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Understanding User Motivations and Drawbacks Related to Product Repair

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Contemporary manufacturing systems depend on large quantities of resource and energy use that cannot be sustained with the planet's finite resources. Producing long lasting and purposeful products is essential in order to decrease the rate of consumption and its negative environmental effects (McDonough & Braungart, 2002; Fletcher, 2008). Repair is an effective strategy for extending product lifespan and closing the material loops (Cooper, 2005; Ellen MacArthur Foundation, 2012). Although designing repairable products can be effective, increasing the product lifespan is also dependent upon attitudes and behaviour of consumers (Middleton, 2012; Brook 2012; Lilley, 2007).

The linear "take, make, and dispose" system has been influencing user behaviour over the twentieth century and it has become the common user behaviour to discard products before trying repair as an option (Middleton, 2012). Availability of low-priced products, repairs which are more expensive than buying a new product, planned obsolescence and rapid technological developments are some of the large-scale factors which have caused repair to lose its power on product lifespans (Brook, 2012; Gill & Lopes, 2011; König, 2013). However, it is important for designers to understand the diversity of factors and motivations involved in decisions around repair from the perspective of consumers themselves, in the context of everyday life, to inform developments in design processes and business models towards sustainability.

This paper presents the findings from an exploratory study that looks at current user behaviours and activities and scrutinises motivations and barriers related to product repair. A method based on *cultural probes* (Gaver, Dunne, & Pacenti, 1999) is utilised in order to broadly explore the motivations and drawbacks of users and to inspire them to reflect and report their experiences and concerns about repaired and broken products. Non-professional people who have got broken products, who repaired objects and/or who got objects repaired are selected for this study. A range of motivation and drawback categories are developed in diverse contexts that suggest opportunities to understand and change user behaviour, through design, to reduce their environmental impact. Furthermore, this study serves as a baseline research for future investigations in how to integrate repair into business models and design process in order to extend product lifespan.