



## Design without Designers: Thinking Everyday Design Practice

Jan-Henning Raff & Gavin Melles

To cite this article: Jan-Henning Raff & Gavin Melles (2012) Design without Designers: Thinking Everyday Design Practice, Design Philosophy Papers, 10:1, 23-33

To link to this article: <http://dx.doi.org/10.2752/089279312X13968781797517>



Published online: 29 Apr 2015.



Submit your article to this journal [↗](#)



Article views: 223



View related articles [↗](#)

# Design without Designers

## Thinking Everyday Design Practice

**Jan-Henning Raff and Gavin Melles**

**Jan-Henning Raff** has a background in communication design and has been research assistant at the media centre of Technische Universität Dresden (Germany) where he has built up and headed the department of media design. In his PhD thesis everyday design practices of student learners are explored. Currently he is working at the German Society for Design Theory and Research (DGTF).

**Gavin Melles** holds a Master of Linguistics and a Doctor of Education. He is Head of Interior and Industrial Design at the Faculty of Design, Swinburne University.

The study of users' practices (User-centred Design) and the integration of potential users in the design process (Participatory Design) have become important ways of resourcing design. Still, from a designer's viewpoint, the material practice of users by itself is not acknowledged as design. By catching up with current debates about everyday design we want to establish an understanding of everyday design as a mode of practice. This implies a stress on practice and a move away from false expectations of innovation in everyday design. This paper seeks to enrich the debate by presenting empirical material from studies of everyday design in students' self-regulated learning activities. This focus extends the scope of everyday design from pragmatic action to cognitive activities.

### **The User as Resource in User-centred Design and Participatory Design**

It's been a while since the user was no longer regarded as an appendix of the machine and as a sure source of errors. 'From human factors to human actors'<sup>1</sup> was an

important move towards the user's expectations and needs. User-centred Design gives the user a voice. Also, seemingly random and irrational behaviour – “people simply strike out into the unknown”<sup>2</sup> and “atrocious stories” of deviant users<sup>3</sup> don't put designers off anymore but provide them with important hints. In User-centred Design the user becomes an important *resource* that informs the design process.

Participatory Design goes one step further as it integrates users in the design process. Users become co-designers. Still, designers adhere to the view that “users are not designers”.<sup>4</sup> Users may help to define requirements of a system, but their positive contribution to the very design is questioned.<sup>5</sup> User-centred Design and Participatory Design can be characterized as “*use before use* approaches”<sup>6</sup> that integrate a small fraction of potential future users as a resource to anticipate unknown uses.

As such anticipation cannot be complete, another approach is often applied as complementary: the “*design' after design* approach”.<sup>7</sup> This acknowledges that not all uses of a system can be anticipated during design time. Further, it implies that “workers have to finish the design by making decisions that could not be reliably made by designers *a priori* because the relevant information was not available.”<sup>8</sup> Hence the necessity for a “delegation of design”<sup>9</sup> to the user e.g. by providing “tailorability” of a system.<sup>10</sup> “Meta-design” is considered an appropriate approach: “to accommodate unexpected issues at use time, systems must be ‘under-designed’ at design time.”<sup>11</sup> Needless to say, the delegation of design to users presupposes a certain design competence of the user. While “work-arounds” by users have been denigrated as suboptimal solutions<sup>12</sup> now researchers discover that “adaptation activity is another form of design, the pervasive everyday design that people do for themselves – the most authentic kind of designing.”<sup>13</sup>

We see that the user in User-centred Design and Participatory Design is a resource to inform professional design. Still, the user remains user. When attention shifts from use to adaptive activities of users, she or he becomes a designer who integrates artefacts in local and contingent practice. We now leave the perspective of design questing for successful adaptation of its products, to enable another view on adaptation activities as autonomous design practice: everyday design or design without designers.

### **The Excessive Demand on Everyday Design**

Looking at everyday practice through the category of “use” is insufficient as it fails to account for all activities. Isn't there design too? “We manipulate the environment, the better to serve our needs. We select what items to own, which to have around us. We build, buy, arrange, and restructure: all this is a form of design. ... We are all designers – and have to be.”<sup>14</sup> Some researchers even believe that design is a general ability that is distinguishing

humans from animals.<sup>15</sup> Such democratic views hit professional designers that dismiss such design: “Yes we all choose colours for our walls, or the layout of furniture in our living rooms... Reducing things to such a level trivializes the hard-won and highly developed skills of the professional designer ...”<sup>16</sup> Professional designers miss the skill and innovation in everyday design. It is acknowledged that “design ability is possessed by everyone”<sup>17</sup> but it doesn’t show up often in everyday life as the bigger part is already designed: “Everyone makes decisions about arrangements and combinations of clothes, furniture, *etc* – although in industrial societies it is rare for this to extend to beyond making selections from available goods that have already been designed by someone else.”<sup>18</sup> Accordingly, design without designers doesn’t take place.

This has led some researchers to conclude that the everyday is not about innovation but conservation, hence, people look for “stability and closure”.<sup>19</sup> Everyday design then is about adapting designed artifacts in order to domesticate them. Indeed people stabilize the environment in a process of “mutual fitting”<sup>20</sup> i.e., they accommodate their behaviour to the actual setting and change the setting to better fit their needs. Such stabilized i.e., predictable environments are a precondition for routine behaviour.

Some studies that turn from workplace to domestic settings to tackle challenges of smart homes and sustainability do find creativity in everyday life aiming at such stabilization.<sup>21</sup> Here, “creativity is discussed as resourceful, adaptive, and emergent over time, manifest through actions and routines that appropriate artifacts and our environment leading to unique design situations and systems.”<sup>22</sup> These descriptive accounts of everyday design however tend to maintain a product-centred perspective on everyday design that is commonplace for the designers’ look. Notions like “reuse”, “misuse”, and “non-intentional design” reveal this design perspective.<sup>23</sup> Everyday design is considered an – albeit mostly admired – deviation from professional design.

The theme of deviation from the given is also a recurrent theme of Marxist approaches to everyday life<sup>24</sup> that look for emancipatory potential in the given. Everyday life is seen as the sphere of reproduction of the given and at the same time the sphere for its potential transformation. Any deviant act then is acclaimed as a revolutionary act, e.g., the use of waste material in the household is seen as an act against consumerism. However marginalized such views are today, they live on in the doubtful belief in the power of the critical consumer.

Summing up, we have seen that the concept of everyday design is attractive to account for everyday practice but is also contested by professional design. A product-centred perspective is able to unveil occurrences of everyday creativity but innovation will still miss. If not innovation then emancipation is identified in deviant practice with given designed artifacts. These views demand everyday life to

be the sphere of transgression of the given. All of these views tend to expect a function from everyday design that it can't fulfill.

### **Everyday Design as a Mode of Practice**

We want to depart from the product-centred perspective and any false hopes in an emancipatory potential of everyday design. Instead we emphasise the enabling and structuring functions of everyday design for practices.<sup>25</sup> With practice theory we understand "practices as embodied, materially mediated arrays of human activity centrally organised around shared practical understanding."<sup>26</sup> By adding the concept of everyday design to practice theory we want to clarify the aspect of materially mediated practice. Material mediation is not just learned and accomplished but has to be designed. How does this take place?

In accordance with practice theory we argue that material mediation is not limited to pragmatic action but also extends to "epistemic practices"<sup>27</sup> i.e., cognitive activities may also be mediated by external resources. The concept of material mediation of practices is by no means a discovery of newer practice theory. First and foremost Activity Theory has introduced the concept of tool mediation.<sup>28</sup> Furthermore, the concept of Distributed Cognition deals with the incorporation of external resources in cognitive processes.<sup>29</sup> Studies from the perspective of Distributed Cognition reveal how the environment takes part in a continual interaction with internal representations.<sup>30</sup> "Experts jig their environment"<sup>31</sup> i.e., they exploit the space around them to structure cognitive tasks. Spatial arrangements are made during a task to accomplish this very task. In terms of Activity Theory the redesigned environment is becoming a tool to mediate a cognitive or pragmatic activity. Such tool generation or "instrumental genesis"<sup>32</sup> within an activity we want to conceptualize as everyday design: it enables and structures pragmatic or epistemic practices.

A basic human competence was presupposed for everyday design. Again following practice theory we suggest that this competence is partly embodied i.e., it is related to the nature of the human body. The product-centred view that characterises everyday design as a deviation from expected uses, as misuse, fails to conceive how humans are able to discover and exploit properties of things as useful. One basic explanation is offered by the ecological theory of perception.<sup>33</sup> Accordingly humans are embedded actors in an environment that already suits them. As biological beings humans are adapted to their environment. The environment offers opportunities for humans to act: so-called affordances. Thus part of an everyday design competence can be derived from the direct perception of affordances, from an immediate sense of how things and the environments may be used.

The ecological perspective has its roots in evolutionary biology and from there its persuasive power. Limitations of this approach

to expand to mediated perception have been discussed.<sup>34</sup> Another approach refers to Piaget's theory of cognitive development.<sup>35</sup> Schemes of cognition are at the centre of this concept. While affordances are said to be identified by "direct perception" the scheme-based perspective takes the need for learning into account. Accordingly humans assimilate (reapply) and accommodate (adapt) utilisation schemes on artifacts. A utilization scheme is "an active structure into which past experiences are incorporated and organised, in such a way that it becomes a reference for interpreting new data."<sup>36</sup> Part of an everyday design competence then is the successful reapplication of a utilisation scheme on another object.

So far we have argued for an understanding of everyday design as a mode of practice. Practices are in part enabled and structured by everyday design activities within those practices. These may be of pragmatic or cognitive nature. A basic competence to act as everyday designers may be derived from humans embodied competence to act and learn in the environment. We will now turn to our studies in the field of learning that have been sensitised by these concepts.

### **Everyday Design in Learning Activities**

Our studies focused on the self-regulated learning activities of students in the humanities. We have conducted a series of interviews, observations in student's homes and surveys to obtain thick material about their learning practice.<sup>37</sup> We have examined student's workplaces, the different activities they perform, the different documents they produce, etc. The material was analyzed in the style of Grounded Theory.<sup>38</sup> We have identified four core design processes in student's learning activities: *Designing the environment, being designed, designing oneself, and designing design.*

*Designing the environment* is an ongoing activity when students arrange their workspace to accomplish certain activities. For example, students arrange documents on their desktops to mediate activities such as the elaboration of a text. The spatial layout of documents on the desktop supports attention and offloads memory by making source documents identifiable by their physical appearance. At the same time the spatial layout provides overview. Spatial contiguity thus facilitates the aggregation of new documents. Also, the desktop is a surface on which documents are piled up as reminders or for temporary storage. Inevitably documents begin to wander from the inner zone of the desk (where interactions between documents take place), to the outer zones. Documents with different functions accumulate here, at the margins of the desk. Eventually the transition from the margins of the desk to the floor happens. Students then discover the floor as storage place and also as a surface where different locations of documents can be attributed with meanings: accomplished documents, urgent

documents etc. are localised on the surface. The accidental drop of documents on the floor leads to the discovery of the floor as a surface that mediates information and task management.

This example is very much the prototype of everyday design processes students undergo in their personal learning environments. An activity has a secondary effect which then is discovered as useful. Students become designers when they observe side-effects of their activities and discover its use for other activities. Only then the side-effect is given special attention and may become the object of further refinement. For example, in dense learning phases students use the available surface to spread out material to gain an overview of a knowledge domain. With refinement taking place at every instance of a similar activity such everyday designs may result in stable systems. The accidental and opportunistic nature of the design process and the stability of the resulting routines are key characteristics of everyday design.

Obviously, not all activities offer new opportunities that may be exploited. Often students fail to find solutions for their personal information management. Taming the flow of incoming paper documents is experienced as a chore. When classification of documents is not (yet) possible students fall back to simple piling strategies. Piles of unclassified documents then arise and become inaccessible over time. Such unsystematic piling activities strike back: Students are *being designed* by the material. The inaccessible pile calls for cleaning up and reclassification. Both become more laborious over time. Students fatalistically cope with the inaccessible piles. They rationalise their behaviour by re-evaluating inaccessible piled up material as useless.

So far the objects of everyday design were things, more precisely documents in an available space. Another important object of students' design is their own behaviour, e.g., when students put constraints on their behaviour to concentrate on a learning activity. This is what we call to *design oneself*. Students "clamp" themselves in postures that are not easy to quit e.g., when elaborating a text on the computer. Some students set themselves in motion when practicing for an exam. Although the motion may not be a part of the learning activity it serves to exclude other actions e.g., an absent look out of the window that distracts from learning. To design oneself thus means the inclusion of one's own body as an object in a material arrangement that is designed to facilitate the accomplishment of an activity.

Everyday design appears to be a phenomenon that casually happens. No plans are made. Opportunities for new uses of objects and environments are taken. When more elaborate activities are required e.g., the aggregation of a text from different sources or the exploration of a new domain of knowledge, such opportunistic behaviour can't succeed. A plan or at least a scaffold for such activities is needed. *Designing design* would be required

e.g., a material structure that enables a student to construct their knowledge. We have found that the dominant mode of text production counters such needs. This mode is characterised as linear, additive, and line-oriented scriptography (or typography when word processors are used). Its inherent generation principle forces the linear and additive development of scriptography on a surface. Only small paragraphs may be pre-structured by indents and gaps. The generative principle requires a high cognitive load for planning. Ways to externalize such planning efforts are not obvious. Instead, the scripto- or typographic generation principle suggests that no external planning is needed rather, that writing is a flowing activity. Students often have trouble developing their own material structures to facilitate such construction activities. A common strategy is to alternate between typography and scriptography e.g., texts are printed out and then revised with handwritten comments and finally typed into the word processor. Such revisions may happen several times to obtain the final document. The constrained overview of the typographic document on the screen is extended by the printed documents. The printed documents serve as surfaces for construction and deconstruction.

More rare is the discovery that beginning with multiple empty documents may be of use for elaborating a text without prior outline. “Collecting” documents are laid out side by side on a surface. Such an arrangement allows the maintenance of the scriptographic (or typographic) generation principle while more loosely filling up the available space for the organization of the text. In this way these collecting documents serve to delegate planning activity. By exploiting the spatial contiguity of the collecting documents students succeed in designing design.

We have shown that everyday design in learning activities creates material arrangements that exploit affordances and constraints of things and the environment. Furthermore the human body takes part as an object in everyday design setting up situations that constrain behaviour. Such arrangements enable, facilitate and structure pragmatic and cognitive activities. Dialectically, students’ behaviour may be designed by their own unsystematic activities resulting in coping behaviour. The latter point emphasises the inconspicuous and random nature of everyday design. Its limitations occur when more complex construction activities are required. Then, embodied skills fail.

## Conclusion

We have come a long way from User-centred Design and Participatory Design to establish the autonomous field of everyday design, a design without designers. We have argued that everyday design is not sufficiently appreciated if discussed in terms of innovation or emancipation. Instead we have stressed its enabling and structuring functions in practices. As such, everyday design



can be conceived as a mode of practice. By providing a grounded theory of everyday design in learning activities we have exemplified this concept. Everyday design creates material arrangements that enable, facilitate, and structure pragmatic and cognitive activities. Things, the environment, and the human body serve as objects of design to create “preferred situations” (H. A. Simon). The emphasis on the material aspects – without engaging in a product-centred perspective – allows the distinguishing of such everyday practice from doing, making, and using.

An important point is that agency in everyday design seems to be distributed between human and non-human actors. This adds an interesting perspective to our title “design without designers”, because the designing actor often is difficult to identify. Is it the material that structures behaviour? Is the human actor only following its constraints? Most obviously when being designed the human actor loses part of its agency and materiality is guiding his or her activities. Indeed the opportunistic nature of everyday design reveals how activities are structured by affordances and constraints of materiality. Human actors only discover everyday design solutions as attentive observers of their activities. The findings may result in particularly adjusted and stable systems that are suitable for a specific situation. The accidental nature of everyday design solutions together with their routinised refinement result in their inconspicuous stability.

We have also shown limitations of such practice. While embodied skills provide the subjects with basic competencies to accomplish activities through material arrangements, more complex activities which afford planning are not well supported. Nonetheless subjects have to, and do find ways to appropriate given tools – such as scriptographic and typographic generation principles – to fulfill their planning needs. Given tools with their inscribed generative design principles are “disassembled” to become useful again. Only then do they offer the possibility of engaging in an everyday design process.

So, everyday design is really about the inconspicuous everyday practices relying on “natural” embodied skills and the cumbersome reconfiguration of existing tools. It is clear: everyday design is not professional design – its scopes and goals are different. As such, it is design without designers. But is it really design? We have argued that everyday design is about setting up material structures for activities in the “medium” of materiality. As an inherent part of everyday practice this can only rightfully be described with the terminology of design.

## Notes

1. Liam Bannon, ‘From human factors to human actors’ in *Design at work: cooperative design of computer systems*, eds Joan Greenbaum and Morten Kyng, Hillsdale: Lawrence Erlbaum, 1992, 25–44.

2. John M Carroll and Mary Beth Rosson, 'Paradox of the active user' in *Interfacing Thought: cognitive aspects of human-computer interaction*, ed. John M. Carroll, Cambridge: MIT Press, 1987, p. 82.
3. Steve Woolgar, 'Configuring the user: the case of usability trials' in *A Sociology of Monsters: Essays on Power, Technology, and Domination*, ed. John Law, New York: Routledge, 1991, p. 89.
4. Jakob Nielsen, *Usability engineering*, Boston: Morgan Kaufmann, 1993, p. 12.
5. Sari Kujala, 'User involvement: a review of the benefits and challenges' *Behaviour & Information Technology* 22 (1): 1–16, 2003.
6. Johan Redström, RE:Definitions of Use, *Design Studies* 29 (4): 2008, p. 421.
7. Ibid.
8. Kim J. Vicente, *Cognitive work analysis*, Mahwah: Erlbaum, 1999, p. 126
9. Klaus Krippendorff, *The Semantic Turn*, Boca Raton: CRC Taylor and Francis, 2006, p. 145.
10. Volker Wulf, Volkmar Pipek and Markus Won, 'Component-based tailorability: enabling highly flexible software applications', *International Journal of Human-Computer Studies* 66 (1), 2008: 1–22.
11. G. Fischer, E. Giaccardi, Y. Ye, A.G. Sutcliffe and N. Mehadjiev, 'Meta-design: a manifesto for end-user development' *Commun, ACM* 47 (9), 2004: p. 35.
12. cf. Philip Koopman and Robert R. Hoffman, 'Work-arounds, make-work, and kludges' *IEEE Intelligent Systems* 18 (6), 2003: 70–75.
13. Thomas P. Moran, *Everyday adaptive design*, New York: ACM, 2002, p. 14.
14. Donald A. Norman, *Emotional Design*, New York: Basic Books, 2004, p. 224–225.
15. Harold G. Nelson and Erik Stolterman, *The Design Way*, Englewood Cliffs: Educational Technology Publications, 2003, p. 9.
16. Bill Buxton, *Sketching User Experiences*, San Francisco: Morgan Kaufmann, 2007, p. 95.
17. Nigel Cross, *Designerly Ways of Knowing*, London: Springer, 2006, p. 38.
18. Ibid.
19. cf. Maren Hartmann, 'Everyday life: domesticating the invisible', *Innovating For and By Users*, eds Jo Pierson, Enid Mante-Meijer, Eugène Loos and Bartolomeo Sapio, Luxembourg: Office for Official Publications of the European Communities, 2008, p. 9.
20. Kristian J. Hammond, Timothy M Converse and Joshua W. Grass, 'The stabilization of environments' *Artificial Intelligence* 72 (1–2), 1995: 305–327.

21. Alex S Taylor and Laurel Swan, *Artful systems in the home*, New York: ACM, 2005; Harald Rohrer, *The mutual shaping of design and use*, München: Profil, 2006; Ron Wakkary and Leah Maestri, 'Aspects of everyday design: resourcefulness, adaptation, and emergence' *International Journal of Human-Computer Interaction* 24 (5): 478–491, 2008; Ron Wakkary and Karen Tanenbaum, *A Sustainable Identity: the Creativity of an Everyday Designer*, New York: ACM, 2009.
22. Wakkary and Maestri, 'Aspects of everyday design' p. 478.
23. Uta, Brandes, Sonja, Stich and Miriam Wender, *Design by use*, Basel: Birkhäuser, 2008.
24. Henri Lefebvre, *Kritik des Alltagslebens*, Frankfurt am Main: Fischer, 1987; Michel de Certeau, *The Practice of Everyday Life*, Berkeley: Univ. of California Press, 2002; Pierre Bourdieu, *Outline of a Theory of Practice*, Cambridge: Cambridge Univ. Press, 2008.
25. Jan-Henning Raff and Gavin Melles, 'Everyday design as practice' *Journal of Writing in Creative Practice* 3 (2), 2010: 149–159.
26. Theodore R. Schatzki, 'Introduction: practice theory' in *The Practice Turn in Contemporary Theory*, ed. Theodore R. Schatzki, Karin Knorr Cetina and Eike von Savigny, London: Routledge, 2001, p. 2.
27. Karin Knorr Cetina, 'Objectual practice' in Schatzki et al, *The Practice Turn in Contemporary Theory*, p. 176.
28. A. N. Leontiev, *Activity, Consciousness, and Personality*, Hillsdale: Prentice-Hall, 1978; A. N. Leontiev, *Problems of the Development of the Mind*, Moscow: Progress, 1981; Yrjö Engeström, *Learning by Expanding* Helsinki: Orienta-Konsultit Oy, 1987.
29. Edwin Hutchins, *Cognition in the Wild*, Cambridge: MIT Press, 1995; D. N Perkins, 'Person-plus' in *Distributed Cognitions: Psychological and Educational Considerations*, ed. G. Salomon, Cambridge: Cambridge University Press, 1993, 88–110.
30. Sylvia Scribner, 'Thinking in action: some characteristics of practical thought' in *Practical Intelligence: nature and origins of competence in the everyday world*, ed. Robert J. Sternberg and Richard K. Wagner, Cambridge: Cambridge University Press, 1986, p. 23.
31. David Kirsh, 'The intelligent use of space' *Artificial Intelligence* 73 (1–2), 1995: p. 37.
32. P. Béguin and P. Rabardel, Designing for instrument-mediated activity, *Scandinavian Journal of Information Systems* 12 (1–2), 2000: 173–190.
33. James Jerome Gibson, *The Ecological Approach to Visual Perception*, New York: Psychology Press, 1986.
34. Shaleph O'Neill, *Interactive Media: the semiotics of embodied interaction*, London: Springer, 2008.

35. Jean Piaget and Bärbel Inhelder, *The Psychology of the Child*, New York: Basic Books, 1969.
36. P. Béguin and P. Rabardel, Designing for instrument-mediated activity, *Scandinavian Journal of Information Systems* 12 (1–2), 2000: p. 181.
37. Drawn from PhD thesis of Jan-Henning Raff, 'Learner as Designer – studies on everyday design of learning activities' Technische Universität Dresden (J. Raff, *Lernende als Designer – Untersuchungen zum Alltagsdesign in der Lerntätigkeit*, TUDpress: Dresden, 2012).
38. Juliet M. Corbin and Anselm L. Strauss, *Basics of Qualitative Research*, Sage: Los Angeles, 2008.