play an important role in bringing familiarity and bridging perception.

Aesthetic experience of encountering the artefact

Finally, the power of a live demo should not be underestimated. In fact, the audience experience can be designed as a whole aesthetic experience, a global process or a controlled situation—as an installation, a user test, an event, or a workshop

Balancing the unfamiliar neither too much, nor not enough

Bringing together alien and familiar elements raises issues of "balance". Designers argue that the efficiency and success of this process requires viewers to occupy a "fecund middle-ground" between familiarity and unfamiliarity—as say (S. Bardzell et al., 2012). And this led Dunne to develop the "not-quite-right" premise, "If it was too correct and as expected, they would glance once and move on. If the object is too open-ended in terms of meaning, then it can seem empty." (Dunne, 2009, p.2). Dunne & Raby already stressed the importance of this "balancing" issue in 2001 (Dunne & Raby, 2001, p.63). Auger as well, "If a speculative design proposal strays too far into the future to present clearly implausible concepts or describes a completely alien technological habitat, the audience will fail to relate to the proposal, resulting in a lack of engagement or connection. " (Auger, 2012, p.138-140).

This balancing effort is applied to various criteria, including the ones found in the literature review, through the different parameters of the artefact—aesthetics, concepts, material and functions.

Miss-managing the uncanny, an example: not familiar enough

Designers usually fine-tune the conditions of communication of their projects but sometimes they fail to achieve this balance as Auger reports on his experience with the "AfterLife" project (Auger, 2012). He shows how over-unfamiliarity can be taken for provocation and abort people's reflection on the project topics.

Auger-Loizeau's Afterlife project provides an investigation of science and technology's roles in the delicate topic of death, new forms of funerals and belief. It is a coffin able to recharge a dry cell battery thanks to the material activity of deceased human body (decomposition) based on microbial fuel cell technology. Its first exhibition took place at the New York's Museum of Modern Art (MoMA) exhibition "Design and the Elastic Mind" (2007). It could be considered a failure as the audience focused on the repelling part of the decomposition process, and consequently the discussions did not reach the main topic. The designers therefore organised a workshop with fifteen colleagues, asking them to produce a text describing what use they would make of their Afterlife battery. For the Experimenta exhibition in Lisbon (2009), their solutions allowed the audience to focus on how people would have a last interaction with their relatives—by providing energy in a specific, and personal context.

> In addressing this problem we shifted the emphasis from the fuel cell and coffin to the function of the battery. This effectively heightened the familiar aspect of the uncanny experience. […] This encouraged the audience to reflect on how they themselves might use the battery, countering the initial repulsion factor and resulting in a form of desirable uncanny. (Auger, 2012).

Staging is part of the "Aesthetic experience of encountering the artefact" criteria, presented earlier. It is all about focusing the attention on the right part of the project, allowing it to generate more meaningful reactions. Here, most of the audience were willing to engage with the question of technologically-mediated life after death.

In conclusion, a "design exploration research" project inherently proposes unfamiliar alternatives. Still, making the strange probable is what triggers viewer's engagement (curiosity, concern, discussion and even debate). It is completed by using a perceptual bridge, rooting the unfamiliar experience into familiarity. This is achieved by
• the practice of design (in all its complex dimensions, materialized in artefacts);
• crafting the narration (rhythm, plot, style…);
• mixing a variety of media;
• proposing an aesthetic experience of encountering the artefact;
Managing this subtle balance—what we call the "uncanny enough"—is the key to the audience's experience. "Things have to be not-quite-right; this awkwardness is a way into the object, an invitation to explain why it is the way it is, why it's not quite right" (Dunne, 2009). The following case-study was to test these hypotheses.

Usecase: "Dog&Bone" example

Dog&Bone, is a case study of speculative design produced by one of the authors to test critical design criteria and eventually to find new criteria of success.

Description of the Dog&Bone

Dog&Bone, The Empathetic Telephone, explores a scenario in which our telephone could be sensitive and responsive to emotions. It is a simple dog collar (embedding a microphone + speakers) connected to a phone by Bluetooth. Once the owner gets back from work, the dog's collar connects to his mobile phone, allowing phone conversations to be held through

the loyal pooch. Taking over for the other's physical absence, the dog can feel the owner's non-verbal cues and reacts to the interlocutor's emotional states.

The project investigated the topic of distant social relationships, and started from an observation of the state of the research in social tele-robotic communications in 2011 (when the project started). In that area, the dominant claim was that remote communication robots should be able to sense non-verbal cues to provide more enjoyment and provide an experience closer to the face-to-face one. Such efficient robots could even allow a long-distance-grandma to take care of her grandkids. Dog&Bone pushes this logic further by speculating on the use of a “fully non-verbal sensitive device”, man’s most faithful friend.

Its name, “Dog & Bone”, means telephone in Cockney rhyming slang, the East London slang. This dog collar, made of leather, embeds a microphone and a speaker. It relays phone calls from a local mobile phone, exactly as a hands-free headset would. The collar hosts an echo-cancelling microphone, a directional speaker (keeping dog’s ears safe), a Bluetooth connection with the phone (low frequency radio waves, safe for the animal), an ON/OFF button (pick up/hang up) and a mini USB plug for battery recharge. Prototypes were developed for two dog sizes (small and medium). The device works better indoors.

The goal of Dog&Bone was to push boundaries to reveal a different (yet probable) state of communication, an alternative present. Rooting this unfamiliar proposition into the familiar was an intentional process; a description follows. The main idea was to ensure the triviality of the object in order to increase its apparent probability.

Design of the artefact

Avoiding unnecessary features

First, the device was limited to a simple dog collar to make it look like a usual domestic object. We avoided adding any channel other than the audio. Adding video would be concurrent to the “non-verbal sensing” role of the dog, and it would blur the apparent use that the object’s design evokes visually.

Avoiding unnecessary debates

Second, we included users’ feedback very soon in the design process. The making of a handmade paper collar (which held a mobile phone) allowed us to makes critical choices. Interviews of testers revealed that they worried for their dog (more than for their own brain) because of the phone's electromagnetic radiation. In order to avoid unwanted debates (about the danger of telephone waves for animals) we turned the collar into a transmitter—similar to a hands-free headset–using Bluetooth.

Crafting evocative appearance

Third, the first working prototypes embedded no intentional aesthetic choices. The final product looks like a traditional dog collar, we made it with a leather artisan, its design seems integrated into the usual lineage of domestic products. The aesthetic given to its functional parts (microphone, speakers) borrows characteristics from usual telecommunication devices: perforations and appearing metal nets.

We considered that the restrained choices of features and the traditional aesthetic made the project realistic, accessible and questionable, avoiding the danger of making an over-provocative artefact.

Design of the staging

Naming

In staging, names play a central function. The Dog&Bone name is a play on words that integrates the project well into British popular culture. The word “affective” instead of “empathetic Telephone” was discussed at some point, but it would communicate different values. Empathetic was chosen as it better relays the fact that the dog is sensitive to positive as well as negative moods.

Communication material

The set of communication materials created—logos, texts, images, videos and the two objects—were able to articulate different scales of complexity (Fig 1.), in different situations and for different audiences (conferences, exhibitions, web, print…). For instance, an audience of professional engineers asked for more technical details, but professional designers asked more about the speculative design approach.

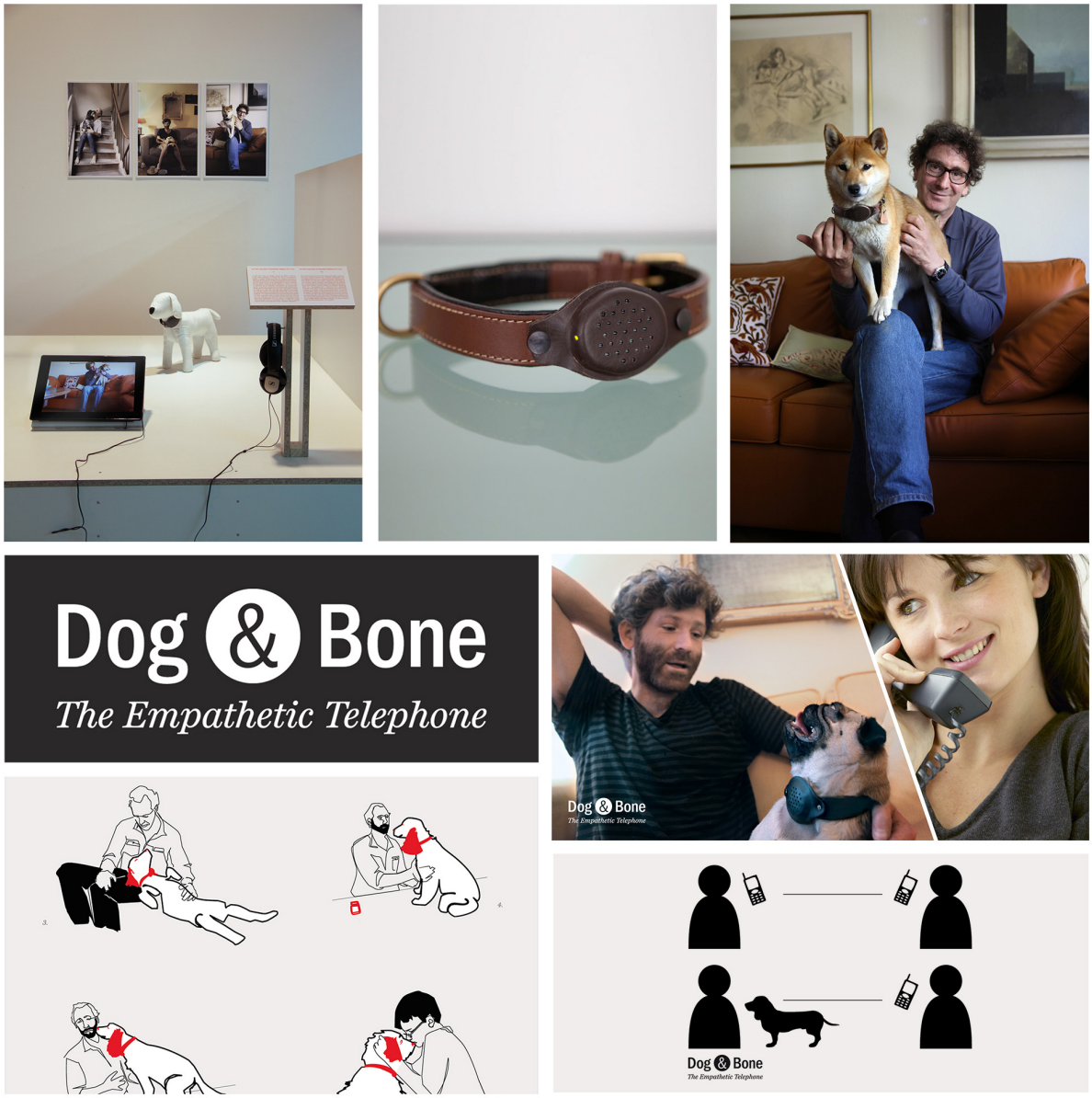

Fig 1. Someof the descriptive materials created to show the project (2011–2013)

Project circulation and reception

In order to circulate the project we tried different settings. Dog&bone was exhibited at the 2012 International Biennale of Design in St.Etienne (France)—part of an exhibition on animals and technology called "*Les androïdes rêvent-ils de cochons électriques ?*" (Do androids dream of electric pigs?). Small audience talk presentations allowed more proximity with the spectators. The one to one interviews allowed to engage meaningful discussions, debates, and even arguments (once).

A series of questions were used as a guide for informal discussions. The user tests were documented and retrieved by video (available on the project's website). They show two dogs, with a very different character, interacting with their owner. We collected expressions of acceptance, interest, wonder, enthusiasm and one strong outrage from a professional dog breeder.

During these experiments, we noticed that collecting meaningful reactions was dependant on the context of mediation and the possibility for interaction with the audience. In other words,

we had developed not only a narrative dimension but also a rhetorical dimension that contributed to the strategy of the “uncanny enough”.

Discussion: the rhetorical strategy

Defining rhetoric

We argue that, in addition to the narrative dimensions explored by the authors from the literature review, the experiment reveals another dimension—intimately related to the aim of organising a debate with the audience—the rhetoric one. This next section goes over the Dog&Bone experiment so as to build a framework that can also account for certain scattered elements that are sometimes evoked by critical designers. The goal is to offer a more systematic approach to these practices.

To define the rhetorical strategy, we intend to use Aristotle’s treatise (Aristotle, Rhys, Ingram, & Friedrich, 1954) that still structures the way discourse and persuasion are analyzed today.

> Of the modes of persuasion furnished by the spoken word there are three kinds. The first kind depends on the personal character of the speaker; the second on putting the audience into a certain frame of mind; the third on the proof, or apparent proof, provided by the words of the speech itself. (Aristotle et al., 1954)

Rhetoric is an art of persuasion that has three foundations:
• the authenticity and credibility of the speaker,
• the audience’s interests and feelings,
• the choice and organization of the argument.
While designers may be aware of the importance of addressing each of these conditions of debate, we think that we need to explicitly examine how different aspects of their production relate to these foundations.

Setting the credibility of the speaker

While presenting Dog&Bone, the author usually explains the reason motivating the project in very personal terms. He explains his long distance relationship with his girlfriends whom he lived with only part time. Then he points out how there is a need for him to imagine alternative ways of communicating with each other. In other words, the author makes it clear to his audience that he has a vested interest in this project not a superficial one. He explains some of his very personal, intimate reasons for doing so. The author’s relationship to the subject makes him “credible”. The author also makes clear that he has worked with RCA teams, a place where such productions were initiated and developed. This particular connection is what makes him appear personally more legitimate.

According to Aristotle, credibility is particularly necessary when the subject is debatable. The more the subject is controversial the more the audience needs to have some certainty about the author’s engagement and legitimacy. This legitimacy can be bestowed by the personal intimate experience of the speaker, it can also derive from his professional experience. Repeatedly for instance, critical designers reaffirm that they are designers and not artists, which is a way for them to situate their work and the type of legitimacy that they claim for

their work. This legitimacy is reinforced by the different institutions (museums, galleries, labs) with which they collaborate to produce and distribute their work. They often act as “meta-locutor” that remediates, or frames, how a project is considered by the audience.

Teasing the audience’s interests and feelings

The Dog&Bone experiment wants to focus on how to make absence more bearable. The choice of a pet to carry affection is bound to elicit very positive feelings in the audience. But it can also make them feel uncomfortable that the animal is being used as a tool. Or it makes them laugh when the movie shows the “tester” running after the dog to continue his conversation. The feelings are not here - as in a work of art - for themselves or for any cathartic experience. They are here to start a discussion.

In rhetoric, the speaker has to stir and relate to people’s interests and feelings for the discussion to start. First, the locutor has to establish a good relationship with his public. What traditional rhetoric qualifies as “captatio benevolentiae”. She does that by respecting the feelings and expectations of her audience. But then, to win her case, she needs to move the audience. Rhetoric is born in the tribunal. Different emotions—anger, sadness, joy,…—need to be elicited from the audience. Aristotle remarks that most of the time, this play on emotions is what is going to win a case or lose it because, he notes, people do not have the time to learn, or to follow complicated demonstrations, but they can still feel about a case and make a decision on the basis of these feelings.

This echoes the definition of the uncanny given earlier, as well as the intentions of the authors related in the literature review. The authors repeatedly caution that the audience needs to be unsettled but not freaked out. They point out the necessary balance of positive and negative emotions. The “uncanny” appears precisely as a way to touch the audience, to appeal to their feelings.

Convincing the audience with argumentation

As said in the usecase description, the set of communication materials—logos, texts, images, videos and the two objects—created around Dog&Bone’s dog collar, is able to articulate different scales of complexity. The discourse generated by the presence of the different elements on their own or the one performed by the speaker is adaptable in different situations (conferences, exhibitions, web, print…) and audience. An audience of professional engineers would not ask for the same kind of technical details as professional designers. Another example of this rhetorical criteria is found in Auger-Loizeau’s work.

> "for technological believability, the Audio Tooth Implant relies on a general public awareness of hard and well-publicised facts, such as the miniaturisation of digital technology and urban myths such as dental fillings acting as radio antenna and picking up audio signals. These combine to give the concept a familiarity. It was also necessary to provide a convincing description, in layman's terms, of the technology involved. […] This description helped in convincing those with a good understanding of electronic technology." (Auger, 2012, p.158)

The artefact is part of an argument and as such does not present so much a "truth" as a probable explanation. The art of the rhetoric, as it is mostly remembered, is about the topics and stylistic flourish that the author is able to master to tell his case in original and appealing ways. Stories, descriptions, metaphors, examples, are part of the argumentative process as well as the aesthetic qualities of the objects. Designers do indeed put a lot of emphasis on the quality and finishing of their productions.

The uncanny is not only triggering feelings of unease, it plays on people's cognition too because the outcome is not some aesthetic experience or cathartic experience. It is a means to an end: that is the debate itself. It presents its case with a relation to what can or what cannot be believed, what can or what cannot be done, what is technically feasible or not. To do that the designers of uncanny objects make hypotheses about the technical literacies of their audience. They need to have a fairly good idea of what is considered common knowledge to be able to destabilise it.

Conclusion

The conceptual framework of critical design is not only based on the narrative dimension of the uncanny but also on the three rhetorical dimensions (legitimacy, emotions, argumentation) that are also ways of managing the balance of the uncanny enough. The rhetorical dimension is a key element of the "design for debate".

Design exploration research and more precisely, the design practices that trigger reactions, discussions and even debates in the audience need methodological and rhetorical clarification. In order to elicit the audience reaction, these practices use a specific narrative strategy based on the psychological concept of the uncanny. Based on a literature review we presented how these artefacts, subtly balanced between familiarity and unfamiliarity, provoke an uncanny feeling. At that point, a case study of critical design, produced by one of the authors, was presented in order to reflect on the research. We finally proposed a conceptual framework—based on the narrative dimension of the uncanny plus the rhetorical one. This allows us to frame more systematically the strategy for debate that is at work, in particular it draws our attention on three main rhetorical aspects: the argumentation which is provided not only by the artefact but also by all the documents that organise the reception of the artefact; unsettling the audience's emotions is a cornerstone of this form of design, in particular because it offers a shortcut to discuss the problems; and the argumentation used to assert the artefact probability.

The limitations of the framework could be explored by evaluating if, and how much people's reactions are triggered (emotions, engagement, discussions…). We also wonder if the notion

of debate is appropriate. It can be seen as the intent of these practices but does the debate or even the discussion occur at this stage? Is a step missing to start a discussion? Are the debates happening, but simply not captured by any media? The next step of this research should examine the importance of the mediation of these projects (crafting the situation of reception) as it seems primordial to gather meaningful audience reactions to start a meaningful discussion.

As designers insist on getting forms of engagement, they therefore shift the attention from winning a case (rhetorical framework) to discussing and debating options (communication framework). We conclude that this specific relationship between artefacts and viewers makes Design a form of communication between designers and their audience.

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