

Toward a New Design Philosophy: Politics *and* the Aesthetic of “We” Human-and-Technology in Interaction Design

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Abstract. This paper suggests that the relation of politics *and* the aesthetic in interaction design depends on a situated knowledge of how to interact with each other. Its aim is to open a new way to approach interaction design philosophy in the perspective of “We” human-and-technology. As a case, interaction design with BCI stimulates a network of conceptual relations rather than merely perceptions of the visible aspects of singles works. The investigation of relations between politics *and* the aesthetic in interaction design reveals that the instrumental understanding of technology is the colonization by tolerance-tactic.

Keywords: “We” human-and-technology · Collaborative action · Interaction design with BCI · Politics and the aesthetic · Tolerance-tactic · Colonization

1 Introduction

This article suggests the relations of politics and aesthetics in the flexible, mobile, variable collaborations of computational/informational technologies open a new way of being-and-knowing of interaction design in HCI. By linking design, technology and humanity as the understandings of “We” human-and-technology in collaborative actions rooted in interdependent perspective, informational technology recomposes both human identity and technological practices as collaborative fusion between the human and technology. The new identity provoked by such technologies might be called “We” human-and-technology. In this conceptualization of “We” human-and-technology, the coded complexities of informatics technology remixes the axes and dimensions of action between politics and the aesthetic. Prior investigations of the relation of politics and the aesthetic in contemporary interactive design are stuck the binary frame of domination in which “Us” versus “Them” enforces a mutual degradation of the human and technified in thought and action.

This approach is criticized here from two perspectives. First, the real disruption of “We” human-and-technology is a reified inversion by a frame of fantasy, using the tolerance-tactic. Second, the traditional instrumental understanding of technology sees it only as an instrument for colonization, which is a limited appraisal of all that happens in technological praxes.

This study, then, traces a few intriguing, but not yet fully disclosed, relations between technology, design, and politics by exploring how new informatic arts instantiate the

communal, collaborative, and collective agencies of “We” human-and-technology as collective deliberations beyond the stale “I” individual-and-instrument personal domination conventionally attributed to technological rationality. It wants to slip past the binaries, inversions, and fetishism that mere toleration accepts in the colonizing and dehumanizing aspects of instrumental reason. Interaction design in HCI can find difference in domination. These differences then might advance the “friendship” of “We” “human-and-technology” mediations as a metaphor for decolonizing and rehumanizing other relationships typically flattened into the fiendishness of “I” individual-and-instrument domination. To make this transition, one must spin the art of translation another way to glimpse these aesthetic dimensions in the politics of interaction design. Hence, this analysis turns to Marx, Heidegger, and Fanon to rethink how the workings of technical rationality parallel commodification and colonization as well as those of leisure and liberation to ask how this new aesthetic sense of technology might evade dehumanizing forces.

2 The Collaborative Action of “We” Human-and- Technology

Technology reconciles the dimensions of action between politics *and* the aesthetic of interaction design. The relation of politics *and* the aesthetic has been claimed to be a mutual degradation between two opposing points of view. First is a use of aesthetics in politics: how politics has turned to the aesthetic as either a support or an ideological antagonism. Second is a use of politics in aesthetics: how the aesthetic has social and political meaning. Technology undertakes a redefinition of the aesthetic that not only challenges the representational categories into which it has been placed but also redefines the aesthetic in terms of political existence. This challenge proposes a new definition agreeing with both politics *and* the aesthetic. The investigation of relation of politics and the aesthetic is amplified by contemporary interaction design. One of significance quietness of technology based interaction design is that the collaborative action of human and technology becomes artwork itself. When interaction design artwork is constituted by collaborative action of human and technology, there is no distinction between actor and spectator, human and non-human, artist and audience.

Especially, Brain-Computer Collaborative Design expands the collaborative action into a kind of biofeedback. It suggests the brain-signal processing as a new way for collaborative action of human and computer. For example, Racing Car Game uses the design of HCI with BCI (Brain-Computer Interface). This work is constituted by the concentration between human and computer as collaborators. The brain-computer collaborative action changes the car’s velocity; it can improve the attention state; when the collaboration between human and computer gets stronger, the concentration level goes higher. In Racing Car Game, brainwave is the key measure; it represents the concentration as the degree of collaborative action between human and computer. Car’s velocity indicates the concentration level using electroencephalography (EEG). Racing Car Game’s system is designed under BCI 2000 platform. Graphical software visualizes concentration index and hardware module controls the velocity of a racing car. BCI2000 is a general-purpose system for BCI research and development. It can also be

used for data acquisition, stimulus presentation, or brain observation applications. BCI2000 consists of a Signal Acquisition module that acquires brain signals from g. USBamp or g.MOBIIlab+devices. These raw signals are visualized and stored to disk, and submitted to the Signal Processing module. The Signal Processing module extracts signal features and translates them into device commands. Its commands are used by the Applications module to generate collaborative action of human and technology (Fig. 1).

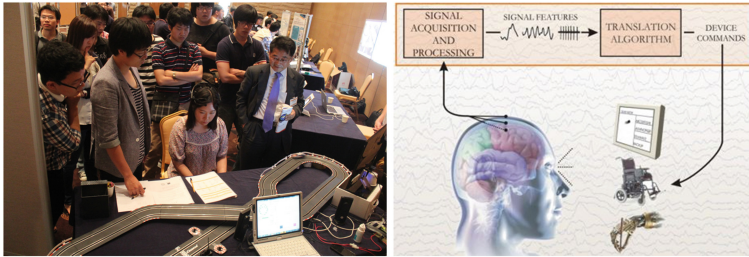


Fig. 1. Racing Car Game and BCI2000 Platform, Picture courtesy of Gerwin Schalk, Wadsworth Center, NY. www.bci2000.org. (Racing Car Game developed by BioComputing Laboratory at GIST, Korea. BCI2000 has been used to replicate or extend current BCI methods in humans, and has recently been used in a number of groundbreaking BCI studies. BCI2000 has been in development since 2000 in a collaborative effort led by the Wadsworth Center. BCI2000 is available free of charge for research purposes to academic and educational institutions.)

The collaborative action through brain activities allows us a new way of interaction design as a communication without physical and visible movement between human and computer. Brain signals create a new aesthetic dimension of interaction designs constituted by the collaborative action of human and technology. Here the interaction design becomes an imagination itself. The aesthetic of brain-computer interaction design considers the collaborative action as knowledge of interaction design. It means that brain-computer collaborative design stimulates a network of conceptual relations rather than merely perceptions of the visible aspects of interaction design. At this point, the aesthetic of interaction design of “We” human-and-technology corresponds on its politics (Fig. 2).



Fig. 2. EPOC and Carrera Slot Car (EPOC is as a 14-channel wireless EEG system developed by Emotiv Systems.)

3 Tolerance-Tactic

The collaborative action of human and technology would function as one diagnostic key for the problem of the supplementary structure of the Western knowledge system rooted in logic of opposition. Instead of drawing a line intended to exclude, technology advocates inclusion, universality, and the plurality of modes of becoming. The question about the relation of politics *and* the aesthetic is then how technology could play a catalytic role for the reframing of knowledge. Especially, technology critiques relations of tolerance in the instrumental knowledge: that is, the binary frame of “Us” versus “Them”.

Wendy Brown notices that instrumental knowledge promotes not the multiplicity, but the “otherness.” As an upside-down image, inversion of instrumental knowledge abets the so-called division of “We” and “They.” Logic of “the absolute and dangerous opposition between us and them” is a cloak veiling “the true nature of the enemy” of knowledge within knowledge [1]. In order to address the problem of inversion in a collaborative action-based context-dependent perspective, she delves into the conception of tolerance only exists in the discourse (utterance) of relationship. As a performing of discourse about relationship, tolerance symptomizes the difference. Tolerance is what distinguishes us from them. It regulates aversion in the name of magnanimity, and works as “a supplement to liberal equality.” The key here is that tolerance becomes a disciplinary strategy. It functions as a tactical instrument of instrumental knowledge: Tolerance-tactic. The tactic of instrumental knowledge is idealization of tolerance, and its aim is to govern the difference itself; it is premised upon and pertains to difference; it is deployed to handle the difference that liberal equality cannot reduce, eliminate, or address.

As a conduit as well as a conduct with the difference, idealization of tolerance underscores the collaboration of human and technology in the binary frame of “Us” versus “Them.” By way of tolerance-tactic, equality of we collaborators presumes sameness. And then tolerance is employed to manage difference between “Them.” The interesting point is not that there are no differences between we humans and technology, but that the tolerance of instrumental knowledge converts these differences into opposites distorting essence of relationship. Tolerance fosters the power originated from mutually degraded positioning; human-subject-thought and technology-object-action, civilization-free-liberal and barbarism-unfree-nonliberal. The power means that in this instrumental knowledge, technology is reduced to a mere tool, a tolerated object in relation to tolerating subject. The live and real collaborative relationship with technology degenerates into a miscegenation, a blasphemy.

4 Colonization

Technology reveals that the instrumental knowledge uses relations of tolerance as a tactic instrument for manipulation of our sensibility. Tolerance-tactic supports the so-called fantasy-frame: the binary of “Us” versus “Them.” According to Frantz Fanon’s exploration, relations of tolerance in instrumental knowledge articulate the compartmentalized colonial system. He notes, “Colonialism is the organization of a Manichaeon world, of a

compartmentalized world [2].” Its first and foremost principle is that “It’s them or us.” The instrumental perspective is “the colonized perspective”: the primitive Manichaeism of the colonizer-“Us” versus “Them.” By the colonist’s powers, the magical and supernatural powers, the relationship of human and technology is reduced to a permanent confrontation at the level of fantasy. Hence, in the colonial context there is no truthful behavior. And good is quite simply what hurts *us* most.

Fanon senses the significance of struggle of human agency in the midst of the agony of oppression of colonialism. And he states, “The colonized world is a world divided in two.” Moreover, it uses the people against the people. The difficulty of decolonization of instrumental knowledge, deconstruction of Manichaeian history of colonialism is that colonization is in the psycho-affective realm (experience), which is neither subjective nor objective, but a place of social and psychic mediation. From this view, he defines that “Colonization or decolonization: it is simply a power struggle. Colonialism is not a machine capable of thinking, a body endowed with reason.” As Fanon’s insight, the collaborative action of human and technology confronts the colonial condition as a process of continued agony rather than a total disappearance. It provides an opportunity to deal with “the colonized’s consciousness.” The analysis bases its diagnostic on psychiatric symptoms of instrumental knowledge.

In order to understand the sensibility of the colonized, the collaborative action of human and technology addresses the collective unconsciousness of the colonized, in particular, through the obsession and symbolic bliss. First of all, psychoanalytically speaking, the colonized is traumatized. The obsession is the essential mental symptom by inversion of instrumental knowledge: colonization. Fanon also emphasizes that the obsession is the most painful legacy we have encountered in the war against the colonist’s power, the instrumental knowledge. According to him, “The subject finds it impossible to explain and defend a given viewpoint. An Antithetical thought process. Anything which is affirmed can be simultaneously denied with the same force.” This is why obsessive personality is the fruit of the psychological warfare used in the service of colonialism.

The collaborative action of human and technology articulates that the obsession is an anxiety disorder or excessive worry of technology. The key here is that it is a product of sufferer’s own mind, not one based in the actual relation (action) with the technology or its experience. The inversion of instrumental knowledge cannot avoid to conflict with the common question about the primary member: here the matter of primary member is that of the colonizing (positioning of subject and object). What the obsession teaches us is that the collaborative action of human and technology would be colonized in the general question that which is primary subject, human or technology? The defining about the primary in relationship, that is, the colonization assumes the relatively degradation: for instance, when humans become the primary subject, technology is degraded as the secondary. The colonized relationship that one serves other does not admit the reciprocity. It does not allow the critical thinking to liberate from bondage the habit and custom and to examine different things. This one-way is the very violent colonization by the inversion of instrumental knowledge. Its aim would be to merely reinforce shame and fear of the colonized.

Jean-Paul Sartre writes that “Colonial violence not only aims at keeping these enslaved men at a respectful distance, it also seeks to dehumanize them. The first

reaction by these oppressed people is to repress this shameful anger that is normally condemned by them and us, but that is the only refuge they have left for their humanity.” The collaborative action of human and technology discerns the collective unconsciousness traversing reality and the Real.¹ The symbolic bliss works as second symptom of colonization (inversion of instrumental perspective) [3].² Borrowing from Freud’s diagnosis, the split in relation to technology is nothing less than what is repressed in the paradoxes of prohibition of incest; it is not possible for a computer to think on the grounds that it is ethically and morally dangerous. The repressed is the discord between the desire of prohibited and impossible relationship of we humans and technology and its guilty conscience (or hostility) [4].

Interestingly, in the repressed, the fantasy-frame of colonized world organizes the symbolic bliss. In other words, what we call reality is constituted by the Real. The Real is traumatic. In order to avoid the confronting with the Real, the fantasy-frame of the colonized world operates the symbolic bliss. The symbolic bliss is “the coming into operation of the symbolic function [5].” It converts the traumatic Real into the reality, “a horrendous discovery” into “a sort of ataraxia.” The colonization of fantasy-frame is constitutive of what we call the reality. Through the exclusion of the Real by the fantasy frame, our reality becomes a model of the symbolic bliss. It implies that the collaborative action of human and technology is an attempt at decolonization. Tribulations and mental disorders by colonial war are the price we pay for our access to reality, and thus the false idea that “technology doesn’t think and act with humans” means that the price for our access to “reality” is also that a colonized something (colonial violence) remains unthought.

References

1. Brown, W.: *Regulating Aversion: Tolerance in the Age of Identity and Empire*, p. 20. Princeton university Press, Princeton (2006)
2. Fanon, F.: *The Wretched of the Earth*, p. 43. Grove Press, New York (2004)
3. Zizek, S.: *From virtual reality to the virtualization of reality*. In: Trend, D. (ed.) *Reading Digital Culture*, p. 18. Blackwell Publishing, Oxford (2001)
4. Cho, H.K., Yoon, J.S.: *Performative art: the politics of doubleness*. *Leonardo* **42**(3), 282–283 (2009). The MIT Press, Cambridge
5. Lacan, J.: *The Seminar of Jacques Lacan, Book II*, p. 168. Cambridge University Press, Cambridge (1988)

¹ The reality and the Real are used in Lacanian notion.

² As early as 1954 Jacques Lacan points out that, “the computer is pragmatic case of symbolic bliss.” See Slavoj Zizek, “From Virtual Reality to the Virtualization of Reality,” in David Trend (ed.) *Reading Digital Culture* (Oxford: Blackwell Publishing, 2001), p. 18.