# Deconstructivist Design within HCI

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**Abstract.** Every HCI artefact reproduces a specific stance towards its users. Influential within the academic sphere is the notion of a *User-Centered-Design* process. However, observing actual design practice renders the assumption of the centrality of users problematic. To this end, the text conducts an exploration of the relationship between discourse within the fields of HCI and architecture. A special focus are the formal expressions of *deconstructivism* within architecture and their potential counterparts within HCI design.

**Keywords:** deconstruction, interdisciplinarity, cultural informatics, critical technical practice

# 1 Introduction

Centrality of users is one of the most prevalent topoi within HCI design and theory. It has been stipulated in the form of a standardised user-centered-design (UCD) process [7] and continues to be an omnipresent point of reference. However, it does not always become clear whose interests get reflected within UCD processes.

At the same time, HCI is in a process of questioning fundamental assumptions embodied within its guiding methodological and theoretical artefacts [12]. By doing this, it responds to a perceived rise in significance attributed to its products. Interactive artefacts continue to permeate social reality. Consequently, the field of HCI has to produce new conceptualisations and theories trying to account for its new responsibilities. At the same time, theorists outside the discipline of HCI call for development of new intellectual agendas and stances towards what is perceived as new qualities of this technological permeation of social processes. In this situation, rethinking strategies embodied within HCI practices and intellectual positions is equipped with a new level of urgency.

We seek to contribute to the discussion process outlined by exploring potential links between architecture and HCI. Specifically, we will discuss possible implications of applying ideas adopted from *deconstructivism* within architecture.

## 2 HCI Self-Images

The discussion will commence by questioning the position of users and humans within the fields of HCI and architecture. This is done in order to provide conceptual distinctions able to designate possible differences and translations between the two fields.

#### 2.1 Humanness

Following its self-descriptions, The Human stands at the center of HCI. After all it gave the discipline its name. Since its inception, the discipline has dealt with questions of the relationships between technological systems and its social other. Initially conceptualised as a cognitive subsystem of sign-manipulating organisational structures, the roles of humans within HCI have diversified over time. Apart from resources, as socio-organic means of production, they have come to be more frequently seen as consumers or as discriminating vendors of their own skills and resources. HCI techniques have since adopted stances of userfriendlyness. Not only the effiency of an organisational system is to be optimised, but products are to be produced that need to stand the test of consumer-scrutiny. HCI now lives in a world, where potential users could say no. At the same time, the organisations conducting HCI have changed in a less radical manner. While it is no longer a single organisation, trying to integrate human operators as processors, users still can be understood as being part of a system. Even if they are consumers, structures creating consumer needs and those that satisfy these can be construed as crucial, sidestepping the figure of autonomous users.

If one accepts that a paradigm change has taken place within HCI, one has to ask how the relationship of humans and computers had to be conceptualised in the past. HCI did evolve in settings of administration and office work, not at sites one would be tempted to identify with 'humanness' as such. Only now has technology become ubiquitous enough that it is perceived as an integral part of virtually every aspect of life. Mobile devices seem to be our most loyal companions, we touch them more often than our lovers or life-partners.

### 2.2 Centrality

As pointed out, HCI discourse organises itself according to a principle of *centrality*. Interestingly, the problem of periphery seldom is put under conceptual scrutiny within the HCI community. The topos of user-centrality is employed in order to distance oneself from positions articulated within the period of classical HCI [12]. Within classical HCI, what appeared to be central were matters of information processing. It thus marked an instance of 'technical talk'.

The encountered gesture is ubiquitous within HCI: Technical problems are not central *anymore*. Does this really designate the main problem, a focus on technology? Or does the perceived ubiquity of technical talk mask yet another underlying dynamic, resisting designation within HCI communities? If deconstruction had anything to contribute might it be not merely questioning centrality of users but also that of technology?

### 3 Architecture

### 3.1 History

The history of computer-science already covers discussions of deconstructive architecture. In their famous debate [4] architects Christopher Alexander and Peter Eisenman discuss the position of deconstruction and formality. Alexander has been extremely influential for design in computer-science both in respect to his early work on mathematically principled form finding [1] as well as with respect to his later writings on patterns [2]. The latter have inspired the design pattern movement within software engineering.

In the aforementioned debate, Eisenman puts forward the view of a building as a formal text. Notions of formality continued and continue to pervade his work, generating interest from researchers within the formal sciences. Our discussion will adopt the conceptual lens of *complexity* in order to provide a perspective allowing for translations into the language of informatics.

### 3.2 Complexity

Ostwald and Vaughan [10] employ the concept of *complexity* in order to inquire into the nature of Eisenman's early buildings. His series of Houses I-VI can be read as effort to produce what he called "pure form" (House VI is shown in figure 1). Eisenman strived to create *non-representational* architecture, structures that cannot be read as function of functionality or context. This is in contrast with systems perspectives, which emphasise the interplay of entities (diagrammatically expressed in figure 2). According to the authors, Eisenman's proclaimed intention of invariant complexity indeed is met. Materialised within the building is no dialogue between system and environment but an instance of what Eisenman calls 'pure form'. They can be read as purely formal entities.

#### 3.3 Alienation

This is in line with a conception of pure technicality: Technical discussions, as Andrew Feenberg points out [5], have a tendency to suppress the context of technological artefacts. Consequently, decontextualisation has been read into the essence of technology. Theory in this respect points towards technology as an alienating aspect of modern life.

Alienation is usually seen as a problem, a worrying feature of modern lifestyles and technological objects occuring in them. Eisenman on the other hand seems to embrace alienation. Formality and decontextualisation are celebrated. His deconstructivist architecture can thus be viewed as continuation of tendencies within modernist architecture. These however emphasised the importance of *function*. Deconstructivist making no longer creates forms that bring about certain functions. Form is seen as independent structure, worth making and reading for its own sake. The design aspect of making thus seems to have been relegated to a secondary position. The made product no longer serves innocent purposes, it



Fig. 1. Eisenman's House VI. Photographic work by Pedro Xing. Image in Public Domain, licensed CC0 1.0.



 ${\bf Fig.~2.}$  Building as system-component and as formal text

tries to resist its usefulness. Eisenman thus anticipates characteristics of electronic products: In an environment where the product does not meet positive needs, it can situate itself as an autonomous entity.

#### 3.4 Inhumanness

Indeed, the topic of inhuman practice is not altogether alien to HCI literature. Dunne provides an account of (In)Human Factors [3]. He thereby criticises notions of design aimed at production of market-oriented forms. His discussion is aimed at thinking an alternative to conceptions of optimalisations of form.

## 4 Deconstructivist HCI

During our discussion of the architecture-deconstructivism problemset, two subjects have kept resurfacing, *centrality* and *alienation*. This section will interpret these subjects as challenges and discuss how they might be addressed designerly, in a strategic manner.

#### 4.1 Decentralisation

Would not decentralisation be a suitable architectural reply to the challenge of user-centeredness? How could it be translated into the language of HCI?

Within the field of IT architecture, distributed systems are a well established field of study. Distributed Systems researchers analyse and build architectures that are dispersed in space and heterogeneous in their construction. This heterogeneity is exhibited both on a technical as well as on an institutional level. In fact, some authors argue that it is indeed administrative complexity that dominates contemporary distributed architectures and thus constitutes the most pressing research challenges. Following these developments, there is a growing body of literature, discussing human-factors in distributed systems [11].

User-experience however is an entity which cannot be directly controlled by means of system design. Distributed architecture does not create a more distributed or decentred experience for users. Indeed on a physiological level, the user as physio-biological entity is a highly distributed system herself. Information processing, immuno-endocrine processes all happen concurrently, while the nervous system exhibits a massive degree of parallelisation.

While the distributed nature of technical internet architecture might not immediately prove to be consequential, social implications prove to be more variegated. Not only does society consist of a heterogeneous array of sites, individuals, institutions, practices. Processes of interaction exhibit a distributed dynamic. If one accepts *attribution* as a constitutive feature of interaction-dynamics, there are no non-distributed processes. Every entity always is decentered, what it is depends on what others attribute to it.

Keeping this in mind, we have to state, that HCI entities always already are distributed.

We revisit the question whether the distributed nature of media creates an awareness of distribution or decenteredness. Is not the opposite true, does not the distributed, ubiquitous nature of contemporary device ecologies contribute to an individualisation of users? They might send messages to technical systems dispersed around the globe. Their communications however appear to be centered more reflexively onto their own person than ever before.

How can these insights be employed in order to create elements on the level of experience relating to distribution? Necessarily such a practice would produce an element of disorientation. This however in itself is insufficient to evoke a sense of distribution or decenteredness.

### 4.2 Deconstructivist HCI Strategies

Has the shift from signal processing to user-centredness to be rethought? Has the 'cultural turn' inside HCI been masking what goes on below the surface logic of postmodern consumer practice?

It would do tremendous injustice to the devices of deconstruction to conclude with a definite answer. It might be tempting to do so, thereby supplying an element of irony. This however, might still prove to be an empty gesture, a mere formal joke, a reflexive manouever limited to the text itself without reference or effect.

We will try to provide a more conventional explanation of Deconstructive HCI (DHCI). Following engineering practices, the text will employ the pedagogical device of bullet-points:

- DHCI could enrich users' experience by alienating them.
- DHCI might allow them to experience alienation collectively.
- Theorists that posit alienation as a defining feature of contempoary society might be tempted to construe this process as an emancipatory one.
- Hereby a transition to positions of enlightenment philosophies becomes possible.

Within this conceptual frame, creation of alienation would not be seen as a problem. It is detrimental to the user-experience in so far, as users would feel 'worse'. If this feeling becomes shared, it could break an isolation felt before.

Deconstructivist HCI is distinct from bad design. While the latter is ubiquitous, both in theory as well as in practice, it does not produce any interesting effects.

It thus adopts a perspective similar to that covered with respect to deconstructivist architecture. The interactive artefact is substituted for the building constructed (as diagrammatically explained by virtue of figure 3).

DHCI allows a user to become a reader of the formal text otherwise hidden beneath the blackbox.

It does so not only in the technical sense of baring the formal 'guts' of materialised formal systems. If it wants to align itself with deconstructivism in its



Fig. 3. interactive artefact: can it be construed in analogy to a building?

critical sense, it has to expose the hidden formal texts that give rise to user positions. These equally are formal. They can be texts on the level of administration or economics, politics or culture.

Deconstruction does not want to optimise a correspondence between form and its cultural environment, it does not want to recontextualise technology. Maybe if one wants to bring deconstructivist strategies to bear they would have to be embedded into a wider array of practices. The concept of design and interface ecologies [8, 9, 6] might reasonably be amended with that of theory ecologies.

# 5 Conclusion

As pointed out, creating effects of alienation could be a powerful ingredient of a strategy of this kind. If we really live in a world were experiences of alienation and individualisation are as ubiquitous as the mobile technologies we use, deconstructivist strategies might still prove useful. By allowing feelings of insignificance and alienation to be experienced jointly they might even contribute to new forms of social awareness.

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