

HUMAN COMPUTER IDEOLOGY

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ABSTRACT

In this paper we propose a theoretical framework of political interpretation of new media art and interaction. All relevant enough cultural phenomena admit a political interpretation and, therefore, carry a political stance. HCI involves an extensive phenomenological corpus that intersects many areas of knowledge, rendering sensible the need of awareness of some of these political stances. There is not and cannot be either methodology or praxis that is not ideologically contaminated.

INTRODUCTION

The core phenomena in any problem of politics, indeed in any problem concerning humanity, are phenomena that have at their center human minds who animate them and who, in turn, are themselves symbolic or cultural processes occurring in the brain; thus, to understand and explain problems of politics one must understand and explain the relevant symbolic and mental processes, which is to understand and explain human actors' forms of consciousness and motivations.

Liah Greenfeld and Eric Malczewski, 2010. [1]

All art is political, Jonson, otherwise it would just be decoration.
Edward De Vere, Earl of Oxford, on the film *Anonymous*, written by John Orloff. [2]

It is easy to agree that all relevant enough cultural phenomena admit a political interpretation and, therefore, carry a political stance. As we have seen, interaction design involves an extensive phenomenological corpus that intersects many areas of knowledge, which renders sensible the need of awareness of some of these political stances. There is not and cannot be neither methodology nor praxis ideologically uncontaminated. The Ricœurian processes of selection (in Ricœur's words "dissimulation"), legitimization and social integration are unavoidable on the social construction of knowledge. [3]

As it happens with all observable phenomena, the background, the context and the knowledge of the observer have a direct impact on what can be observed and on how the observations will be interpreted. From an engineering point of view, some of the conclusions that appear from media analysis do strike as naive. One example is the very late realization of the prevalence and importance of "the digital" on media manipulation, creation and dissemination. In the same vein, Lev Manovich's famous "laws of new media," while reasonable and important in their systematicity, are not much more than a collection of already well-known characteristics of digital media. [4] As well as HCI requires for both its analysis and practice a multidisciplinary approach (embodied by teams or single persons, what Malina once called "New Leonards") new media art does require a high level of fluency in both the arts and technologies. [5] We propose

that the appropriation of the knowledge behind the involved technologies is the fundamental, defining characteristic of new media art.

In his latest book, *Software takes command*, Manovich anew states the obvious: that software constitutes the central backbone of new media production. In Manovich's words: "There is only software. [...] Software is the central element and theory has not put attention to it. [...] To understand media today we need to understand media software."

There seems to be a distance between media theorists and reality and this late discovery of software as the main actor of "the digital" is surprising. It is hard to tell if this blindness of sorts arises from a misunderstanding of how things are done or if there is an actual lack of theoretical and analytical framework of the "new media." It is not clear if the constructed rhetoric is naive or poor. Media theories need to move over the fascination of the discovery of how media technology is built. Media has to be appropriated from the rhetoric and theory needs to catch up with the practitioners in order to establish a meaningful dialogue. The theoretical discourse should not be constructed from a fascinated alien perspective.

THE IDEOLOGY OF THE BLACK BOX

Flusser's black box theory identifies the need for media appropriation in order to decipher new media productions. In Flusser's words: "The coding happens inside this black box and therefore every critic of the technical image has to be based on that, to reveal the inner life. As long as we are not in possess of this critical view, we remain analphabets." [6]

The notion of "ideology" admits several readings, from the Marxism notion of falsehood that hinders scientific knowledge, to the conceptions of Gramsci and Althusser, "who see ideology as an essential part of human existence, [...] a communally shared set of ideas which people draw on to make sense of their existence." Moreover, ideologies become part of material, individual experiences, constituting an individual's worldview, naturalized as ways of "experiencing the world" and operate as actuators of implicit political stances behind design and implementation choices. [7]

There is a need of analysis of the ideological stances taken by new media artists, HCI practitioners, interaction designers and cultural operators in general. Paraphrasing De Vere in the quote that opened this paper, as with any construction of knowledge, all design is political. In designing how we interact with digital devices, the politicality is evident as designers and organizations sample the world choosing the problems to be solved and their solutions.

It is impossible to think about these decisions without realizing that there is always a political model of reality behind them. In Phoebe Sengers' words: "the proposed 'solution' tends to be understood as technologies that monitor users' behavior and either influence them to make a correct choice, where the correct choice is generally determined by the technology's designer." [7] Friedman and Nissenbaum identify three types of *bias* in computer systems, preexisting, technical and emergent; where a *bias* is the slant, the behavioral concretization of philosophical and political stances. [8] We argue that this bias is unavoidable as it is inherent to any human production. The assumption (both explicit and implicit) of the market – that is, the assumption of "the applicability of market models and economic exchange" is one example of ideological models inserted into cultural practice. This conception of "the market as natural fact" also shows how "traditional HCI discourse obscures political and cultural contexts." [9] In the same sense, there is an underlying agreement under the success (academic, social, economic) of any interactive appliance and of every technical artifact. "Ideological analysis reveals that this problem of framing embodies a series of political commitments about who determines what behaviors are acceptable, how users should relate to the authority of technology and what role technology should play in solving societal problems." [9] To perform any serious political or ideological analysis that reflects any reality, the socio-political context and a characterization or identification of the "societal problems" would have to be integrated. Design decisions are not only a product of the ideological models and interests of the designers ("designers" understood in the broadest sense of the word, including organizations, companies and policies) as they include the social, economical and political contexts where the products are designed, offered and inserted. Even if we do not attempt to provide such analysis for any cultural or design artifact, we hope that the acute conscience of how inevitable it is to apply the sieve of ideology will help us to be vigilant of our own assumptions and in identifying at least some of the ideological and political undercurrents in interaction design and new media art.

Each man, finally, participates in a particular conception of the world, has a conscious line of moral conduct and therefore contributes to sustain a conception of the world or to modify it, that is, to bring into being new modes of thought.

Antonio Gramsci, The prison notebooks. [10]

SOME DESIGN ISSUES

Once we have surrendered our senses and nervous systems to the private manipulation of those who would try to benefit by taking a lease on our eyes and ears and nerves, we don't really have any rights left.

Marshal McLuhan. [11]

The close connection between surveillance/monitoring and assistance/augmentation is one of the key characteristics of the high-tech society.

Lev Manovich. [12]

The digital landscape poses great opportunities and challenges in terms of design and therefore in terms of political design, of ideology. Design has a world transforming potential, for it not only shapes the tools we use to interact with the world but it also shapes our ideas and conceptions about the world itself.

Cartography easily exemplifies this. "From the earliest world maps to Google Earth, cartography has been a vital interface to the world." As we cannot perceive the world directly, the world's virtualizations – maps – are the only way we can observe it. Maps guide our perceptions of what the world is and steer our actions in it. We build our mental representation of the world via maps. Indeed, our understanding of the nature of world is created in function of this interface. However, maps are not (and cannot be) an accurate depiction of the world. Instead they are an "abstract and influential creative practice, rich with the power to engineer political views, religious ideas and even the material world itself." [13]



Fig. 1. Mercator projection. Greenland and Africa are shaded. Greenland's size is of 2.166, while Africa's is of 30.22 million km², almost fourteen times bigger. [15]

One easy example of both maps' power and abstraction is given by the Mercator Projection: the world map most commonly used and the one used by Google Maps, among uncountable others. Indeed, the Mercator projection is the projection used in the world map we use on an everyday basis. [14] However, if we look at figure 1, we can see two shaded areas corresponding to Greenland and Africa. These two areas are represented with similar sizes, yet in reality, Africa is almost fourteen times bigger.

Map design shows the power of interaction design as it builds our reality. The world we inhabit is the fictional result of design consumption. Another example of the relationship between design and reality is provided by the "desire paths." This term, coined by French philosopher Gaston Bachelard shows, as we can see in figure 2, the path that emerges in function of the sustained transit of peasants. Desire paths appear due to a systematic use that directly contradicts the design. Design exists in these two examples' apparent contradiction: it is powerful enough as to change our conception of the world. It is weak enough so as to

be blatantly ignored by its users. In the words of NYU's Clay Shirky, design exists in the tension between arrogance and humility. Arrogance to tell users what they should do, humility to understand that users are experts in their reality.

Arrogance without humility is a recipe for high-concept irrelevance; humility without arrogance guarantees unending mediocrity. Figuring out how to be arrogant and humble at once, figuring out when to watch users and when to ignore them for this particular problem, for these users, today, is the problem of the designer.

Clay Shirky. [16]

These two forces behind design are always present and both encode ideological and political stances. We need to be particularly aware of the inevitable ideology of the perceptual interpretation. The appropriation of human perception and the instantiation of affordances will always encode a certain interpretation of the world, a specific ideological model of reality, creating what we could call *perceptual colonialism*.

A few years ago, a YouTube video showing a little girl of approximately one year old trying to perform multi – touch gestures on a printed magazine went "viral." [17] Even if the conclusions of the video uploader were, in our opinion, plainly wrong, what is interesting resides in the video's popularity. It provides an example of how used we are to the idea that new interaction designs re-shape our everyday experience and re-define normalcy.



Fig. 2. A desire path in the UK. Photo by Kake Pugh, used under a Creative Commons license.

Efforts such as Google Maps are deeply related to Flusser's suggestion that the apparatus of the camera compels the user to take photographs and in a demented encyclopaedism to attempt exhausting the infinity of all possible images. The omnipresent mediation of digital interfaces to the world poses extremely sensitive and delicate relationships of power, with a profound impact in real life. However, it is the delegation of computational processes to powerful, centralized centers that will produce the biggest impact.

For example, according to a report from Navigant Research, in just over two decades, autonomously driven cars (such as Google Car) will account for 75 percent of all light vehicle sales worldwide. In total, Navigant expects 95.4 million autonomous cars to be sold every year by 2035, totaling more cars than are currently built every year. [18] This will deepen the already existing delegation of navigation decisions to automatic systems, creating new modes of interaction with the reality where users are no longer subjects of the interaction, but, instead, its objects. Besides initiating (and eventually monitoring) the execution of the interaction, users would have no active role in its performance.

This entails a clear negotiation of power. For example, if we delegate our navigational decisions within a city to a company (as we often already do by following navigation software's instructions), we would be surrendering economically valuable decisions. What would happen if Google, for example, wants to negotiate with the fact that it can choose whether people would be passing in front of a shopwindow or not? This type of relationship is not new: we always have had mediated relationship with socially shared spaces. For example, it is more expensive to buy a newsstand next to a bus stop than one situated far from everywhere.

On the other hand, this has potentially positive impact: the creation of more efficient cities, where data is democratized, allowing for new narratives in the relationship with the city and for cities that more efficiently regulate themselves and their resources. Contradictory impulses like this are prevalent in our relation with technology, especially in our relation with commercial technological offers. For example, we want online services to learn about our tastes in order to provide customized experiences while at the same time we want our information to be ours alone.

However, it is worth noticing that these constitute almost always social design problems and not technical ones. For example, there are known solutions that offer anonymity and privacy while at the same time allowing for most (if not all) the advantages of personalized services. Similarly, gentrification processes are well known and documented and have been exploited by economic operators for many years (to the systematic disadvantage of the less powerful who find themselves expelled from the cities).

Historically, capitalistic processes do require regulation in order to protect the less powerful. However, under the difficulties that the regulation and comprehension of mixed (virtual / actual) processes have had, it does seem that a great effort of education would be needed in order for governments to be able to develop or update the normative. Especially taking into account that our relationship with shared social space is already being questioned. However, the inherent flexibility and dynamicity of virtualized practices present both an opportunity and a risk factor.

The very concept of public space is to be contested. Nowadays, in Julian Oliver's words, due to the prevalence of advertising and

billboards, we are facing “a new kind of dictatorship that one cannot escape,” that contests whose public space is. The cognitive-perceptual surfaces have been appropriated by companies and we should reclaim the cognitive space. [19]

However, in crisis lies opportunity. As Rogério De Paula notes, People build “spaces of opportunity” wherever and whenever possible. In his own words: “It is critical to understand and appreciate the ways – often taken for granted and overlooked by the research and design communities – in which people, in particular those from low-income groups, exploit opportunities that the environment (social, physical, technological, etc.) offers for any sort of economic growth or business, often informal.” [20] We cannot help but wonder how will capitalism ensure that the socioeconomic divisions will be maintained? The axis subject-object of an interactive procedure is dynamic and dependent on time and context. Therefore, what will be the capitalist arrangement that makes sure that there still are persons-objects, a *conditio sine qua non* for it?

William Gibson's famous dictum *Future Has Arrived – It's Just Not Evenly Distributed Yet* is wrong: the future is evenly distributed: the most common form of Human-Computer Interaction consists on being recorded by a surveillance system. Maldistribution lies in the roles and, sadly, still offers no new insight on well-known and well-established social distribution patterns. Indeed, the relationship with technology is well distributed and in the distribution of roles reside the inequalities. The most common form of HCI is being observed, tagged and recognized by a surveillance system. A passive, objectifying interaction.

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