"baby" to "adult") and in different colors. And for any of these varieties, several brands may be available. Not all of these differences affect the use of the toothbrush: you may just as effectively use a yellow one as a red one. Yet some differences are relevant: brushing a baby's teeth with a hard adult brush is assumed to damage the baby's newly formed enamel, which makes brushing ineffective in the long run. Thus, there is a practically relevant distinction between toothbrushes as a general *kind*, several *types* of toothbrushes currently available, and individual *token*s bought and used by consumers. The unknown-designer phenomenon is only prominent on the level of (some) artifact kinds; it does not, in general, apply to artifact types. For each type available in stores, its origin is clear: there is a manufacturer who communicates the use plan of this toothbrush-type and who takes responsibility for the rationality of this plan.

Thus, the unknown-designer phenomenon is accounted for in different ways, on different levels: at the level of artifact kinds, its impact is minimized by pointing out the effects of epistemic and evaluative screening-off, which show that designer's intentions are not irrelevant, but just screened off by supplementary sources of evidence. At the level of artifact types and tokens, the phenomenon was argued not to play a large role, designer's and manufacturer's intentions are communicated and they are evaluatively relevant.

4 An Evaluative Conclusion

In this chapter, I have presented the use-plan analysis of artifact use and design. In this use-plan analysis, design crucially involves the construction and communication of a use plan. I have argued that the use-plan analysis is intentionalist: it emphasizes the mental states of designers and users in reconstructing their activities. Furthermore, I have shown how the use-plan analysis can accommodate four aspects of the phenomenology of artifact use and design that, at first glance, appear to ground objections to it: creative use, serendipity, the unread manual, and unknown designers.

Furthermore, I have indicated that the analysis provides a framework for evaluating artifact use and design. As presented here, this framework rests upon three evaluative notions: rationality, properness, and expertise. The central element is practical rationality. Plans can be evaluated in terms of their rationality, and because use and design can be analyzed in terms of plans, the standards of rationality also apply to those actions. The value of rationality is hardly comprehensive, since designing and using are not evaluated just in terms of effectiveness and efficiency; other values, such as safety and durability, have not been addressed in this paper. A value that *was* covered earlier is the notion of (im)proper use. This value cannot be derived from that of rationality: on the use-plan analysis, any use plan that answers to the standards of practical rationality is 'acceptable' in the important sense of being effective and efficient. One can, however, add to the evaluative framework a distinction between professional and non-professional (re-)designing. As described in section 3.1,

this distinction reflects a division of labour that exists in most contemporary societies. Thus, use plans constructed by professional designers are socially and legally privileged over those constructed by non-professional designers although, again, improper use, based on "non-professional" plans, may be highly effective. By adding a third element, one may go beyond treating the division of labour as a brute social fact: one may take professional designers as experts. Yet on the use-plan analysis, their expertise does not primarily concern products, but rather ways of effectively realizing goals. That professional designers are often taken as experts is shown by reliance on their testimony: when asked why they believe that a new car can be used effectively for personal transportation, most people would probably reply that it has been designed for this purpose. Typically, this expertise becomes superfluous after a while: when someone is asked why she believes that her five-year old car can be used effectively for personal transportation, she would probably refer to her own experience in using it rather than to its being designed for transportation purposes. This change in evidence indicates that the relation between designers and users is not merely social, but social-epistemic (Houkes, 2006), and therefore an appropriate topic for further evaluative inquiry.

The evaluative framework presented above is far from complete, but it does contain several notions that are practically relevant and that cannot be found in other philosophical analyses of designing. Therefore, I conclude that the use-plan analysis provides a phenomenologically viable and evaluatively useful account of artifact use and design, in which intentions play a vital role.

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