

Should Technology Be [just] Delightful?



Rodrigo Hernández-Ramírez, Liene Jakobsonė, Thomas Behrens,
and Teresa Chambel

Abstract Our world has been steadily populated by a growing number of artificially “a-live” objects and smart devices, over the last decades, with varying degrees of autonomy, and seeming to become better at guessing and responding to our needs, offering pleasurable or delightful experiences, and making us more willing to trust them. Nevertheless, such development and understanding of ubiquitous smart technologies are not without criticism and challenges. The more users regard technology in magical terms, the more they ignore the complexities of the underlying infrastructure enabling their devices. However, these come with vulnerabilities that expose users to various undesirable situations, threatening their privacy and forcing them to deal with complications, with potential unforeseen social and economic consequences. This is an important reason why Human-Centered Design needs more than being empathic towards the user; it needs to assume a clear ethical stance. Designers should learn to say “no” and ask “why” while examining the role technology plays in our lives and asking what types of new relations we want to establish with it, and ultimately be equipped to ask about our human project for the future and the role a humanistic design approach should play in it. So, Should technology be [just] Delightful? This introductory chapter addresses this fundamental question while commenting on the contributions of the other chapters selected for this Design for Interaction section of the book.

R. Hernández-Ramírez (✉) · T. Behrens

UNIDCOM/IADE - Unidade de Investigação em Design e Comunicação, IADE - Faculdade de Design, Tecnologia e Comunicação, Universidade Europeia, Avenida D. Carlos I, 4, 1200-649 Lisbon, Portugal

e-mail: rodrigo.ramirez@universidadeeuropeia.pt

T. Behrens

e-mail: thomas.behrens@universidadeeuropeia.pt

L. Jakobsonė

Art Academy of Latvia, Kalpaka blvd. 13, Riga 1050, Latvia

e-mail: liene.jakobson@lma.lv

T. Chambel

LASIGE, Faculty of Sciences, University of Lisbon, 1749-016 Lisbon, Portugal

e-mail: mtchambel@ciencias.ulisboa.pt

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1 Introduction

Over the last decades, our world has been steadily populated by a growing number of artificially alive (“a-live”) objects with varying degrees of autonomy, ranging from programmable vacuums and smart thermostats to virtual assistants—e.g., “Alexa” or “Siri”. Each year, these smart devices seem to become better at guessing and responding to our needs, offering pleasurable experiences, and making us more willing to trust them. These smart objects (including mobile phones) perform as well as they do, not because they are “intelligent”, but due to the expansion of mobile communication systems based on satellites, cell sites, and WiFi hotspots, coupled with ever-increasing computing power has made our physical environment more friendly towards them. More humans online, faster and more efficient computing, more sensors communicating with each other, more RFID tags, and more actuators mean more opportunities for collecting data about every aspect of human behaviour [4]. This accumulation of data has enabled otherwise purely syntactical—and therefore semantically incompetent—systems to be considered “smart”. Data processing is the backbone of this ubiquitous computing.

The main idea driving this wave of automation is the belief that technologies work best when they recede to the background of our experience [18] and that we should take advantage of current developments in computation to enliven everyday objects. Seen in this way, ubiquitous computing is portrayed as a form of “enchantment”. As such, technology could offer information, entertainment or help people accomplish specific tasks, but all while getting out of people’s way, behaving unobtrusively, without forcing them to think about what they are doing. Enchantment relies on aesthetics, playfulness and people’s affective responses to turn smart devices into “partners in ubiquitous meaning-making” ([10], p. 738) for people.

Such an understanding of ubiquitous smart technology is not without criticism. The notion of enchantment is arguably underpinned by a “magical” portrayal of technological design that prevents users from confronting potentially unsettling questions about their devices [17]. Issues such as the type of labour involved (ethical or exploitative?); the provenance of the materials (do they come from conflict zones? Are they ethically produced?); fabrication and disposal (are they environmentally friendly?); and privacy (user’s data is sold to third parties?) are eschewed.

“Magical thinking” combined with technological efficiency prevents users from pondering the negative consequences that technologies might bring. The more users regard technology in magical terms, the more they ignore the complexities of the underlying infrastructure enabling their devices. Magical thinking also eschews many of the constraints and frictions imposed by real life, ignoring that they exist for some reason and may have a purpose.

A common trend in ubiquitous computing seeks to make everyday human movement more fluid by automating physical barriers. For example, smart door locks at homes or offices that automatically open as users approach thanks to either biometric information (e.g., digital print) or an RFID tag. Some solutions even have suggested enhancing these door-locks with long-distance geo-location and predictive algorithms that can anticipate the time a given person might be likely to approach the door. The problem, however, is that all of these functionalities would require vast amounts of data about users, information that would otherwise remain hidden or would only be accessible through conversation or keen observation. Thus, by removing the friction of opening a door, ubiquitous computing would also have to remove the frictions that enable critical human dynamics.

This frictionless, utilitarian understanding of technologies not only brings an arguably false sense of augmented agency but also eschews three crucial problems:

1. that technologies are not simply extensions of human capacities, but are also phenomenological mediators which influence human experience;
2. that in order to predict users' needs, technologies, need to spy on users;
3. that what is often perceived as prediction is, in fact, induction of needs or actions.

The latter case is when an application encourages the user to do a certain thing, she had not thought about doing, such as buying a coffee cup as suggested by the iPhone's "time and location" function.

Moreover, consumer-level ubiquitous computing does not merely work out of the box. For example, most services require a smartphone, to accept the terms of service, manage preferences and updates, and program and monitor the devices' behaviour. To properly function, these devices presuppose that all the systems in the network in which they are embedded can exchange data. In reality, the implied seamless interoperability is difficult to achieve for both commercial and technical reasons (patents or petty cooperative rivalry). Consequently, there is no universal standard governing how different devices should communicate over a network. Thus, even the simplest device will enter an ecosystem of "balkanised" operating systems, software protocols, versions, frameworks, packages, and dependencies [7], all of which contribute to making the system more vulnerable to errors and third-party attacks. These vulnerabilities expose users to various undesirable situations, threatening their privacy and forcing them to deal with complications, such as component obsolescence, bugs, and unsafe data handling that cannot be avoided as ubiquitous computing systems continue to grow in complexity.

Despite these shortcomings, technocentric biases continue to thrive, mainly because "perfection, prediction and seamlessness" as the central (and sometimes only) goals behind technological design [2]. The problem, however, is that the promises of seamless, flawless technological advances never come, and, instead, end-users are left to deal with the unforeseen social and economic consequences of these technologies. Moreover, most of these consumer devices are now developed following some version of Human-centered Design approach (HCD) to User Experience (or at least developers claim to do so). While these methodologies are right to put users' needs at the centre of their concerns, HCD still tacitly argues that

technologies should be “ready-to-hand” (to use a Heideggerian term) and disappear from users’ consciousness to better perform their role. Hence, devices should blend into the background, appearing almost unnoticed as quiet servants whenever needed. This view is problematic because it perpetuates a utilitarian understanding of our relationship with human and non-human agents and because it lacks an explicit ethical stance.

From a methodological standpoint, HCD should be one of the best means to keep the consequences of poorly implemented automation at bay. However, to do so, HCD cannot continue to be a mere epistemic facilitator—i.e., a means to make the complexities of technological systems understandable. HCD needs more than being empathic towards the user; it needs to assume a clear ethical stance towards technological development and, arguably, the courage to enforce that stance. Designers should learn to say “no” and ask “why” when dealing with ubiquitous computing; they should question whether specific processes require to be automated and whether interfaces should be hidden for the sake of making technologies delightful. Designers should critically examine the role technologies play in our lives and ask what types of new relations we want to establish with our devices. Ultimately, designers should ask what our human project for the future is and what role a humanistic design approach should play in it.

2 Design for Technology and Digital Interactions

HCD advocates take human–technology relations for granted, that is, that interfaces should be “ready-to-hand”, as well as epistemic facilitators, but, as we saw earlier, this often requires invasive and privacy-threatening compromises. Consequently, as our dependency on smart devices increases, so do the chances that they end up calling the shots, distorting and constraining our behaviour and our physical and conceptual environments to further accommodate us to them instead of the other way around [4]. The danger is that instead of establishing healthy dialectic relationships, we end up adapting to their “needs” only “because that is the best, or sometimes the only, way to make things work” ([4], pp. 252–253). Designers should, therefore, always consider what would be the actual role a given technology is going to play in peoples’ lives.

Regardless of these concerns, however, from the point of view of the user, there is undoubtedly an experiential benefit from disappearing interfaces, as we can see in the chapter, “A Semiotic and Usability Analysis of Diegetic UI: Metro—Last Light”, where Doval, Almeida, and Nesi discuss how integrating the user interface into game’s art & narrative (a diegetic interface) can increase the feeling of immersion and thus provide a more pleasurable game-play experience. Furthermore, immersion can also serve a methodological purpose, as Fransreb et al. show, while exploring the potential of VR for carrying out UX research, though there is open debate concerning the scalability of the results. Thus, it is necessary to carry out more

research and perhaps bring a deeper and broader understanding of users' interaction with technology.

Furthermore, when the mediation capacities of technologies are not only accounted for but also positively used, as Seçil Uğur Yavuz shows in "MASAL: Bridging between two cultures through storytelling with an interactive e-textile toy", designers make the enhancement of the relationship between humans the explicit end-goal of technological systems. Thus, here is a case in which the interface is not something that disappears but visibly mediates human relations. These chapters show the emergence of new design frameworks which, through creative speculation, challenge the dominance of HCD and show the need to reevaluate the tenets of this methodology.

3 Design for Self-reflection, Imagination and Disruption

The rapid technological development that has taken place during the previous century has enabled significant progress and improved the living conditions in certain parts of the world considerably. However, due to corporate interests, poor management, or even lack of awareness, this progress has also resulted in severe damage to the environment and deterioration of the lives of those less privileged. Furthermore, design has been too much focused on plain problem-solving innovation as its primary goal, forgetting that "innovation, as a concept, does not embed any social and ecological value sets, nor does the 'design thinking' approach to problem solving" ([1], p. 6). Even the 'human-centered' aspect of design often remains on a level of physical and emotional satisfaction of the user, without acknowledging any ethical considerations the product might require, not to mention the disregard of indirectly affecting also the non-humans.

In his chapter, "Design Delight: An Experiential Quality Framework", Omar Sosa-Tzec decodes and analyses design products' experiential qualities, which cause a sensation of delight. As he notes, until recently, this has primarily been a matter of concern for marketing researchers and practitioners, as they have realised that satisfying customers' needs were insufficient to persuade them to buy something. At the same time, it is widely acknowledged that design has historically been, and still is, employed as a powerful tool for marketing. The effect is not achieved by improving products' functionality, nor by making them more ecologically and socially responsible. If previously it was about the looks and trends, then now it is all about the experiences, and delight is among the most pleasurable ones. Sosa-Tzec describes how delight can be created through design, or in other words, what emotions a design product needs to provoke in its user in order to be perceived as delightful. However, the most crucial issue considering the current state of affairs is the purpose of causing delight. Apart from the most evident and historically accustomed reason—marketing—it can also become part of a larger-scale solution to consumerism. Sosa-Tzec remarks that delight, as a positive emotion, might have the power of altering

our thinking and actions. Nevertheless, he also urges the designers to adopt a critical perspective and become ethically aware when pursuing “design delight”, as this concept rejects thoughtless deployment of products and consumerism.

Luckily, he is not the only one calling for an ethical stance. In the past decades, we have witnessed an emergence of various attempts to question the very basis of design and its tradition, which has for so long contributed to the global environmental and social issues we are currently facing.

Tackling not only technologies but all sorts of design products, one of the most established results of such endeavours is the Critical and Speculative design approach, which has been gaining design community’s attention since the 1990s. It is intended to address both designers and society and aims to challenge narrow assumptions and preconceptions and disrupt the status quo. By use of fictional and provocative design proposals in the form of objects and their use scenarios (often depicted in photographs and videos), Critical designers attempt to raise awareness, expose bias and provoke discussions on the role that products play in everyday life ([16], p. 94).

Another approach conceived with a similar intention is to seek ways in which design can contribute to a systemic disruption of the status quo and aim at a different “design culture” ([12], p. 58), originated in the 2010s and is known as the Transition design. It acknowledges that we live in transitional times and is based on the premise that there is a “need for societal transitions to more sustainable futures and the belief that design has a key role to play in these transitions” [9]. Similarly, advocates of this design approach are convinced that the whole society, including designers, needs to reconsider its expectations and assumptions and set new goals accordingly to achieve the necessary change. They urge designers to revise their mindsets and adopt a new paradigm in design to discontinue the ongoing “defuturing” ([5], p. IX).

The two approaches described above have things in common. They pose a strong emphasis on the future, along with an invitation to deliberately shape it according to our needs, rejecting the conformist attitude, re-learning to dream again, and setting goals that serve society instead of the industry. Both approaches also have an awareness-raising ambition and emancipatory goals, as they offer space for disciplinary and individual self-reflection ([13], pp. 389–395), which should result in a humbler and more inclusive mindset, that accepts all kinds of human ‘strangeness’ as well.

Also, the Disruptive Design Method [1], central to the discourse of Cristina Carmelo Gomes’s chapter, “Smart Urban environments,” is based on similar premises and aims at similar goals: challenging the status-quo, emphasising social and ecological values, and overcoming one’s own bias. Gomes discusses the arguable success of transforming Lisbon into a smart city—a process in which, according to her, the city’s peripheries have not undergone sufficient improvement of their public urban environments.

This is partly because the traditional city planning processes are complex and slow; hence they often deliver obsolete results already at the moment of implementation. Nevertheless, their methods are outdated—they replicate the existing organisational models, which are inherently unsustainable. They aim at technological innovation,

which solves practical problems, but unfortunately does not tackle the social and ethical issues: neither the historically rooted nor the ones caused by this innovation.

Active citizen involvement in the form of co-design and participative processes is needed to gain insights and confront the users with the multitude of options and activate their imagination. New design methods, such as the above described, are very welcome as well, as change towards the sustainable, human and livable future “will not occur of itself; it can only occur by design” ([6], p. 45).

4 Ethical Technology and the Question of Trust

The chapter “Age Ratings for Tabletop Games’ Usage in Brazil—analysis and suggestion of new criteria” by João Léste and Claudia Mont’Alvão, formulated the research question:

Are age indications in tabletop games adequate to children’s abilities and limitations? Moreover, how will children deal with the frustration of not accomplishing a game’s objective?

The authors hypothesise that current tabletop games publishers do not follow adequate cognitive-oriented criteria and, therefore, the game’s age rating is not adequate for children’s learning and development skills.

When we purchase a tabletop game for children, we usually trust the recommended age restrictions, but what exactly is that trust based on? Chemistry sets and science kits have a long history of causing accidents, so what parameters will consumers look for before trusting a specific product? The question of trust can be extended to all interactions between humans and artefacts, but from a certain age onwards, learning and development skills are no longer tied to a specific age.

In a growing trend, companies realise that every aspect of their organisation disrupted by technology represents an opportunity to gain or lose trust. They approach trust *not as a compliance or public relations issue* but as a business-critical goal to be pursued.

Historically, scholars have viewed distrust and trust as opposite ends of the same theoretical construct or as functional equivalents. More recently, scholars have begun to identify them as theoretically different constructs [8, 14], defining distrust as “confident negative expectations regarding another’s conduct” ([11]: 439). Researchers note that human perceptions are multi-dimensional; trust and distrust can, and do, coexist simultaneously [11]. “Trust and distrust are contraries, not contradictories. To say that it is not the case that one trusts another person is not to say that one distrusts him” [8]. Thus, distrust is not simply an absence of trust [11] but a proactive expectation of harm [3].

Seen from this perspective, trust becomes a full-scale undertaking to ensure that the many dimensions across an organisation’s technology, processes, and people are working in sync to earn and maintain the high levels of trust expected by their many stakeholders. Consumer distrust can be particularly destructive [15], and the

prospect of self-driving cars or health related services, products or policies (so relevant and debated in our current pandemic situation) are but a few examples that trust is a multi-stakeholder design challenge and represents a critical value that sets apart the responsible from the irresponsible and the corrupt, in a world that faces multiple crises. Many questions like the following are circling “ethical technology” and ethical dilemmas when making decisions on how to use disruptive technologies. “In a burning building, how would a robot that has been designed to rescue human beings from the fire have to look and act like, if it was to earn their trust?” “In case there are people of varying age groups, race and gender, whom should the robot rescue first?” The technological focus might be too narrow in this context, and it might become critical for designers to address the question of trust as a critical factor for success.

We need to evaluate what “user needs” mean nowadays, perhaps think from an ecological standpoint and this implies re-thinking (even re-designing) what humanism means in the 21st and coming centuries. Perhaps the shifting nature of the relationship between humans and artefacts via interfaces requires an accompanying adjustment in design practice, where the focus shifts from the output to the outcome. This question, in turn, raises the question of what are the preferred outcomes and who should define them? Are designers professionally equipped to engage the new ethical dilemmas that inevitably accompany the present and future technologies?

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