
HCI for the Real World

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Abstract

HCI as a field comfortably and unquestionably links itself with the corporate world. What does this mean in terms of an ethics of *problem choice*, meaning the considerations that influence what types of design projects HCI researchers consider as important? Using the work of the industrial designer Victor Papanek, I foreground the *agency* of the designer. By undertaking a close reading of a recent publication of a major corporate research lab, I examine what important social and political aspects are missing from their vision of the future. I end by examining the work of the design team Anthony Dunne and Fiona Raby, describing how HCI can be involved in the formation of new forms of subjectivity that are not subservient to a market-based ideology.

Keywords

Design, designer agency, ethics, responsibility, critical design, reflective design, subjectivity

ACM Classification Keywords

K.4.1 Public Policy Issues: Ethics H.5.m Information interfaces and presentation (e.g., HCI): Miscellaneous

... I must agree that the designer bears a respon-

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sibility for the way the products he designs are received at the market place. But this is still a narrow and parochial view. The designer's responsibility must go far beyond these considerations. His social and moral judgment must be brought into place long *before* he begins to design, since he has to make a judgment, an a prior judgment at that, as to whether the products he is asked to design or redesign merit his attention at all. In other words, will his design be on the side of the social good or not [20, p. 66].

Introduction: the absence of ethical discussion

Discussions of design ethics and designer morality are not popular within CHI¹. While there have been a few papers that have discussed ethics within the context of HCI or usability [16, 11, 4, 18, 24], they have tended to focus on questions of informed consent or professionalization, and have been presented in the form of "case studies" without extended theoretical discussion of the underlying principles. Unfortunately and as a result, ethical and moral concerns are often relegated to the final paragraphs of papers under separate headings such as "privacy" or "surveillance", left to fester within the nether-regions as a token acknowledgment of the social complexities of the technical work. Engagement with ethical, moral, and social concerns is left by the wayside in favor of more "technical" contributions. Such an attitude certainly needs to be remedied within HCI, but it is not the direct focus on my paper. Instead, I want to open an alternative space for the discussion of ethics and responsibility, one that

¹The ACM classification tree does not mention the term within the branch for HCI.

brings forward the ethics of *problem choice* and the ways in which institutional affiliations, funding sources, and corporatization of HCI shape the types of problems, solutions, and visions of the future we might have.

I opened with a quote from the industrial designer Victor Papanek whose influential 1971 book, *Design for the Real World: Human Ecology and Social Change*, gives this paper its focus and its titular namesake. Papanek foregrounds the *agency* of the designer, meaning h/er² ability to choose what design projects to focus on, and to make choices that advance social justice and aesthetic experience rather than the needs of the market. It is this clarion call that I wish to sound: I argue that instead of allowing the values of profit (via the intertwining of HCI with the corporate world) to determine what projects HCI explores, we should rather foreground the importance of social justice, the creativity of the individual, and radical social change, using our privileged position(s) within the world to make unequivocal calls first and foremost for the needs of the oppressed.

This paper is thus a performance of *design critique* as well, and one that foregrounds the necessity of different forms of HCI contributions, especially those that do not present a novel technical apparatus but instead critique the state of the field. HCI is developed enough as a field to require sustained critique if it is to be socially relevant in the present century. Valuing alternative forms of CHI contributions is necessary for the advancement of HCI as it continues its tortuous path from the laboratory and office into the "real world".

²I will not correct Papanek's use of gendered language in his quotes, but will use appropriate forms in my own text.

Papanek's View of Design

Victor Papanek was trained as an industrial designer, one who was tasked early on in his career with what he calls "shroud design", meaning the design of the exterior covering of mechanical or electrical devices, what we might call in HCI the "interface". Papanek realized, however, that this type of design, if left slave to the market, left the designer impotent within a wide space of possibility. Design, reasoned Papanek, is fundamental to being human: we design the objects of our world in order to interact with it in certain ways, and the designs that we currently have unfortunately create differential access for various racial-, social-, ethnic-, gender-, and class-based groups. Designed objects—and the very choices of objects to be designed—reflect our underlying political assumptions of what we value in the world, whether it be profit and market penetration, or advancing the needs of those who are marginalized. Papanek saw the power of design to be an active participant within a process of social transformation, one that could transform society for good if used with thought and consideration. Design could not be the solution in and of itself (it is not sufficient), but it could be an integral component of the solution (it is necessary).

Important to this viewpoint, then, is the *agency* of the designer: the ability for h/er to make choices about what design projects to undertake, what design topics to study, what human values to consider and promote. In the quote that opened this paper we find a forceful statement of Papanek's vital question: given a designer and a particular design project, "will his design be on the side of the social good or not" [20, p. 77]? Papanek wants to question what structural elements constrain the designer's choice, meaning how do funding sources, institutional arrangements, and educational configurations influence the way people approach

design problems, and how might these elements be reconfigured to be more appropriate to a project of social emancipation or advancement of individual creativity? Within this milieu Papanek foregrounds the *responsibility* of the designer:

The designer-planner is responsible for nearly all of our products and tools and nearly all of our environmental mistakes. He is responsible either through bad design or by default: by having thrown away his responsible creative abilities, by 'not getting involved,' or by 'muddling through' [20, p. 67].

For Papanek design is always already political, and to ignore this is to be "throw[ing] away" h/er ability to affect the world in a fashion that improves the standards of others. Design, therefore, should not be in the service of the already powerful, limited to a delimited list of pre-existing "choices"; it should focus instead on the "needs" of people rather than "wants" produced by marketing, where "needs" encompasses those slippery qualities informed by inspiration and desire that are not easily subsumable into commodities: "The economic, psychological, spiritual, technological, and intellectual needs of a human being are usually more difficult and less profitable to satisfy than the carefully engineered and manipulated 'wants' inculcated by fad and fashion" [20, p. 32]. What should be clear by now is the underlying critique of capitalism that forms the basis of Papanek's project. By framing design projects within the limited space of profits, design ignores those who need the most help. Modern capitalism, especially within its neoliberal mode, sees everybody as a potential consumer, and HCI professionals within corporations are often tasked to create new products to capture ever more specific segments of the market. This point has recently been raised as a concern by those interested in forms of "sustainable HCI", as certain forms of de-

sign are used as a way of artificially forcing the obsolescence of artifacts [1]. However, the point that Papanek makes is stronger: he is critiquing the very nature of capitalism itself, and the ways in which this promotes a certain style of design that focuses more on the wants of people rather than the needs of the masses (who are more numerous, in a strictly utilitarian sense, than any market within the West and global North). In order to be sensitive to the needs of the majority of the population of the world, the design profession needs to shed its profit motive, a motive that cannot legally place people before profits.

This is where Papanek's design suggestions conflict most strongly with the current configuration of HCI as a field. Industry and academia are comfortably intertwined, with there being little outward concern as to this arrangement. Yet for Papanek this is an untenable situation, and he is especially worried about the effect this has on academia and the education of students. He makes the suggestion that at least 10 percent of an employee's time should be devoted to socially-responsible projects³: "Even if the corporate greed of many design offices makes this kind of design impossible, students should at least be encouraged to work in this manner. For in showing students new areas of engagement, we may set up alternative patterns of thinking about design problems. We may help them to develop the kind of social and moral responsibility that is needed in design" [20, p. 81]. By bringing the world of profits into academia, HCI has taught a generation of students that profit can be put before the concerns of people. School breaks such as summer in the north—the time where academic responsibility is at its least—are often

³Papanek draws here from the Finnish word *kymmenykset*, or tithe, saying that designers should be tasked in "giving 10 per cent of our crop of ideas and talents to the 75 per cent of mankind in need" [20, p. 80]. Note that this is similar to the practice at some technical companies where workers are allowed a certain amount of time to devote to personal projects.

the times when students work as interns within corporations. This arrangement can never adequately address deep-rooted social problems around the world when large numbers of students spend their "free" time on projects in service of a market. As a result of the fiduciary responsibilities of public companies within the United States, corporations have to show a good-faith effort to steadily increase their stock prices or face potential lawsuits from shareholders (most often large institutional funds rather than individuals). Thus by so closely linking HCI with the development of industry, we have unwittingly chosen to bring two diametrically opposed poles into close proximity: corporatism, which exists to increase profits for shareholders, and design, that ideally exists to improve the human condition irrespective of monetary gain.

This is not a new development, as it reflects the increasing corporatization of the academy, at least within the United States. We do not have to look hard for evidence: the naming of internal lab spaces after corporate donors; the funding of more and more of our work by corporate grants; and the focus of curriculum on the needs of employment within the market. Indeed, a number of well-researched books have been written about this over the last few years [10, 22, 23]. For example, the investigative journalist Jennifer Washburn both notes that corporate non-disclosure agreements (NDAs) have interfered with programming assignments in computer science courses [22, pp. 95–96] as well as documents the ways in which universities now structure themselves to create employable technology workers instead of critical citizens [22, pp. 212–215]. Henry Giroux, a well-known cultural theorist and scholar of critical pedagogy, has additionally detailed the ways in which corporate notions of "accountability" and "efficiency" have expelled discussion of ethics, equity, and justice from academic projects and curricula in favor of the instrumentalization of education via the acceptance of industry research funding [9, paragraphs 3.3–3.5]. In an

other text Giroux described how a large computer services company directed the design of a course at a major research university [10]. Amongst all of the details regarding the links between industry and the university, there additionally has been the suggestion that certain types of technology transfer agreements might endanger the non-profit status of universities [2]. With regards to HCI then, and given the field's intimate relationship with corporate research laboratories, we especially need to establish a critical distance and ask ourselves whether this situation enables or disables the types of design practices for which Papanek calls. What types of concerns or approaches are left out when the field is so closely tied to a corporate value system?

What's Missing in 2020

I want to closely examine a recent publication that will illustrate some of my points regarding corporate blindsightedness regarding "real world" technological development. Microsoft Research in 2008 published a document entitled *Being Human: Human-Computer Interaction in the year 2020*, the outcome of a 2007 forum that involved many people well-known to the HCI community [17]. This booklet sets forth a Microsoft vision of HCI for a little over a decade from now, and is influential as a lens into corporate research priorities. To the authors' credit, they do track one of the most prevalent changes within HCI recently, namely the focus on *experience* and the ways that human values are framed within that experience. The authors thus suggest adding another component to the well-known user-centered "study-design-build-evaluate cycle": that of "understand", a stage whereby designers would analyze the values at work within a given problem space. This, they say, would require a multidisciplinary approach (although they still suggest policing the

boundaries between different disciplines, making clear that HCI "undertakes one set of tasks, philosophy another" [17, p. 81]). Yet the "values-based design" that the authors support is paradoxically value-neutral. Throughout the text we can read their equivocal stance, their commentary on the "complexity" of understanding values within technological development. For example, in a section regarding the embedding of health monitoring devices within humans, they ask the following question: "Should the bodily functions of people be allowed to be monitored without their awareness or permission" [17, p. 37]? By asking this question, the authors suggest that autonomy over the body is not a fundamental human right, that instead it might be something that is open to negotiation (and likely linked to differential pricing for health-care services). Nevertheless, the authors are considering a certain type of value orientation with this question, with the caveat that it is decidedly weak and is opposed to generally-accepted human rights formulations found in standard international documents such as the UN Universal Declaration of Human Rights [8].

But more importantly for my argument I want to focus on what is missing within this text, and what the subtext suggests about how these HCI researchers and Microsoft see the future. Nowhere in the booklet are the words "gender", "race", "class", or "ethnicity" found in their normal social justice meanings. This is an almost unfathomable omission, as asymmetric access and experiences with technology are fundamentally related to these key social classifications. It is as if in the year 2020 we will live in a society that is "blind" to these considerations—blind, perhaps in the negative sense, where we ignore the issue under the rubric of "fairness". As an example, the only image of a stereotypical "African" man appears in the context of selling phones alongside the road, with the accompanying note that, in its subtext, lauds the immense market for phones within Africa [17, p. 29]. This

is an example of what the visual studies scholar Lisa Nakamura would link to a discourse regarding “universal access” to technology, and the ways in which such rhetoric erases the complexities and histories of state and corporate marginalization of minorities under a banner of emancipation through technology [19]. Nevertheless, foregrounding issues of gender, race, class, and ethnicity would require focusing on immediate needs, undoubtedly ones that would not easily serve a profit motive. While neoliberal forms of capitalism have done a good job of fragmenting the consumer population into ever-smaller segments partially based on these classifications (the proverbial “long tail”), there comes a point where people are just not willing or not able to pay for certain types of technologies—even if they need those technologies to participate equitably within global technological societies, societies constructed in large part based on the work of HCI researchers. Thus, using Papanek’s view of design, we can ask instead how technologies—and the individual and social infrastructure surrounding them—could be better designed to meet the needs of these people. In terms of pure numbers, we would be focusing on many more people—but those who might not produce any income for the balance sheet.

Additionally, there is no mention within the booklet about the spread of free and libre software, even though one of their images makes reference to a project, *reactTable* [15, 14], whose source code is freely available for download⁴ under the GNU General Public License (GPL). This coalition of movements has been key to the spread of enabling technologies throughout the world, especially within the Global South. However, corporate focus on proprietary, closed-source software has limited the freedom people have to modify it to serve their own needs and requires the payment of license fees, fees that are moving more towards recur-

⁴<http://mtg.upf.es/reactable/?software>

rent, subscription-based systems rather than one-time-only payments. The omission of free software in the *Being Human* text exemplifies a profit-making ideology that is often fundamentally incompatible with certain human freedoms, namely the ability to do with software and hardware whatever is desired and necessary. This is a fundamental human right, as educational and technological development demands the ability to modify computational artifacts for unseen purposes, something that is blocked with proprietary software. This further ties users into a particular, closed system whose purposes are already given—yet whose future cash flow is steady and known. While more and more companies are moving towards open-source software, this is often being done for purposes of cost-savings and “efficiency”, rather than any altruistic or social justice motives, mirroring the discourse surrounding the instrumentalization of education I mentioned before and turning software into a consumable commodity.

Indeed, throughout the text and illustrating images we see examples of how HCI can be leveraged to improve purchasing and consumption experiences [17, pp. 19,23,30,44,48,60,64] through, for example, speed payment technologies or augmented reality access to products via mobile phones. This stance towards the power of HCI is extremely limited, but it is understandable within the constraints of a capitalist framework. My point then is to return to Papanek and ask the question: does looking at HCI from this lens improve the social good or not? And I would answer emphatically no, for all of the reasons mentioned so far. A view of HCI that limits it to the design of devices for purchase or use in purchasing severely curtails the transformative power of design. HCI becomes merely a tool, a tool for diminishing the barriers towards consumption. As a design endeavor, then, HCI is instrumentalized in the service of capital, rather than attending to the difficult-yet-important

psychological and social needs of the many. And by aligning the field with this type of outlook we are implicitly accepting limitations on our creative agency.

An Alternative Form of HCI

I do not have to limit my discussion to the *Being Human* text in order to make my argument, however. On a more judicial level we only have to look at the complicity of some well-known technology corporations in state-sponsored oppression to further understand Papanek's entreaty: for example, AT&T's part in enabling warrantless wiretapping in the United States, Yahoo!'s role in the imprisonment of Chinese journalist Shi Tao⁵, or Google's implementation of content filtering for the Chinese government. Given these examples—and many others—we need to ask whether or not we can respond productively to Papanek within these sorts of social arrangements. With market pressures, relationships with totalitarian regimes, and a legally-bound slave relationship to shareholders, how can we expect corporations to be able to use design as part of the process of social emancipation? And what would be the alternatives? This act of *thinking an alternative* requires a process of reflection [3, 21] that would focus on (as I have been doing in this paper) the designer's role within existing structures of power and h/er latent assumptions regarding (un)conscious values that ultimately become framed through the choices of what design problems to consider. In a broader project, additionally, we would want to critique other aspects of one's role within the academic enterprise beyond the corporate relationships I previously mentioned; for example, the ways in which tenure, publishing requirements, and student training

⁵<http://www.amnestyusa.org/individuals-at-risk/priority-cases/shi-tao/page.do?id=1101243>

does or does not enable a project of social justice within HCI and design programmes.

We can look towards the "critical design" work of Anthony Dunne and Fiona Raby for one example of what an ethically-situated HCI practice might look like [5, 6, 7]. Their work involves creating objects that are based on the "misuse" of technologies as a way of critiquing market-based approaches to design. According to Dunne, by linking itself to the market, "Design is not engaging with the social, cultural, and ethical implications of the technologies it makes so sexy and consumable" [5, p. xi], a remark that dovetails with my arguments regarding the ways in which an HCI focused on consumerism does not and cannot productively engage with important social, ethical, and aesthetic issues. Specifically, in their book documenting the *Placebo Project*, Dunne and Raby write that

The design profession needs to mature and find ways of operating outside the tight constraints of servicing industry. At its worst, product design simply reinforces global capitalist values. It helps to create and maintain desire for new products, ensures obsolescence, encourages dissatisfaction with what we have and merely translates brand values into objects. Design needs to see this for what it is, just one possibility, and develop alternative roles for itself. It needs to establish an intellectual stance of its own, or the design profession is destined to lose all intellectual credibility and be viewed simply as an agent of capitalism [6, p. 59].

For Dunne and Raby this means not only realizing that "a world where shopping has more political impact than voting is a threat to democracy" [6, p. 59], but also that the design

profession needs to “take on a more responsible and proactive role within society” [6, p. 59]. This is more than just designing responsibly; it is realizing how design can be used as a means of “asking questions through objects and stimulating debate in engaging ways” [6, p. 59]. Beyond not only considering the role of design in counteracting consumerism, Dunne and Raby are additionally concerned with how the design of objects can produce new types of psychological and social relationships with the material world, relationships that cannot be reduced to a form of purchasable commodity.

This form of critical design can therefore be seen as working within the ethico-political realm as described by the French philosopher, psychoanalyst, and activist Félix Guattari. In his formulation, technologies are always already linked to the formation of individual and collective subjectivity, or the means of creating orientations and agency within the world. For Guattari, subjectivity is not a fixed concept, but can be changed via paradigms that are more aligned with ethical, aesthetic, and political issues [12]. In terms of HCI, then, we would be interested in projects that not only allow for the autonomous formation of subjectivity by those oppressed via the state and corporations, but additionally projects, such as those of Dunne, Raby, and others, that enable people to express themselves outside of rigid and limiting social structures. These projects would, in Guattari’s words, focus on “an ethical choice in favour of the richness of the possible” [12, p. 29] rather than the confines of market-driven approaches.

Guattari’s view of subjectivity is embedded within his concept of “ecosophy”, or the three ecologies of the mental, social, and environmental worlds [13]. For Guattari focusing on one aspect to the exclusion of the others gives us a skewed concept of the world and what must be done to change it. This viewpoint closely mirrors that of Papanek’s

in important ways: Papanek envisioned a means of design that would not only help us rethink ecological issues, but that would also foster new psychological and social relations. Thus, the ethico-political approach I am advocating for here cannot be seen in terms of component parts such as sustainable HCI (that would focus on bottom-up creation of objects based on renewable resources), reflective design (that would interrogate the designer’s role within broader social structures), or critical design (that would examine the psychosocial relationships between humans and objects). Rather, following Guattari, I would envision an approach within an integrated methodological amalgamation—combining these three named foci, among others—that foregrounds the designer’s agency within this process. While this paper has focused primarily on the social position of the designer within the relationships between HCI and industry, it must parallel the development of a culture of self-critique that will enable the creation of new forms of subjectivity and alternative visions of the future.

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