

THE PARADOX OF DESIGN METHODS: TOWARDS ALTERNATIVE FUNCTIONS

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ABSTRACT

During the last ten years design has been discussed as a driver for novelty and innovation. Design methods have been applied to challenges ranging from environmental pollution, food to health care and have been used in other disciplines and by people with non-design backgrounds alike. Social Innovation, Design Thinking and Co-Creation are three approaches that are strongly associated with this development. While their borders blur, their toolboxes – the methods they apply - are similar. Sustainability usually requires design methods that enable a participation in the design process of all interested parties. But while typical methods claim to favour multi-disciplinarily, they paradoxically lack emphasis on design knowledge such as communicative and aesthetic qualities. Through an illustrative case in sustainability - a multi-disciplinary team worked on the topic of food waste - this paper discusses the communicative and aesthetic potential of methods for transferring project goals to stakeholders and the wider public. Findings point in the direction of more advanced studies on the significance of core design expertise in multi-disciplinary and co-design oriented contexts.

INTRODUCTION

Since the start of the twenty-first century the focus of design has been moved from approaching a single product or product family to designing systems, processes or services. By looking into design research history we can gain a greater understanding for the steps that led to this remarkably free definition of what design is, where its borders are and what role design can take on to make change happen. The subsequent section will show the development from ‘giving form’ to three dimensional products to designing systems and services. It will explain the connections of this shift to user centred design and its contemporary agents such as Design Thinking, Co-Creation and Social Innovation. I argue that all three of them root in design research histories’ tension between material and conceptual understandings of design agendas. By scrutinising the landscape of current methods’ collections their lack of discourse around challenging group settings is criticised – a dis-balance given the emphasis that is put on the collaborative aspect in all of them. By evidence of a case study on food waste, alternative roles for design methods are introduced as potential solution to this paradox.

TENSION BETWEEN MATERIAL AND CONCEPTUAL APPROACHES

A discussion of appropriate working fields and projects for designers – whether to “give form” (Alexander 1964) or more broadly to think about “what ought to be” (Simon 1969) – informs also today’s discussion on design thinking, social innovation and co-creation. And this discussion is linked to the very beginning of design research with Christopher Alexander publishing his PhD *Notes on the Synthesis of Form* (1964) - the first one in design/architecture. Alexander was convinced by the evidence of bad forms around us that needed re-design but at the same time seemed overwhelmed by the complexity of present design tasks at that time. Seeing a limit to individual designer’s capacity, he suggested turning to more logical fields – computer science was one of them – in order to cope with this intricacy (Alexander 1964). Alexander saw the need for enriching

the design process with further knowledge. Thus he argued for a more 'logical' and less intuitive approach to design, he perceived the sciences as a good partnering (see Alexander, 2002 [1964]:7). Simon, who was publishing in the same period of time, writes in *The Sciences of the Artificial* (1969) that "the natural sciences are concerned with how things are... Design on the other hand is concerned with how things ought to be". This abductive quality of design, to think about the future and place systems, products and services into context, is referred to as innate to the design discipline (see Jones 1970; Fries and Gelting 2014). Unlike Alexander, Simon asserts that a designer's main task is to conceive an aspired status – be it in the form of a product or system is left open.

Donald Schön on the other hand, a philosopher by training, widely anticipated in design research, puts the practice of psychotherapists and designers/architects next to each other, arguing that both reflect in action working with "the materials of the situation" (Schön, 1991 [1983]:78). Schön argues that they approach their problem cases as unique, designing an intervention, thus both disciplines handle information in the very minute it is placed. "In neither example is the problem given.(...) The situation is complex and uncertain, and there is a problem in finding the problem." (Schön, 1991 [1983]:129) His definition of design is deeply rooted in the personal potential and skills of the practitioners which generate solutions in situ. This genius perception of design is very different to today's preferred approaches in Social Innovation or Design Thinking, that map out defined steps and methods in a design process. Nigel Cross' work (1995) neatly ties into this discussion because he coined the term 'designerly ways of knowing' (referring back to Jones 1970) arguing for a distinct knowledge of designers. According to Cross, designers "Produce novel, unexpected solutions, tolerate uncertainty, working with incomplete information, apply imagination and constructive forethought to practical problems and use drawings and other modelling media as means of problem solving." (Cross, 1995:107) Cross tried to articulate how designers' skills differ from other disciplines, ultimately what makes it unique. Unlike Alexander who opted for a positioning of design near to the sciences, Cross' understanding is more self-confident in arguing for a distinct design knowledge.

FROM SOCIAL DESIGN TO CO-CREATION

Until the 1970s, the role of the user has been primarily discussed in social design, for instance in many of Victor Papanek's writings (1971, 1983). The practice of collective creativity is seen as having its roots in participatory design of the 1970ies Northern Europe, where workers were engaged to increase the value of their workplace. Important reads such as Christina Wassons' *Ethnography in the field of design* (2000), discussed the influence of anthropological methods in gaining greater understanding of 'the user'. Looking at

contemporary proponents engaging with people, design thinking, social innovation and co-creation are the main contemporary proponents that are calling for a new role for design as 'change maker' and strongly centre on the participative design modes. The three approaches are introduced in more detail in the following section.

MOVEMENTS FOR CHANGE – INCLUDING MANY

It is difficult to give clear definitions and histories of social innovation, design thinking and co-creation. Kimbell remarks in this respect: "Even on a cursory inspection, just what design thinking is supposed to be is not well understood, either by the public or those who claim to practice it." (Kimbell, 2011:288) The same is true for co-creation and social innovation – all three terms are used alternating and many projects withdraw from a clear classification were they would belong to. Co-Creation, a further development of participatory design is referred to the creative processes of designers and people not trained in design working together in the development process, but this is true to a similar extent for design thinking and social innovation. Described by one of its main proponents Liz Sanders and Pieter Stappers it reads as follows: "the person who will eventually be served through the design process is given the position of 'expert of his/her experience' and plays a large role in knowledge development, idea generation and concept development." (Sanders and Stappers, 2008:12) Sanders and Stappers (2014) increasingly sketch a world that uses design ever more naturally as an everyday tool. Consequently they argue that the role of the designer has shifted from being the author of a certain design to being the facilitator of design processes with many participating actors. They also point to a change in language; designers do not design for 'customers' and 'consumers' but they design with people as their design partners.

The term Design Thinking on the other hand, gained first recognition in the work of Peter Rowe, publishing *Design Thinking* back in 1987. Rowe discusses procedural aspects of designers' modes of operation and problem handling. His analysis of the term Design Thinking is firmly connected to the theoretical discourse of design as a procedural practice where he discusses the nature of the process as directly shaping its outcomes. Although its history is more complex as Lucy Kimbell remarks in *Rethinking Design Thinking: Part I* (2011) she agrees that the current understanding of the term is largely associated to one design consultancy namely IDEO and its CEO Tim Brown. Kimbell argues though that Brown's approach (see publications in 2008, 2011, 2014) covers only one aspect of design thinking which she terms as *Design thinking as an organizational resource*. The other two approaches are associated with *Design thinking as a general theory of design* which discusses design as teaming wicked problems (see also Rittel and Webber 1973). Due to their societal character they are "wicked", meaning that

the definition of the problem is at the same time the solution. As a third way of describing design thinking, Kimbell uses the term *Design thinking as a cognitive style* (see Kimbell, 2011:297). Not only is the management driven discourse of Design Thinking detached from Rowe's earlier notions, its rhetoric remains also clouded about designs' distinct reflective approach to processes (see Schön 1983) and the role of aesthetic literacy (see Tonkinwise 2011 and Johansson et al 2013 for a current critique on Design Thinking) that shall be discussed in this paper as well.

Social Innovation as the third protagonist is regarded as an activity that "has always been and will continue to be a normal component of every possible society." (Manzini, 2014:57) Ezio Manzini a main researcher on social innovation and initiator of the DESIS network, an online source for promoting and documenting social innovation, describes it as a process of transformation based on the recognition of a valid challenge. Through the creative recombination of existing resources and structures these challenges are met in a novel way (see Manzini 2014:60). Argued as being a method that always existed to some extent, initiatives have nevertheless multiplied in today's environment of economic crisis and a widespread recognition for a need towards more sustainable lifestyles.

In summarizing, the opening up of the design process as a formerly specialist procedure towards open steps anybody could follow, has gained interest for its problem solving capabilities (see Nussbaum 2004; Norman and Verganti 2014). Design gained widespread recognition in disciplines such as management studies, public policy and organisational studies. Design so it seems, offers answers to a pressing search for innovation, or as Kimbell remarks "the urgent quest for innovation and novelty has new resources – a creation class who have a privileged place within contemporary capitalism" (Kimbell, 2011:288). Besides design itself these disciplines have since been using iterative processes, mixed teams and design methods as a new blueprint for developing solutions in an array of fields. Remarkably all three movements (Illustration 1) discussed in this section see problem solving, taming societal challenges and innovation as their core purposes – and in all three of them cooperation with people is central. This calls for alternative working modes and consequently we see a shift from 'Methods for Design Experts', to 'Methods for Experts and Stakeholders' towards 'Methods for Change Makers'. Methods need to be able to favour co-creation and enhanced identification with the project goals of all interested parties. With project collaborators changing from traditional makers and technicians towards the wider public, design methods play a central role in terms of group cohesion and sustainable project outcomes.

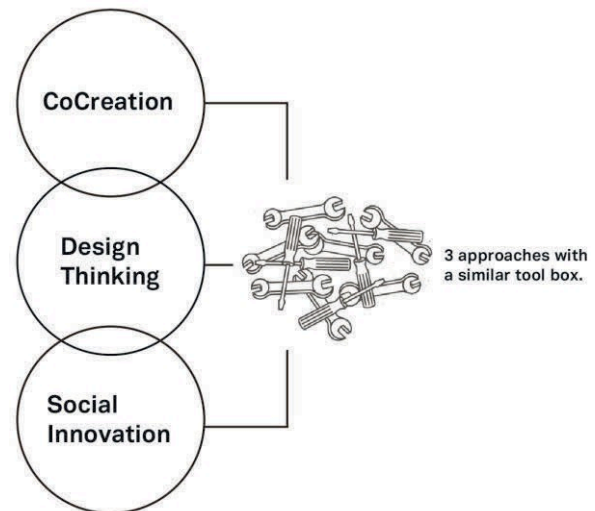


Illustration 1: Approaches in contemporary design sharing their tools.

COOK BOOKS FOR DESIGN: THE CURRENT LIMITS OF DESIGN METHODS

Depending on the project phase and theme, design teams follow a range of steps until the design outcome is defined. Design researchers such as Bella Martin and Bruce Hanington discuss the role and development of design methods and assert that design enriched its processes with methods from other disciplines and adapted methods freely (see Martin and Hanington 2012). In this respect Hanington (2003) distinguishes between traditional methods, for instance interviews, or focus groups, adapted ones such as ethnographic methods and innovative methodologies for example design workshops, visual diaries or velcro modeling (see Hanington 2003:13). Hanington also emphasises the difference between generative research in the early phases of a design project and evaluative research typically positioned as an end-stage component of research (see Hanington 2003:12).

While product designers have traditionally employed research, sketching or model making as core techniques, the move towards social and environmental challenges called for a broadening of a designer's repertoire. Methods that made sure the user's voice is heard and implemented in the design marked a first step; methods that enable the inclusion of many different stakeholders in a design process a second. A move from designing for and by users towards designing with user was aspired for (see Stappers and Sanders 2014). Subsequently the toolbox of designers extended concerning methods that enable knowledge generation together with users. The opening up of design processes towards collective action, called for methods that would be readily available and easily communicated to a wider range of design partners. Cards, books and online resources mark the most well-known formats.

Collections of design methods are typically clustered along themes and suggest their implementation to be well chosen in terms of time frame, resources and the design phase. Usually an image or illustration frames the method, while a 'How to'-description describes the steps for its users.

Designing with people, an online collection of design methods run by the Royal College of Arts' Helen Hamlyn Design Centre starts by suggesting to meet real people and to explore a range of activities of daily living. The collection refers to project examples, which makes it easier to comprehend the method's structure and outcome. It also puts a focus on deciding the right method for the project at hand; quite uniquely this selection includes an approach to ethical research in design, which most other collections miss. Also developed in an educational setting the DSKD methods cards, a collection rooted in Danish design education differs between 'Collaborate', 'Collect', 'Comprehend', 'Conceptualise' and 'Create'. This collection argues that the first section is core to every design team and is therefore at the centre of all design activity; methods in the section 'Collect' and 'Comprehend' enable to generate knowledge about the existing situation, while the latter two generate knowledge about what ought to be. (Fries and Gelting, 2014:4) Whereas these two collections have been developed within an educational framework, the following two root in a corporate setting. The methods cards by design consultancy IDEO are structured in the four categories: Learn, Look, Ask, Try and consist of a front picture and a 'How' and 'Why' description on the backside. This classic card set comes in a digital app-version as well. The card set *75 Tools for Creative Thinking*, has been developed by the Dutch design studio Booreiland and consists of five categories: 'Get started', 'Check around', 'Break it down', 'Break free' and 'Evaluate&Select'. The manual also includes suggestions on how to combine a selection of methods, in a recipe-like manner. In my experience their small size and step by step instructions make them easy to handle and their enable a playful group setting. Sort of an outlaw marks the collection *Oblique strategies: Over one hundred worthwhile dilemmas*. First published in 1975 by Brian Eno and Peter Schmidt they are a forerunner of the card selections we see today. Unlike the other sets they are very minimal in their design containing no visuals such as photos or illustrations. The deck of printed cards comes in a black container box and offers each an aphorism originally intended to help artists to break creative blocks by encouraging lateral thinking¹. Examples of these aphorisms include: 'Use an old idea', 'What to increase? What to reduce?', 'What would your closest friend do?', 'Ask your body'. 'State the problem in words as clearly as possible'.

At the core of methods collections is the claim towards tangible design outcome. Subsequently they promise to support the design team to move forward, overcome

barriers, let them ask the right questions and develop designs to be. Participatory design methods are also associated with a wider range of insights, with empathy (Mattelmäki et al 2014), or alternatively with mental maps for designers (Daalhuizen 2014). Although design methods can inspire new viewpoints and idea generation (see Gelting and Fries, 2014:9) methodical interventions loose strength if detached from everyday material practice. Methods used in a too formulaic fashion are disconnected with the social practice of designing. Another area of critique centres around the conflicts and social interactions between stakeholders and within multi-disciplinary team members that seem suppressed and are given little room in methods collections. There is no guarantee for ideas and good design by following step-by-step methods but there is even less pledge for successful group dynamics. Methods collections smartly introduce a wide variety of approaches but they reveal little about group cohesion and about how to use methods to enhance communication between project members and the wider public. Design literature discusses the potential areas of conflict that may arise from designing with many stakeholders, either in the form of triggers of positive and negative behaviour see Gebauer et al (2013) or in the context of conflicts between companies and consumers in co-creation projects (see Prahalad and Ramaswamy, 2002). By evidence of the author's own experience in multi-disciplinary teams, the knowledge about iterative design processes and the time spans that are necessary to achieve tangible outcome, vary greatly within team members. These potentially additional sources of conflict are underrepresented in the current discussion about open design approaches, this article thus argues: the area of sustainable design could use design methods' communicative values stronger for supporting effective group settings. These concepts will be elaborated and discussed by the following case study in sustainable design.

DESIGN FOR SUSTAINABILITY: NO WASTE BUT I LOVE BROT

A few years ago I was invited to participate in an exhibition titled *Tools for the Design Revolution*^{II}; it asked design teams to work on less traditional design topics. We chose to cooperate with the municipal waste unit and more specifically focused on food waste. Statistics and campaigns are concise in pointing to the huge environmental challenge, with estimated 100 tons of food waste produced by EU households in 2014^{III}. We felt, design ability had to work on creating awareness in an elegant but nevertheless effective way. We chose breaking statistics down to individual people and therefore asked six households to donate their weekly food waste to us (Figure 1). Together with a photographer the material was arranged for a key image that would attract attention in the first place because of its reference to tableaux arts. Only at second sight, rotting food and background information on

consumption and garbage habits would reveal our agenda.



Figure 2: *No Waste*. Key Image for the exhibition contribution to *Tools for the Design Revolution*. Photo Credit: Pia Mayer

We ran out of the 3000 posters produced long before the exhibition has ended and had a lesson learned: design methods can be used powerfully for issues with little glamour but widespread environmental impact. The team used classical design ethnography with interviews and in situ inspection of people's fridges, but it made use of the research in an effective way. Unless the usual practice in design, the data and method have been moved to the core of the project and its findings have been communicated effectively. After this initial project, I was searching for a possibility to work on food waste at an organizational level and conceptualised the project *I Love Brot*.

METHOD

The following sections describe findings from a two year project, initiated to research the combination of methods from diverse disciplines. Product, communication and service design, marketing and sales, life cycle assessment and business consultancy^{iv} have collaborated in an attempt to form one design innovation process. A mid-size bakery chain in Vienna, aiming at reducing food waste formed its case study. Research questions have been: How can team members with unequal knowledge about design, form one coherent process? How can co-creation flourish in a craft context? What is designs' specific knowledge in multi-disciplinary settings? How can design methods support awareness for sustainability? How can the skill of life cycle assessment be integrated into a complex design situation? This paper is grounded on practice-based research or *research through design* (see Frayling 1993) which bases its findings on reflective practitioner records.

CREATING A SHARED MEANING

While the majority of the team members have experienced long-term innovation projects in other contexts, the bakery chain had experience with communication design only. From the onset of the project, constructing a shared meaning through the conception of a brand was therefore deemed essential. The project plan stipulated the creation of a brand and a range of methods with a high visibility. Looking at the diversity of international, national and communal campaigns on food waste^v, the project team opted for a brand focusing on the encouraging aspect of loving bread and food in general. The chosen title *I Love Brot*, promotes the aspect of care for high quality food and is a play with combining the universally understandable *I Love* and the archetypical word for nourishment in German, the word *Brot*. The brand was integrated in the bakery's corporate identity and used for all design methods, in media as well as branding the projects' outcome.

CONNECTING DISTINCT STAKEHOLDER GROUPS

Stakeholders in the company included bakers working night shifts as well as shop personnel working during the day, which made it impossible to use design workshops or the like, which are traditionally part of innovation driven projects. Every stakeholder group was therefore supplied with a distinct set of design methods that would ideally connect them strategically with other groups. One example for this strategy: a variation of the method of cultural probes was chosen to engage with clients of the bakery chain. The main interest lied in learning more about using habits of buying, consuming and storing pastries. The probe created was named *Bread Diary* (Figure 3) and enabled people to document consumption habits over a period of seven days. Since employees and clients should likewise be informed about the newly initiated project the design probes were distributed via sales personnel in the shops. Through this move this main stakeholder group became familiar with the project goals and took over a decisive role. Over the period of several days shop assistants handed out bread diaries and informed about the project; social media and website featured the initiative as well. Assessment of the bread diaries showed that 25% of bought pastries were thrown away, summed up with the chains internal waste rate of 16% this added to 41% of products that are ultimately thrown away.



Figure 3: I Love Brot Branding and Bread Diaries. Photo Credit: Alessia Celetano

VISIBLE SITES FOR MAKING RESEARCH

The concept of marking distinct research sites was extended to the site of the chains' cafés by *Coffee Table Sketching* (Figure 3). This method is an adaption of the World Café^{vi}, a method for fostering large group dialogue. Originally this format consists of small groups sitting around a table, discussing a distinct question for twenty minutes; after this time slot, each member of the group moves to a different new table. Insights from the conversations are shared and documented afterwards in plenum. As a consequence of the different working hours within the bakery chain and a great diversity of customers varying on the chains' locations, we used the flow of café customers during one day as contributors to our questions. Three questions concerning food waste and the project were printed on paper table cloths. The

questions started with the more general “What annoys you most concerning the issue of food waste?”; moving on to the responsibility of the bakery chain by asking “What can the company actually do for less bread and pastries left-overs?”; and finally taking individual accountabilities into account by asking “What can I contribute for less goods at the close of business?”. While customers sipped their coffee or ate their pastry they left answers in the form of notes or drawings (Figure 5) and discussed possible approaches with team members that were present. In a similar mode as the *Bread Diary*, it enabled communication of the project to staff as well as customers and made project aims transparent.



Figure 4: Coffee Table Sketching in the environment of the bakery chain. Photo Credit: Eva Engelbert

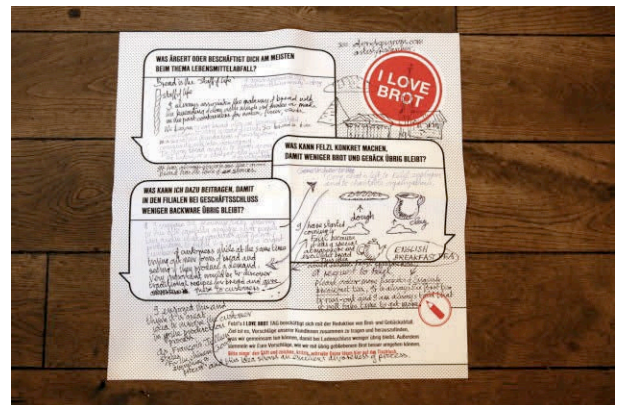


Figure 5: One example of a table cloth. Photo Credit: Eva Engelbert

METHODS FOR CONNECTING ALTERNATIVE FIELDS

By the end of the research phase the team had generated design opportunities in the four main categories ‘Communication’, ‘Culinary’, ‘Distribution’ and ‘Storage’. The project had been running for seven months by then, impatience and worries from the side of the bakery chain increased. The partner raised concerns on extensive time resources without seeing tangible outcome. The team thus opted for prototyping as a means for intermediary results and prove of concept. One promising concept was that of bread crisps produced in different flavours. Bread crisps would be produced from bakery products returned from chain stores in the evenings. By cutting bread into two millimetre thin slices, roasting and grading them up with additional flavours, a new snack could be produced from otherwise wasted food. The second biggest personnel group, the bakers have been approached to produce the prototypes together with the design team.

Unlike testing and prototyping the idea in the cafés of the chain, the team decided for an alternative venue at a contemporary art gallery. 600 packages of bread crisps have been provided for the show; every tester was asked to use one crisp to tell the design team his or her opinion about its taste. Every other week, the analogue bread column was documented visually and put back to zero for another weekly voting cycle.



Figure 6: Booklet with instructions on *Life Statistics* and background info.

The packaging of the snack was combined with a booklet, campaigning food waste and the project as a whole (Figure 6). The 600 packages produced were consumed after week three and the vote therefore came to a natural end. The methods ‘prototyping’ and *Live Statistics* have not been primarily used for delivering rigid, quantitative data but they served as a three dimensional, tangible tool to promote the topic of food waste. By making the process of voting observable, visitors became vividly engaged in topic and project (Figure 7). Additionally this move enabled a connection between craft and an external venue. Widespread media coverage of the live statistics ensured an ease of tensions between the project team and the bakery chain. Three times in a row the column ‘has potential’ gained most votes, based on that the project team initiated a co-operation with food production engineering to develop the product idea into a marketable product.



Figure 7: Prototyping via *Life Statistics* at the art venue.

DISCUSSION

As shown with these four examples, methods can be used to ensure strong group ties between core design team and stakeholders. In this case, methods moved beyond knowledge generation and served a range of additional purposes. Branding created a shared meaning; altered probes connected internal and external stakeholder groups; methods marked visible sites for making research and methods have been used to connect with alternative fields such as art. How do these findings fit with the wider design research discourse?

By way of historical references I have argued in this article that design plays an increasingly stronger role in tackling social, environmental and organizational challenges, which leads to ‘giving form’ to systems and services as well as to three dimensional products. The paper explained that this shift is connected to user centred design and more offensively to approaches with open design processes such as Design Thinking, Co-Creation and Social Innovation. A closer look at these three movements showed that their roots and foundations can be found in design research histories’

tension between material and conceptual understandings of design agendas. By scrutinising the landscape of current tool collections and processes in design their lack of discourse around the challenges in collaborative settings and their too often formulaic usage was criticised. Whereas current writings in design (Manzini 2014; Sanders and Stappers 2014; Fries and Gelting 2014) point to the value of design methods for collective knowledge generation, but there is a lack of research that explores the communication value of design methods. An efficient use of design methods for communicating project goals, can resolve some of the common issues in collaborative design processes for instance varying knowledge about design processes. The methods presented in the case study have been imperative for the success of the project – also for their ideas and concepts they generated by including stakeholders but even more so for their ability of showing progress, informing about the status quo and providing tangible prototypes, connecting stakeholders, media, alternative venues and fields. In this respect I am suggesting a stronger discourse around methods' roles in facilitating group functionality.

Design methods have been democratized and with that the style of sticky notes and data walls. What has been lost along the way of 'quick and dirty' prototyping is the value of an overall research design with a strong visual identification. This case study indicates that the visual and tacit quality of design methods is particularly significant in projects with varying knowledge on design processes and therefore an area in need for further investigation. Methods used in a more 'designerly' way might build on interpretation and reflection in and on action, and through building stronger ties between stakeholder groups they might support critical points in the design process. In this respect design methods liberate themselves from being mere working tools but tangible agents, capable of taking a leading role in sustainable design.

CONCLUSION

While design for sustainability focuses usually on green product development and increasingly on a change of customer behaviour, promoting design methods' role for transferring sustainable design thinking to the wider public is little discussed. This is a paradox given the claim in current design that methods support multi-disciplinary settings. By discussing a range of alternative roles and functions of design methods, this paper argues that they are 'good to communicate with'. This refers to abductive, interventionist qualities of design that should be upheld against formulaic application of methods. It is consequently concluded that a new concentration on design's core knowledge such as aesthetics, communication and tacit literacy is necessary to support group settings and move beyond the current homogeneity of their application.

NOTES

^I See also <https://nancyreijndersmaster.wordpress.com/2012/12/12/oblique-strategies/> for a further discussion of the cards, accessed 15 01 2015

^{II} *Werkzeuge für die Designrevolution* has been curated 2012 by the Institute of Design Research Vienna. A publication followed 2014: <http://www.idrv.org/publications/wfddr/>, accessed 20 January 2015

^{III} Current statistics on food waste across the European Union can be found at http://ec.europa.eu/food/safety/food_waste/index_en.htm, accessed 19 January 2015

^{IV} The project team consisted of the six members Horst Felzl, Thomas Hruschka, Andrea Lunzer, Angie Rattay, Wolfgang Wimmer and was initiated by Kathrina Dankl. The project was supported by the Vienna Business Agency and The Austrian Research Promotion Agency (FFG). It started in January 2013, outcomes have been implemented successfully.

^V The topic of food waste gains prominence worldwide. Resilient data is still rare; Wastage takes place throughout the food chain, starting with the discrepancy between nutritive food quality and accepted trade quality, transport modes that damage food, best before date, choice and availability of food until shop closing times, household consumption habits. As a consequence campaigns have been launched to raise civic awareness for the wider implications of wasted food. The EU has set the goal of cutting food lavishness in half until the year 2025. International initiatives include *Think Eat Save* introduced by the United Nations Environment Programme. FUSIONS (Food Use for Social Innovation by Optimising waste prevention Strategies) brings together 21 partners from 13 European countries collecting and combining knowledge from different national initiatives. National campaigns focus on different aspects of food waste and take cultural context into account: While Germany focuses on saving food with *Zu gut für die Tonne* (translates 'Too precious for the dustbin'), the Chinese food-waste-initiative *Clear the Plate* aims at changing the cultural habit of expressing hospitality via excessive food ordering at restaurants. *Love Food, Hate Waste* is run by the British Non-Profit-Organisation WRAP, focusing on the fact that every food product thrown away implicates the wastage of its production resources, while the Austrian city of Vienna launched *Verputzen statt verschwenden* (translates to Eating instead of Wasting) points to 400 Euro worth of edible food in the trash per household per year.

^{VI} The method is used in organizations and politics likewise. It is only feasible in larger groups from 12

persons onwards and not appropriate for solving clear-cut problems. But based on questions that participants find relevant, it can foster lively conversations and a variety of ideas in relatively short period of time.

LINKS

http://ec.europa.eu/food/safety/food_waste/index_en.htm, accessed 19 January 2015

<http://www.theworldcafe.com/method.html>, accessed 15 January 2015

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