

# Design Thinking: From Individual Thinking Towards a Technohuman Reconfiguration

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**Abstract.** This paper calls ‘design thinking’ a closed tool, and tentatively proposes ‘technohuman reconfiguration’ as a methodological opportunity to visualise the reproductive cycle of making whole and splitting partials, in order to support a moving away from individual thinking towards collaborative courses of action.

## Design as a Closed Tool

‘Design thinking’ has become a successful export of design practice for the purpose of helping organisations innovate (Brown, 2009; Martin, 2009; Verganti, 2009). Design is here (re)presented as a human-centered methodology for the production of technologies. These representations describe design’s function as the synthesising and integrating of different interests and needs – such as technological possibilities and human needs. The ‘nature’ of design work is often described as ‘holistic’, and although design representations differ in detail and focus, they generally describe how design work integrates divergent interests into a “coherent whole” (Lawson & Dorst, 2009, p. 42).

A recently concluded research project with UK designers allows a close-up view on these practices of designerly synthesis and integration. In the close-up view it becomes visible how design work unfolds amid entrenched organisational practices, such as traditional top-down business management practices and difficult-to-access engineering practices. In the navigation of these practices,

designers use the representation of design as a holistic tool and as an innovative way of ordering production activity.

In the research project, DesignerX, a user experience (UX) designer, showed me the design process diagram she had made. Her aim had been to help the organisation change from a “technology-driven” to a “user-centered” one. In the diagram, DesignerX defined specific activities, ordered these into groups, and allocated roles and responsibilities with each activity. She allocated locations to the user-related ‘User Experience’ role (herself) throughout the design process aiming for an even and constant distribution of user-centeredness. In the design process diagram, DesignerX placed the senior engineers (‘Technical lead’) alongside herself in the front tasks such as ‘Scope Definition’ or ‘User Stories Definition’, and so put both, designers and engineers, together in the driving seat. The ‘visual designers’ and ‘developers’ are placed in areas of limited scope, such as ‘Style guide’ and ‘Technical validation’ respectively. Five things are happening in the map:

1. Separate activities are defined and chronologically split into defining activities (‘Discover’, ‘Define’) and implementing activities (‘Design’, ‘Develop’).

2. The (human-centered) design professionals and the (technology-centered) engineers receive the same ‘strength’ representation in the defining part of the process, and thus the activities which come before all other activities.

3. Design professions are split apart (‘UX designer’ versus ‘Visual designer’) and the engineers (‘Technical lead’ versus ‘Developer’). DesignerX explained that ‘Visual designers’ (in contrast to ‘UX designers’) are designers who join the process later, because they are only “working on effects and visual interactions, rather than user/product interactions”.

4. ‘UX designer’ and the ‘Technical lead’ are placed in the defining part of the process, while the ‘Visual designer’ and the ‘Developers’ are in the implementing part of the process, achieving an equal distribution of designers and engineers across the defining and the implementing activities.

5. ‘UX designer’ (DesignerX) is present in almost all activities of the design process. Specific locations are assigned to other roles, and an all-encompassing presence to DesignerX.

Because of design’s representation as a human-centered methodology which can integrate different interests in a holistic process, designers are in the position of devising design process diagrams which are aimed at reordering production processes. Through the integrating of human and technological concerns within the design process, designers simultaneously split ‘human needs’ and ‘technology’ into separate roles and activities, at the same time as making the case for design requiring to integrate these. Through the mapping of design activity, the designers achieve advantageous negotiation positions. They assign locations to others whilst they themselves remain free to appear in all locations,

or what Haraway called “to represent while escaping representation” (1988, p. 581). As Suchman observed in design practice, decontextualized designers are “unlocatable” and thus escape accountability (Suchman, 2002, p. 95). Through this flexible ‘presence’ within design activity, designers (design thinkers) are able to use the human-centered design process as a device of flexible accountability, by shifting accountability between themselves and the human-centeredly ordered design process. Design thinking is thus in danger of becoming another tool for redefining human-centeredness in ways that suit the organisational practices. Several authors before have described how users are constructed within organisational practices, and configured to fit where they most suit the organisations (Oygür, 2017; Wilkie, 2010; Woolgar, 1991).

## Opening Up Design?

It is through the practices of ordering design activity, rather than through the nature of design, that organisational practices are configured as ‘human-centered’ and as ‘integrative’. Design thinking is in danger of becoming a tool of flexible accountability. Suchman (2004) has called for a decentering of the designer through collective prototyping, in order to integrate use within production environments. However, it will prove difficult to open up design without opening up the practice of ordering design activity. Current practices do not leave open the possibility of design as a collaborative and integrative tool. This is unlikely to change through a simple changing of who designers prototype *with*, as long as design processes are ordered and facilitated by design (thinking) practitioners. The ordering of design activity itself needs to be reconceptualised in order to turn design thinking from an export of individual thinking (and flexible tool of accountability), into an openly accessible tool.

Haraway (1991) reminded us with the concept of the cyborg that identity is the work of “mapping our social and bodily reality” (p. 150). The machine is as ‘natural’ or ‘artificial’ as the human body. Suchman (2006) describes the boundaries of who and what we are (humans, machines) as the effects of reconfigurations in situated action. Boundaries are the “more and less durable and contestable” effects of relations (re)producing the “materialization of subjects [and] objects” (p. 286). It is so that design thinking – as the ordering of activity, the continuous splitting and integrating of technology and human needs – can be reconceptualised and opened up as reconfigurations in practice in which technology, humanity, and integrated technohumanity are effects of practice. Seen as reconfigurations-in-action and as effects of action which reproduce each other, they can be negotiated in a collaborative way. ‘Design thinking’ can be reconceptualised as a programme of technohuman reconfiguration.

Following Suchman and Haraway, the locations within the maps/orders of activities configure who we are and what we do – who we can be and what we can do. Represented as a programme of technohuman reconfiguration, designers are brought into presence within the design activity. Designers begin to speak from locations, alongside everyone else. They become accountable through their location in the collective ordering and action of design.

A mapping of locations within the sociomaterial arrangements of design action can open up design activity to make it collaborative and accountable. In a map of locations, activities such as ‘scope definition’ and ‘usability tests’, or roles such as ‘developer’ and ‘user’, are publically suggested units of negotiation. The negotiation of mapping roles and activities as separate entities (splitting them) and putting them in relation (integrating them) can be collaborative work. This work is not a reconciliation of the ‘natural whole’, but it is making explicit the work of making partials and making whole, in order to become accountable, accessible, and open. Instead of designers (design thinkers) creating design processes, the technohuman reconfiguration takes over the work of mapping locations.

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