DRS 2018 Design Research Society 2018 Catalyst

University of Limerick
25th–28th June 2018

Good Design-Driven Innovation

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doi: 10.21606/drs.2018.648

Radical innovations are designs that alter the meaning of our life experiences. In order to realize such innovation, a designer needs a vision, a strong personal view on the world. The identity and values of designers however, are often denied in modern design processes. Consequently, (junior) designers have difficulties in connecting with their values and standing for their ideals, especially when designing within a corporate setting. We report a case study that demonstrates how nurturing a designer's personal understanding of 'good design' and integration of this understanding in his work, influences a design-driven innovation project and outcome. Our findings suggest that a designer's principles for good design, enable him to design more in tune with his identity and related ideals. Personal principles for good design empowered the designer's creativity, decision making, process planning, and drive to design and promote the acceptance of a radical idea within a corporate setting. We hope to inspire designers to use personal values and identity for design-driven innovation, and would like to start a discussion with design research and education communities to ponder on how designers can be supported in this journey.

design-driven innovation; good design; principles for good design; designer's identity

1 Introduction

The lecture has ended. Students are walking out of the lecture hall. The lecturer is shutting down the projection system when a student approaches and says the following:

> *Hi, I find the lecture you just gave quite inspiring and feel this way of designing has synergy with how I see design and how I want to design. Would you be interested in collaborating on a graduation project? (G. Dawdy, personal communication, December 5, 2016)*

This is how the collaboration of a MSc graduation project and eventually this paper was initiated. The lecture was on meaningful design, given by the first author as part of a series of lectures in a MSc course at the Industrial Design Engineering Faculty of Delft University of Technology. The student was the second author, back then pondering what MSc graduation project he wants to do

and with whom. The third, fourth, and fifth author, are colleagues of the first author, sharing many research interests. Is this not how successful collaborations come about? First and foremost, from who we are? Second, from what connects us to collaborate on and how we want to contribute to the world?

The purpose of this paper is to express and explore how awareness of a designer's principles for good design can influence and benefit a design-driven innovation project within a professional context. We report a case study that demonstrates how awareness of a designer's personal understanding of 'good design' nurtures creativity, decision making, process planning, and drive to design and promote the acceptance of a radical product concept inside of a corporate setting.

In this world, there are many designers who design through a connection with their life experience, driven by their worldview and conception of what is good. This notion is certainly not new and can be observed throughout the history of design as a practice. Dieter Rams (1976, 2017) for example, proposed 10 principles through which he could judge the quality of his design. William Morris (1883), well known for his textile and wallpaper design, connected his work with a deep appreciation for the medieval crafts and his socialist worldview. Victor Papanek (Papanek & Fuller, 1972) devoted his life to incorporate sustainability and humanist ethics within the culture of design.

How designers work has also been well documented in scholarly works. Nigel Cross (2011) for example, describes how expert designers use their intuition, abductive reasoning, and a deep concern for 'appropriateness' to fuel their ability to be creative and come up with innovative applications in ill-defined situations. In specific, highly innovative solutions seem to occur especially when there is a conflict to be resolved between the designer's own high-level problem goals (their personal commitment) and the criteria for an acceptable solution established by client or other requirements (Cross, 2004; Lawson & Dorst, 2009).

In the recent decade however, human centered design has seen a massive increase in popularity in business, and it could even be considered the status quo of how design is taught at universities. Within human centered design, we find that the designer is expected to meet the role of an administrative actor or process facilitator that helps to identify, understand, and address problems that are found within the world. A designer is then expected to guide its stakeholders through a process that reaches a solution that spans the spaces of human needs, technological feasibility, and business viability through iterative cycles of development and testing (Manzini, 2016, p. 58). The human centered design approach, is however, criticized for leading mostly to incremental forms of innovation; improvements that are made on existing products or problems (Norman & Verganti, 2014).

The radical form of innovation on the contrary, introduces new affordances of use through the introduction of new technology or a change in the aesthetic experience (how we experience a meaningful event) of a product. Radical innovations are game-changing, even disruptive within entire industries. Notably, Verganti (2016) places a big emphasis on the individual, and how radical innovation often results from a strong drive and vision of individuals instead of formal user studies. The potential utility of a radical idea is seldom clear at the start but is still pursued because it deeply resonates with the individual (Baha et al., 2012; Norman & Verganti, 2014; Verganti, 2016).

It is only recently that design researchers have begun to explore the relationship between the personal awareness of a designer's personal values and their ability to bring about meaningful innovation. Van Onselen & Valkenburg (2015) for example, have found an early indication of this relationship and report how a lack of awareness of personal values can block creativity, especially among junior designers.

2 Theoretical Background

2.1 Design-Driven Innovation

Design-Driven Innovation (D-DI) is a concept that finds its origins within innovation management literature but has close links with the work that designers do (Norman & Verganti, 2014). Verganti (2009), states that there are four types of innovation strategies, defined by incremental and/or radical change in technology or in meaning, as the two main dimensions of innovation – Figure 1. In his new book, Overcrowded, Verganti (2016) further explores that more than often, innovation is solely seen as problem solving. However, Verganti argues that radical innovation, which often defines entire new markets, does not start from the notion of evident needs or problems. Instead, individuals pursue seemingly trivial ideas because it deeply resonates with them, they see value in their vision and use an ongoing co-reflective process to bring this vision to the world. The purpose of such a vision is to bring new meaning in the life of others (Baha et al., 2012). Verganti (2016) compares this envisioning of new meaning to the act of making (or choosing) a gift for someone else. It is an act of responsibility, and highly meaningful for the individual, because it concerns something 'they would love others to love'.

Verganti (and others like Krippendorff, 1989, 2005), sees design as a profession that makes sense of things. Moreover, he states that if designers want to achieve radical innovation, they should be concerned more with the meaning of their vision than with user needs. This is because people can find it hard to imagine the value of something new, even when they are in constant search for something new that is meaningful (Verganti, 2009, 2016). Of course, that does not mean that user research has no place in this process, it is still used to incrementally refine the products stemming from a vision for new meaning (Norman & Verganti, 2014). Through criticism, an expanding and reflective dialogue refines the vision towards a product that allows others to see the value of the vision and consume the new meaning, something Verganti calls the 'Inside-Out' process – Figure 2.

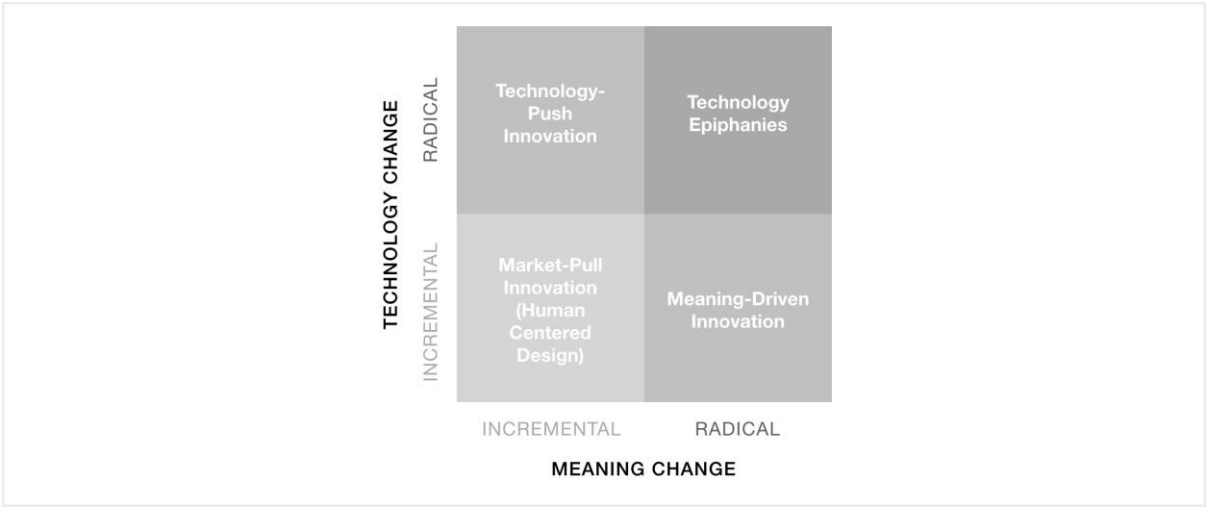

Figure 1 The two innovation dimensions and four related innovation types. Source: Norman & Verganti, 2014

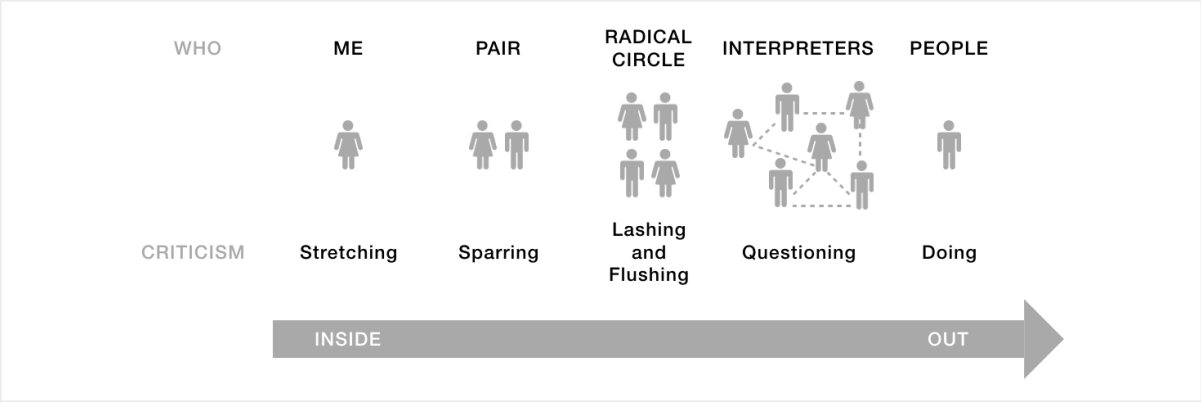

Figure 2 The (inside-out) process of innovation of meaning. Source: Verganti, 2016

D-DI therefore starts with the individual. At the first stage (me), the individual envisions something that they would love others to love, a phase where they postulate a new interpretation of a life experience, which goes through a process of critical reflection on why that interpretation is valuable and how it could change the experience of others in a meaningful way. As said before, junior designers often have difficulties in eliciting the values that drive their work and stay true to them, which hinders the design outcome (Van Onselen & Valkenburg, 2015). Verganti acknowledges in a similar fashion that shaping and refining the designer's vision and guiding principles is very difficult, and therefore considers the most powerful aid in this process to be another person. Someone to reflect with but specifically a person that will both challenge one's vision and not kill the idea in order to make it more robust; a person of deep trust. Along the way, we get a better understanding of the vision through an expanding and reflective process. Eventually, the value of the final proposition of meaning gets clearer and interpretable for others, who are able to then use user centered research methods to define and refine the concept towards a successful outcome.

This expanding process of the Inside-Out has been incorporated in our case study, meaning a design coach (partner) has helped the student (visionair) to become aware of his personal understanding of good design, what he finds meaningful (his values), safeguard it and allow the student to refine his vision within a corporate setting.

2.2 Good Design

In order to create a vision, Verganti wants us to look towards ourselves and define what principles define our love for something. The visionair designer finds these principles so meaningful that they are highly motivated to bring them into existence, because they are good and they make life better.

But what is good? And what is good design? In the past, these questions were typically answered by the best and bravest designers of their respective times. We can refer here to the promotion of a good life - in good taste - to consumers and business managers at the start of the 20th century. Important sources of such promotion in Europe were the arts and crafts movement in Britain, and the many professional societies for design and industry that had come up in various countries (such as the early German Werkbund, see Bürdek (2005). Another role was laid out for publicists on interior and industrial design who were writing about good taste in design, such as Edith Wharton, or about a design "that shall inspire a new era," such as Norman Bel Geddes (1932, p. 5). In a move towards post-modernity another conception of good design was developed in the 1950s and -60s by the post-war German Werkbund and the Ulm School of Design. Here the idea arose that design would contribute to a good society by finding the right form ('gute Form') to the values of a social, post-fascist democracy. Although the latter group already stood for the emancipated and individualized needs of users, the idea was still that an elite force of designers would systematically provide the best solutions for them (Betts, 2004).

After the 1960s, the term ‘good design’ has mostly stood for these two periods in design history where designers were professing their superiority, whether it was in their taste or in their intelligence for solving problems for users. These two approaches have later been coined ‘big-ego design’ and ‘solutionism’ by Manzini (2016), stressing how, in the past, ‘good design’ was based on a misplaced normative stance towards users. Indeed, it is only in the last decade that an appreciation for leadership by design has revived, with D-DI taking a central, and much debated (and debatable) position in this.

In D-DI, Verganti’s stress on criticism and visioning hints to the importance for designers of bringing their personal beliefs and values to their work. We thus return to the notion of good design, to elaborate on how design can embody personal values and beliefs of designers. A starting point for describing this relation between design and personal values and beliefs is the work of the American pragmatist philosopher John Dewey. Dewey (2005) shows how personal values (and what these meaningfully relate to) can be seen as continuously changing personal beliefs that are in constant dialogue with society. These values and beliefs can become clearer by learning, acting, and reflecting upon them. As such, they are capable of guiding new visions about the possibilities in a situation (e.g. Vink, Wetter-Edman & Aguirre, 2017; Wetter-Edman, Vink & Blomkvist, 2018). Fahey (2002), who studied Dewey’s work on values writes: “In being sensitive to the ideals of virtuous action, it senses the possibilities in a situation, what is absent” (p. 19).

Through Dewey’s work we learn that there is an aesthetic dimension to everything we do, when we reflect upon and pass judgment on one’s experiences in life. By reframing our embodied experiences, we can thus derive a sense of new values, and of new opportunities for aesthetic expression. In a more direct application of these thoughts to design, Schön (1983) pointed out that design can be seen as a knowing in action, which we interpret here as a sensing of values through the act of designing. In relation to D-DI, we find that, over time, a designer might come to understand better why s/he feels the need to pursue a particular vision through acts of design. In other words, s/he develops personal principles for good design.

Becoming conscious of, and stating one’s principles for good design is important because D-DI takes the individual designer as the starting point for potentially radical ideas. Within D-DI, designers move from personal principles and vision towards a shared vision with other stakeholders, reinterpreting and refining this vision without letting go of its underlying principles (see Verganti, 2016, p. 143). Principles for good design refine the idea on how we might support (junior) designers in the act of D-DI; it goes beyond rational principles of human centred design, it elicits what a person loves and values in life, and it supports the embodiment of these values in design. In this sense, the notion of principles sits close to what Vial (2015) calls an idealect: “concepts in the form of ... rationally achievable ideals” (p. 64). Consequently, we believe (junior) designers can become more focused and gratified in the process of designing, increasing their commitment to what they feel constitutes a good design.

Our case study concerns generating a D-DI product concept, by a designer who has become aware of his personal values, and who has defined a set of personal principles for good design.

3 Research

3.1 Research context

The context for the research was a six-month graduation project of the second author in fulfilment of a Master of Science degree in Integrated Product Design. The project was a collaboration between the Faculty of Industrial Design Engineering of Delft University of Technology and Bang & Olufsen (B&O). B&O is a high-end Danish consumer electronics company that designs and manufactures audio products, television sets, and telephones. The graduate student deliberately approached B&O to become the client of his graduation project. This choice came about from his passion for music and appreciation of B&O as a company with good products. The project had an open design brief

that was scoped to initiating a product concept that combines the future of ‘music’ and ‘autonomous driving’.

The graduate student was mentored by two university lecturers; a graduation coach (the first author), and a project chair who oversees the graduation process. Next, the student was accompanied by two company experts (one from B&O Automotive and one from B&O Home Audio). From here on, we refer to the graduate student as the designer.

3.2 Research approach

An in-depth case study was done using a Research Through Design (RTD) inspired approach (Yin, 1994; Frayling, 1993 cited in Godin & Zahedi, 2014). In RTD, knowledge is being created based on design action and reflection in- and on action. The design outcomes are then considered as physical proof of the generated knowledge as well as the material with which the researcher advances investigations (Schön, 1983). Both reflection in and on action are considered highly relevant for identity development as they allow for acting mindful in immediate moments and for dynamic narration and interpretation of past experiences (Hughes, 2013; Tracey & Hutchinson, 2016).

Within our case study, the designer reflected in and on his actions. These reflections occurred during the project and during weekly project coach meetings. Shared reflections in form of dialogues with the project coach, allowed the designer to receive constructive criticism while being in a trustful, hence failsafe environment. The project coach would, for example, prompt the designer to reflect about different designed concepts and indicate which concept was more aligned with his personal believes. Not knowing what to answer then, would not have immediate consequences for the designer, but work more as an opportunity to develop his identity and/or the concept. Both the designer and the project coach used a notebook for recording the main points and conclusions of the reflections.

3.3 Case study setup

One of the wishes of the designer at the outset of the project was to end up with D-DI product concept that he would consider as good design. It was this wish that lead into defining what he would consider as good design. Therefore, the project started with a ‘principles for good design’ exercise. In this exercise, instructed by the project coach, the designer performed a couple of activities with the intention to become aware and sharpen his sense for good design. Eventually, a personal set of principles for good design were defined. Once the designer became aware of his principles for good design, these were used for and within the D-DI project process and for envisioning a product concept. In this paper, our main focus and study regards the effect that the designer's principles for good design have (had) on the D-DI project and outcomes.

4 Results

4.1 The designer’s principles for good design

The principles for good design exercise resulted into three main principles for good design. These were: ‘Principle 1: good design is simple (one thing, do it well)’, ‘Principle 2: good design is meticulous’, and ‘Principle 3: good design is timeless’. A fourth principle, ‘Principle 4: good design is magical’, revealed itself from the project context while the designer went through the project. All four principles are described and expressed visually using a product example in Table 1.

4.2 Designing based on the designer’s principles for good design

Awareness of personal principles for good design influenced: the designer’s creativity, the project planning, the decision-making process, and the focusing of the D-DI product concept. For showing this influence, we start by describing and exploring the project outcome first. Next, we continue by explaining whether or not, to what extent, and how, each principle for good design of the designer, was integrated or had influence.

4.2.1 The D-DI product concept: Bring The Moment

The D-DI product concept was called 'BTM', acronym for Bring The Moment. BTM is a car audio system based around bringing your music into the car and taking music with you after the ride. Listeners can seamlessly transfer the music on their B&O headphones to the car audio system and the other way around. Once in the car, listeners can choose between listening to their own music by flipping their headrest flaps forward, or a shared music with other passengers, by flipping their headrest backward. At the end of the ride, listeners just put their headphones on to continue the listening experience they were in when leaving the car – Figure 3.

Table 1 The designer's principles for good design and related product examples.

Principle for Good Design	Description	Product example
1. Good design is simple (one thing, do it well).	In contrast to products with many functions and controls, the designer enjoys products that do one thing and do it well. The BeoSound Essence by B&O is a prime example. A product that is essentially one knob which gives people simplified controls over their music. That is, a simple interaction point to control the music from anywhere in the house in a simplified way. It is simple, highly useful and leaves out the fuss of unnecessary functions or interactions.	 BeoSound Essence by B&O. Source: Bang & Olufsen, 2014.
2. Good design is meticulous.	The designer likes products that are designed meticulously. He believes, attention to details make a product interesting and gives it a sense of quality that is otherwise not present. Second generation advanced sound system speakers for Audi A8/S8 by B&O Automotive is a good example of a product with great attention to detail that keeps the product interesting to look at long after first purchase.	 Second generation advanced sound system speakers for Audi A8/S8 by B&O automotive. Source: Bang & Olufsen, 2017.
3. Good design is timeless.	Design that stands the test of time, that does not look old after one, five or ten years can be considered timeless. The designer likes designs that stand the test of time, and stay relevant long after their inception.	

	A good example is the Beogram 4002 designed by Jacob Jensen for B&O. First designed in 1972, it continues to look beautiful and modern.	 BeoGram 4002 Turntable by B&O. Source: MoMA, 2017.
4. Good design is magical.	Products that surprise people in a delightful and mysterious way are seen as 'good design' for the designer. Whether it is interacting with an object in unexpected and useful ways or affording people to look at the world in a new way, these products induce a feeling of magic. This can be seen in the Beosound 3000 mkII CD/Tuner by B&O. As soon as the product is approached, when one waves their hand in front of the device, the doors open mechanically, allowing one to place in a CD. This is a simple interaction that creates an unexpected reaction in the product that delights the user in a mystical way.	 BeoSound 3000 mkII by B&O. Source: BeoWorld, 2012.

Figure 3 The BTM product concept and video QR code.

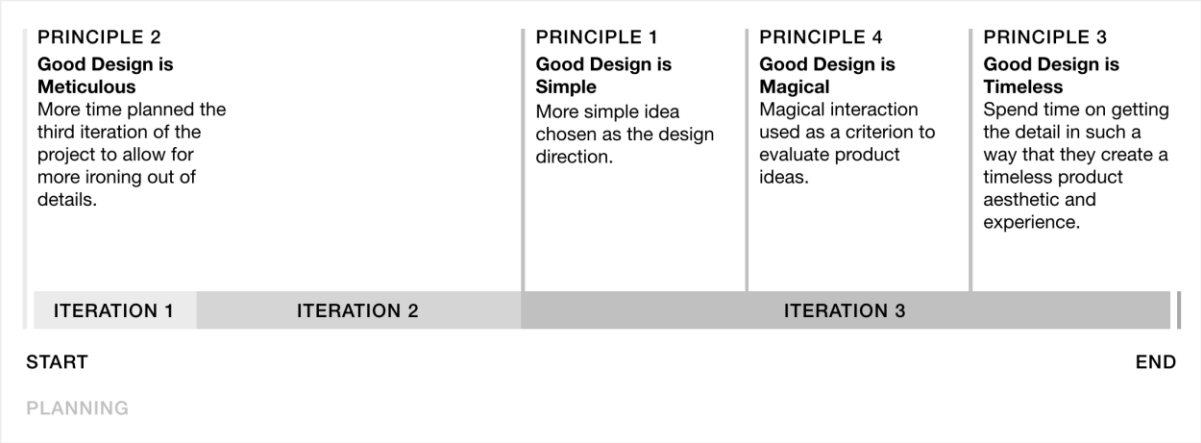

Figure 4 Pragmatic overview of the designer's principle for good design, for and within the D-DI project process.

4.2.2 Project planning, decision making, and focusing of the concept

Inspired by the 1-10-100 method, the project was planned and executed in three iterations that covered twenty-six weeks of time. The first iteration took one week, the second five weeks, and the third twenty weeks. At the end of each iteration the designer reflected upon the process and evaluated the achieved results. Reflections of each iteration, were used for setting up the following iteration. 1-10-100 is a method for better aligning research and design activities, specially in projects that are not problem oriented and do not have a specific direction from the beginning (van Turnhout et al, 2011; Luminis, 2017). Figure 4 provides an overview of the project plan including the three iterations, activities, and where the designer's principles for good design played an important role and how. Below we explain how each principle influenced the D-DI project planning, decision making, and focussing of the concept:

3. Principle 1: good design is simple (one thing, do it well)

Simple design was manifested during the conceptualization phase. Design intrinsically involves making decisions where the best outcome is not known. In such an instance, the designer was faced with the decision of choosing between two concepts: one concept with a singular, simple purpose and the other with multiple functionalities and modes of interaction. Both concepts appeared good on paper and had done equally well in user testing. So, the designer ended up choosing the concept that aligned more with his principles for good design during that instance, the simpler concept.

The designer also used this design principle directly in the design of the product and experience. The concept could have incorporated many features when it comes to music in the car. But he chose to focus on creating a seamless experience and perfecting that experience as best as possible, while removing any unnecessary details and features from the concept.

4. Principle 2: good design is meticulous

Knowing that he wanted to include this principle in the project, the designer actively planned ahead to include this principle in the product concept. During the initial planning phases of the project, the designer allotted more time for the detailing phases of the project. This was done in order to give the full attention to detail he admired in other B&O products. Having planned enough time allowed him at the end of the project to spend more time on things like the pattern of the holes on the speaker grill, which ended up consuming about two full weeks of design time – Figure 4, Figure 5.

A large amount of time was also spent on the final experience. The form of the product is a direct result of this meticulousness. The designer spent a large amount of time on making a seamless experience fit with all passengers in a wide variety of social situations. A seamless music experience

in a social context does not work without addressing the issue of privacy versus social listening experiences. The designer found a way to create a seamless listening experience through a long process of conceptualization and testing until he found a way to create this experience that was holistic.

5. Principle 3: good design is timeless

Timeless design manifested itself in the detailing phase of the project. After the concept was generated and elaborated, it was time to give the product a physical form with design details. Rather than looking at trendy design details that could make the product look good in the short term, the designer tried to create a more timeless look. This involved keeping the details to a minimum and using basic geometric forms for details such as the speaker holes – Figure 4.

The experience is meant to be simple and timeless, not bringing in any features grounded in current technologies, but rather staying basic on an interaction level to allow for an experience that fits in well with the future. Flipping a headrest forward and backward is an interaction that has been used in airplanes for the last half century.

6. Principle 4: good design is magical

Magical design was something hoped for but is not something that the designer felt he was able to intentionally design. However, during the user testing of the individual concepts, the designer kept this principle in mind as a way to rank his concepts. The final concept was chosen based on these results seen in user testing. People reported a feeling of magic and wonder when testing out the prototype.

The interaction portion was where the designer chose to incorporate this principle the most. The designer spent a large amount of time examining the switch from a private listening experience to a social listening experience. He used this as an opportunity to create something that was intuitive but surprising. Using the headrest as a way to incorporate a switch from a social to private listening was the way he chose to do it. A flipping headrest is already something quite ordinary on long distance

Figure 5 Detailed rendering of the hole pattern of the headrest.

flights, normally used as a way to support the head when sleeping (and thus create a feeling of privacy). The designer changed the meaning of this interaction by making it a way to interact with the music, and he made it magical by allowing passengers to easily switch between their private music and the car's social music.

5 Discussion

5.1 Implications for the designer

We found that by being aware of his good design, defined as a set of principles, the designer was more proficient in eliciting his identity and actively engage with it throughout his D-DI project. Personal principles for good design, in our case study, empowered the designer in designing more in tune with his ideals and potential. This is a matter of becoming aware of who you are, what kind of world you want to design for, and sharing your worldview through design and participating in the design culture discourse (Manzini, 2016, p. 54). For example, with regard to the interaction aspects of the BTM concept, the designer actively chose a simpler interaction against a more complicated one because the simpler interaction aligned more with his first principle for good design. Another example is that the designer's fourth principle for good design arose during the project as a more project context specific principle for good design.

Designing with principles for good design in mind, the designer felt more content with his work, felt he could better reach his potential as a professional, took responsibility for at least some of the personal influences in his work, and continuously evaluated himself to refine his ideals (sense of good design). For example, by being aware of his bias towards products with a 'magical' quality (fourth principle for good design), the designer was able to have dialogue about this quality with the

client as a goal within the project. He was able to use 'magical' as a criterion for the prototype evaluation and improve his sense for this quality based on the feedback received from his radical circle (mentoring team) and other interpreters (e.g. a car dealer). In sum, his principles for good design, helped the designer in understanding and eliciting his designerly intuition, which made him more confident in his ability to share and communicate his vision for music in autonomous driving to the project client and other stakeholders.

5.2 Principles for good design for D-DI

In this project, we found that the designer's principles for good design did not stop at shaping the D-DI product concept. The designer's principles for good design also influenced the project planning and formal decision making.

Awareness of one's principles for good design is also useful for safeguarding the radical innovation of meaning (essence of the innovation) by the envisioning designer. McDonnell & Lloyd (2014, p. 349) describe this act by the designer as a gatekeeper and protector of his terms of the design concept. Safeguarding was done by taking more time for certain activities, for example, such as detailing of the D-DI product aesthetics of form and interaction and collaborating with specific people; such as a graduation coach who is experienced with D-DI and someone who keenly supports designers to stand for their ideals.

Furthermore, the designer's principles for good design also manifest themselves in the product form, the interaction aesthetics, and the envisioned experience. In our case study, the designer deliberately used his principles to design the aesthetics of form and interaction of the D-DI product concept, being aware that these are not so called value-free (Bürdek, 2005, p. 323). For example, the designer spent two weeks detailing out just the hole pattern on the design to adhere to his second principle of good design.

5.3 Implications for the design discipline and education

Personal principles for good design, can bring a valuable new dimension to design. For example, designs designed by designers who are responsible based on awareness and recognition of their biases. Designers who use their biases to envision, rather than being unaware of or merely suppressing them. Yet this is not easy, as designing based on one's principles for good design, one's identity, is not considered as a standard norm within our current design culture which is rather limited or limiting due to a lack of debate (Manzini, 2016, p. 52). To go beyond the current design culture, designers, in particular junior designers, could benefit from being supported in defining their personal principles for good design. It is in becoming aware of their identity that (junior) designers can realize the importance of their ideals and start daring to express and protect them when designing for a client within a corporate setting.

5.4 Limitations of the study

The research insights of this paper are based on one single case study in which a creative exercise was used for supporting the designer to become more aware of his principles for good design. Although this study resulted in valuable insights, there is more research needed to further explore the implications of principles for good design for and within D-DI.

With regard to principles for good design, we would like to emphasise that a designer's personal principles for good design are not and should not be seen as a set of generic guidelines for producing good design. Rather, they are meant as a tool to help a designer to become more aware of his ideals and identity. This awareness opens opportunities for designers to take responsibility for the normative influence in their work and further develop their identity as a person and a design professional.

6 Conclusion

The inspiration for our paper started when we read Manzini's (2016) call for a culture of design, one that cultivates ideas and visions of designers in a dialogic conversation with the world, where speaking (the designer's vision and ideals) is as important as listening (what others need). This design culture can be seen as a countermovement against our current context of practice, where designers are expected to be neutral facilitators within a problem-solving process and neglect if not suppress their own ideas and responsibilities as an expert.

In this paper, we have outlined that there is a need for both incremental and more radical forms of innovation (Norman & Verganti, 2014). Radical innovation in particular, seems to be linked to highly creative solutions that aim to change the meaning of life experiences and are driven by a deep, personal commitment. These solutions cannot be found within evident problems that are already recognized in the world. Rather, such solutions come to be by radically changing the meaning an status quo experience. Here, we find a place where speaking and listening both have a place of importance (Manzini, 2016, p. 58). Still, there is a gap between designing meaningful innovation and the ability to execute it within a corporate setting, especially among junior designers (van Onselen & Valkenburg 2015).

We hope this case study demonstrates that radical innovation need not only follow design methods such as D-DI (Verganti, 2009), the Reflective-Transformative Design Process (Hummels & Frens, 2009), or Vision in Product design (Hekkert & Van Dijk, 2011). While such methods all provide crucial pieces of the puzzle in achieving radical innovation, we feel that the focus on design process shifts attention away from the design practitioner himself (Dorst, 2008, p. 8). What to us seems equally essential for radical innovation is that designers are aware of their identity, and acknowledge that their identity flows from and through their work and actions. This allows designers to confront themselves with their personally held values and beliefs, and start a dialogic process of speaking and listening that helps to develop their sense of ethics and aesthetics, and thus their expertise in designing.

With this work, we hope to inspire design researchers and educators to consider how the design ability of (junior) designers can be nourished for proposing radical innovations within corporate settings while designing in tune with their identity. Design researchers and educators need to rethink how designers themselves can become more active participants in a debate about design culture. Principles for good design can be a way to support (junior) designers to participate in this debate by designing based on their own authentic process of project planning, creativity, decision making, and proposing novel ethics and aesthetics. Principles for good design can thus positively influence a designer's ability to create potential technological epiphanies that are 'good'. As design researchers and educators, let us restart the debate with our students on our design culture by uncovering our own authentic ways for making gifts for the world.

Acknowledgements: We express our sincere thanks to the following individuals for participating in this work: Erik Tempelman (project chair, Delft University of Technology), Mikkel Venge (company expert, Harman International Industries Inc.), Lyle Clarke (company expert, B&O), Maaike Kleinsmann (research advisor, Delft University of Technology), and Stefano Magistretti (research advisor, Politecnico di Milano).

This research was funded by Meaningwise and a collaboration with the Industrial Design Engineering Faculty of Delft University of Technology, B&O, and B&O Automotive a.k.a. Harman International Industries Inc. Meaningwise is an (Innovation) Design Strategy, Research & Coaching Consultancy based in The Netherlands.

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