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Design Togetherness, Pluralism and Convergence

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Abstract: We describe an inquiry into how we relate to each other in design, *as we design*. In particular, we are interested in to what extent, and in what ways, we acknowledge diversity in knowledge, experience, and skill. We have conducted a series of project courses within design education to make students explore different ways of doing design together. Our findings point to two main tendencies: towards cultures of pluralism, of coming together as *who* we are; and cultures of representation, of coming together as *what* we are. This points to important issues related to how methodology and process structure the way we perceive and relate to each other. Indeed, in a disciplinary methodological framework ultimately oriented towards convergence and the making of a final design, how do we evolve and engage with that which must not converge to a single point but where difference and diversity must be acknowledged?

Keywords: Design Practice, Design Theory, Design Methodology, Design Education

Introduction

Ever since industrial design came into being as a result of an emerging industrialisation of production and consumption, there has been a dialogue between industrial contexts and the practices of design. Indeed, during one of the debates at the previous DRS 2014 conference Clive Dilnot argued that:

“The specific point is that as a professional activity design does not occur, does not happen, through its own volition. Rather, Design—modern design, professional design— is called into being by Industrialization.” (Dilnot, 2014)

Ranging from searching for new forms and expressions appropriate for the machine-made (as in the early days of the discipline at places such as the Bauhaus) to the emergence of new design areas in relation to new societal and technological developments (such as *experience* design, *service* design, *sustainable* design and so on and so forth), professional design has continuously been responding to social, technical and not the least financial



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changes. At the same time, design has exercised a certain influence on what and how things are made, driving change in areas such as ergonomics in the 1960's, participation and collaboration in the 1970's and the importance of user experience since the 1980's, to name a few. The resulting complexity when it comes to articulating what the terms 'industrial' and 'design' in industrial design practice actually refer to should not be underestimated, but one observation could be made: that significant developments in one, will lead to changes also in the other.

One issue of particular interest to us given a Scandinavian context of orienting industrial design practice towards notions such as 'user-centred' (cf. Norman, 2013), 'collaborative' (cf. Cross, 2011, Manzini, 2015) and even 'democratic' (cf. Ehn et al, 2014, Fallan, 2012) is how the way we do design together is evolving as a response to social and technical conditions. In particular, we're interested in both articulating and advancing practice with respect to how we relate to each other in design – *as we design* – and to what extent these ways of working acknowledge difference and diversity.

This inquiry takes as its starting point the structure of the typical industrial design process itself. In particular, we are interested in the implications of its ultimate aim for convergence – the basic orientation towards creating that final thing that will then be used as the basis for mass-production. Thus, there is an important difference between this inquiry and the work that has been done on re-orienting designing *as such* towards new objectives. What we address here is still within the basic frames of industrial design, and our questions would turn out quite differently if we were instead asking about a redefinition of what it is that design designs. For instance, if we look towards emerging practices related to social innovation, central propositions are not only a movement towards 'everyone designs' (cf. Manzini, 2015) but also that the object and objective of design *per se* has changed, and thus the overall orientation responds to a different need and context.

In other words, there is a basic difference between addressing matters of participation by changing not only the way design happens but also what it aims to create, and changing the way it happens but keeping the basic objective. While we find such emerging forms of design oriented towards the social most interesting and promising, we here want to stay with the troubles of the established requirements on professional design to produce certain outcomes, and instead look towards what ways of relating to each other can be opened up within this industrial context. And so, when we now look towards issues of participation, democracy, etc. in industrial design, this becomes a key question: *in a disciplinary methodological framework ultimately oriented towards convergence, how do we evolve and engage with that which must not converge but where difference and diversity must be acknowledged?*

In what follows, we will inquire into aspects of how we work together in design. We will not be able to address the full complexity of what diversity is and have to be in design at this stage, but our aim is to shed light on some structural properties of design processes that might be useful for having such further discussions. The basis for this inquiry is a series of project courses in design education, set-up to reveal ways of working and to engage the

students in opening-up design doing together. In particular we're interested in how we come together as 'what' we are versus 'who' we are (cf. Arendt, 1958), and how relations between 'we' and 'they' come into play (cf. Mouffe, 2005).

Background

To understand how we come together to design, it is necessary to look at the history of how design practice and education have developed structures for certain kinds of collaboration and relations between actors and stakeholders. In the development of the discipline of industrial design as it is also currently conceived, the notion of the professional role as one of coordination is a key idea. Perhaps first explicitly articulated in the curricula of HfG Ulm, and in the writings of Thomas Maldonado, the idea that the industrial designer will be the one responsible for the creation of a meaningful whole as different areas of expertise in problem-solving and production come together, has been central to much methodology and practice. As Herbert Lindinger comments on HfG Ulm:

“As design was now to concern itself with more complex things than chairs and lamps, the designer could no longer regard himself, within the industrial and aesthetic process in which he operated, as an artist, a superior being. He must now aim to work as part of a team, involving scientists, research departments, sales people, and technicians, in order to realize his own vision of a socially responsible shaping – Gestaltung – of the environment.” (Lindinger, 1991, pp 11)

Such initial articulations of design as coordination were taken further in the 'design methods movement' happening primarily in the UK just a few years later. Reflecting upon what the new ways of doing design that the collection of new design methods resulted in, John Chris Jones wrote:

“Looking back now, at this book, and at what has become of design methods, I think that this is the crux of the matter: the new methods permit collaborative designing whereas the old methods do not. They change the nature of designing, or can if one lets them. The essential point is that the new methods permit collaboration before 'the concept', the organising idea, the back-of-the-envelope-sketch, 'the design' has emerged (provided the leading designer knows how to switch from being the person responsible for the result to being the one who ensures that 'the process is right.'” (Jones, 1992, p. xxxiii)

Such ideas about opening up the design process, shifting from an individual artistic process towards a collaborative effort involving not only different areas of expertise but also more broadly the people intended to become the future users of the design, were taken even further in the new forms of participatory design that emerged in the 1970's onwards. Over time the designers' role, thus, became a matter of not only negotiating product ideas with production processes, but increasingly also about developing functionality and use in context. In some cases this could imply taking a mediating role between industry and use, between producer and consumer; in others it could also be that the role of design becomes one of facilitation rather than production, of making it possible for others to 'design' (cf Manzini, 2015). In practice, professional design carries elements of all these historical

developments. Whereas research and development projects may take on more extreme positions along this spectrum, much design practice makes use of pragmatic combinations of methods and approaches, leaving traces of a range of different design roles, from artistic ones as when being responsible for the aesthetics and expressiveness of the product, to facilitating roles of future-user involvement in the process, and cross-disciplinary collaboration. This pragmatic mix of positions, however, also makes it necessary to look into that which does not vary but remain more constant, i.e. those structures in how we relate to each other that we perhaps do not challenge as much or do not even reflect upon.

The context

UID

This inquiry into how design doing together might deal with diversity is based on our work with the education at Umeå Institute of Design. The programme aims to educate students in industrial design for a future performance in design practice as a professional designer. Hence, the overall orientation is characterised by ‘learning-by-doing’ and project courses set up to simulate design practice. Projects are mostly performed in collaboration with external collaborators, including both commercial and public stakeholders. In projects courses students practice how to execute projects in collaboration with external stakeholders, different specialists and users.

This means that the education is focused on educating students as an expert in design, rehearsing and practicing planning, coordination, collaboration and performance. Thus, the basic design process is essentially the model sometimes referred to as ‘divergence – transformation – convergence’ (Jones, 1992), ‘the double diamond’ (cf. Design Council, 2015) and similar structures oriented around stages of problem framing, exploration and problem solving. Since the education is firmly rooted in a Scandinavian tradition of user-centred design, students practice ways to work close with users in certain stages of a process such as when analysis, in concept development and when evaluation of concepts.

The set-up of project courses

In order to have our students engage with aspects of working together, including ways of dealing with diverging perspectives and values, we set up the project courses in a way that challenged their established ways of working in certain ways. As our focus was on evolving forms of doing design together and acknowledge diversity in knowledge, experience and skills, we did not pay particular attention to the specifics of the design concepts and proposals nor how they were conceived from a cognitive problem-solving perspective. Indeed, the courses were not set-up to try out any particular theory or concept of design, but rather as open explorative processes.

From the outside, the student’s projects were framed by familiar criteria such as: having a certain time frame and deliverables; collaboration with an external stakeholder (organisation or company); and an initial brief at the beginning of the course. All projects

were to result in a conceptual model to be presented for stakeholders. In contrast to these more familiar external criteria, we used certain guidelines to structure the design process in each team in order to open up for a diversity of competences and knowledge. For instance, students were told to use a 'build-to-think' approach, to continuously use and share design materials and work in a very open way with each other. Indeed, as all projects started with an empty space, literally building, configuring and furnishing a shared physical space – a 'studio' – was an integral part of the project and the scaffolding of the design work.

We conducted five multi-disciplinary project courses between 2008-2012 in the BFA-program at Umeå Institute of Design, each lasting for five weeks. Students worked in mixed teams with members from different educational backgrounds, such as design, occupational- and physical therapy and engineering programs, but also from studies at different educational levels. Each team had 6-8 members, and in two of five project-courses, one group of participants were continuously mobile, moving to a new team every week.



Figure 1 Participants started to elaborate on their shared spaces as they came together in dialogue.

In the beginning of the course, the teams typically started to discuss with each other how to approach this particular project. Since the brief was open-ended, there was also frequent initial discussion about how to understand and interpret the brief. As their processes started to unfold, the initially empty space evolved into a place filled with different kinds of materials, each team building their own provisional studio.

Over time, teams started to invite the ‘users’ they worked with to come by their studios at any time, moving beyond only meeting them for specific tasks such as when doing user-research or for follow-up sessions. Consequently, users dropped in during the whole project time, in some project more frequently than others.

We studied the evolution of both process and physical space during the project time using notes, photos and video recordings to document. Throughout the courses, participant’s experiences were recorded as written reports in the form of individual self-reflections handed in every week, as well as an individual meta-reflection after finishing the project course.

Findings

Below we report on the findings from these courses with respect to how participants performed doing design together and how the space evolved throughout the project courses. Here, we will focus on two main traits, or paths, that stand out with respect to how the students related to each other.



Figure 2 One team sharing and communicating their different understandings and interpretations.

As the projects began, we could see how the participants immediately started to engage with each other, inviting to a shared dialogue, asking questions and listening to each other’s thoughts and perspectives on the project. As one participant wrote: “The strength was that we took part of each others thoughts” (No 1, 2009). This resulted in very diverse suggestions

and ideas, concerning both planning and content. The amount of diverse opinions and understanding seemed to propeller a need to visualise and materialize what was revealed. The complexity of thoughts, understandings and opinions did not point to a unified shared understanding and approach, but rather opened up for diversity set of approaches that needed to be processed and negotiated. Hence, participants put their thoughts and understandings on paper or with material, used white boards to sketch out ideas, put printed images and information on the walls, etc. to create a studio environment that in a very hands-on way materialised everything that had been collected. In this way, participants' understandings and interpretations became present as physical and tactile material placed on surfaces in their studios, and thus accessible for continuous interaction and intervention between participants. The material context allowed participants to inquiry into and interfere with each other's opinions and ideas, as it was quick and easy to create new connections between planning, materials and adding new material into the increasingly complex structures on the wall. The resulting combination of acting from several positions and being challenged by each other almost seemed to become an embodiment of a complexity. As one participants voiced: "I appeared to be one with the material as a whole since everything is there at every moment" (No 2, 2008).

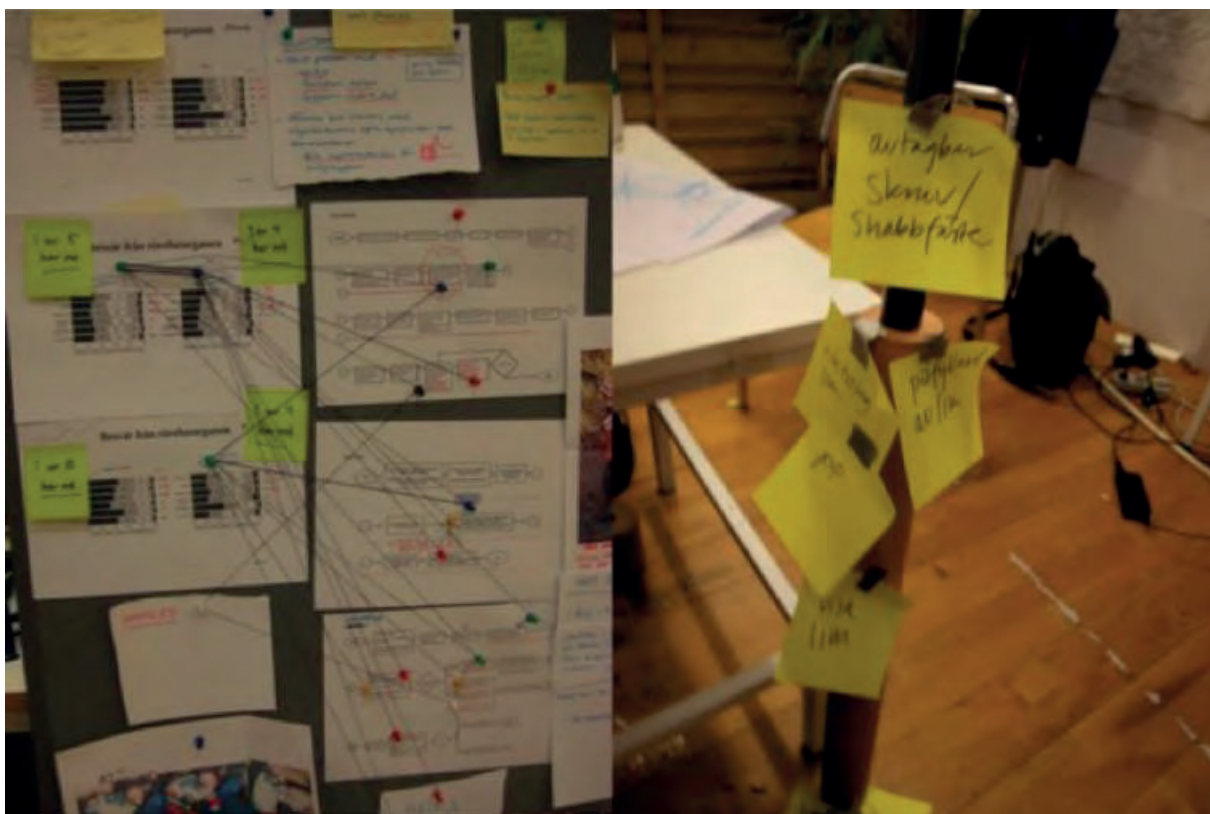


Figure 3 Participants materialized understanding and opinions were discussed, argued over and contrasted through dialogue and discussions using the material context.

Indeed, in the courses where one group of participants were constantly changing teams, the material context facilitated bringing the new member into the team as it exposed earlier

actions and discussions in a way that prompt intervention. These moving participants wrote in their reflections that they experienced the material context as a body that supported their integrating into teams and the project. Furthermore, the context supported involvement of users and stakeholders who could intertwine with the process and material, keeping it open for influence. It also enhanced dialogue and discussions between different kinds of participants. As one participant wrote: "There is a difference between being 'we', being 'I' in a group" (No 3, 2010). The interconnection between the material context and an evolving process supported a feeling of belonging and commitment among the participants, as well as users and stakeholders. Users that participated engaged not only in discussing user experiences and evaluation but rather involved themselves, and were involved, in diverse kinds of actions and discussions. Boundaries between different kinds of expertise and knowledge somewhat dissolved and participants did not feel as confined to offering views restricted to their disciplines or experiences. As we read in one meta-reflection: "I see great potential to capitalise on each other's experiences and knowledge and utilise that we are different individuals with different ways of thinking in a project" (No 4, 2010).



Figure 4 Participants discussing concepts together.

While participants modified, elaborated or contrasted each other's understanding and opinions of the planning by raising their voices and arguing with each other they related to

the material context. In reflections participants wrote that the overall planning changed over time due to what they explored and how their discussions developed.

However, at times these ways of relating to each other broke down and the teams started to act in another way. For instance, we could observe taking turns leading give way as certain participants started to act as leaders, structuring up the process along known ways of doing design. Such acting leaders wrote in their reflections that they had experienced the process as uncertain and wanted more control, and on occasion that they did not really trust others to make certain choices or decisions.



Figure 5 Occasionally some participants started to act as leaders and divided other participants into different tasks.

At times of breakdown, teams showed tendencies of splitting up into groups of permanent participants and non-permanent participants. Members took on more individualistic work and distributed tasks between them based on perceived competence and knowledge. Results were then brought into the process for feedback and critique. In these situations, there would also be less interaction, as the unwillingness to interfere with each other's work made them stay within their own dedicated knowledge or competence area.

The non-permanent participants (such as the ones moving between teams, participants from non-design educations and 'users' etc.) reacted in different ways. Some felt resignation and

accepted the leadership for a while, others more irritated and suffering from a lack of motivation. In the written reflections, participants nevertheless described this to be an efficient way of working, relying on methods and processes experienced in former projects knowing they ensure a successful result. Others thought about it as a fear to 'lose one's face', as one participant reflected:

"The risk increases to avoid saying anything that is not in its place, that you feel you do not have the authority to express a particular opinion or idea. With roles will also hierarchies arise, the hierarchies of a fear of losing one's place." (No 5, 2010)



Figure 6 Participants divided into different subdivisions in one team.

Non-permanent participants felt they were in a power structure and hence insecure concerning their position in the team as they perceived the others as more knowledgeable. In some reflections there are also tendencies towards temporary separation between genders, and participants experienced while either male or female participants acted as leaders it some times developed into power structure. Although the teams sometimes discussed it as an issue, it seemed to be a situation that remained unsolved and only were mentioned in reflections.

Furthermore, participants coming from the non-design educations at times experienced a dual feeling of either not thinking of having the knowledge to steer the discussion or being in

a position to make statements. This was clearly uncomfortable, and they pointed out that they did not feel this was the right way to deal with the issue, but rather a way to cope when knowledge are seen as an authority or in majority.



Figure 7 Every team in all five project courses were to present a final concept to their external stakeholders. This is one final concept, out of five in one project course, of a driving seat conducted with a truck manufacturer as the external stakeholder. The general brief was set around driver ergonomics and acts of sitting and driving. Although all of the teams presented reliable concepts, one of the teams developed a conceptual model of a new driver's seat where sustainability and ergonomics was considered quite innovative. The conceptual work and the model later was awarded in the competition 'International Interior Motives Design Award', and won the first price in the category 'Best Safety Innovation 2009' at a ceremony at Frankfurt Motor Show, 2009, (<http://www.interiormotivesawards.com>).

Representation and Pluralism

To understand and explore differences between the two 'paths' of doing design together emerging in our studies, we need new concepts and articulations. Trying to unpack our

findings using the notion of ‘work’ and ‘action’ (Arendt, 1958) and ‘plural radical democracy’ (Mouffe, 2005), we suggest that the two tendencies can be interpreted as on one hand a culture of *pluralism* and on the other one of *representation*,

First, however, we need to return to the fundamental methodology for multi-disciplinary design as in the divergence-transformation-convergence process (cf. Jones, 1992) aiming to handle complexity and align production process and design process for mass-production. A divergence-convergence process enhances coordination, control and efficiency as it structures core design activities: analysis, synthesis and evaluation. As such it also explicates a plan for when and how to invite diverse knowledge and expertise, e.g. user in user evaluation or stakeholders in decision meetings. This is clearly a structure when invitation and involvement is based on how a given individual can be said to represent particular knowledge, expertise or perspectives. If we return to the experiments described here, we found this representative approach to doing design together, but we also found alternatives. In a representative culture participants embraced a reliable structure as a means to an end. Here, participants trusted a leader to steer the process while others became divided into different tasks and roles depending on their knowledge and skills. The material context was used more sequentially, and contrasting opinions were not picked up or challenged as participants hesitated to interfere with each other. This might be described as a stable structure when participants, somewhat separated from each other, acted from specific and relatively fixed positions.

In the approach we call a pluralism culture, we found another kind of doing design. Participants integrated their knowledge and experience without thinking of it as a designated task. Participants acted as clearly distinct individuals, raising their opinions but also taking on ‘the others’ position’ as they embodied an increasing complexity and approached it from multiple perspectives. Issues of how diverse knowledge and perspectives are brought in at distinct stages of the process were more or less completely dissolved, and participants and users engaged with the whole rather than different parts at a time. This seemed rather to be an unstable structure, although solid framed by time limits and outer requirements, when participants approached a material context moving between multiple interpretations.

There seems to be two different way of coming together, one as ‘what’ one is, and the other as ‘who’ one is. This is close to the notions of ‘work’ and ‘action’ (Arendt, 1958). Work is suggested as a means to and end, reliance on proven structures, and a making. Even though we work together, we act separately from each other. In ‘action’, we come together through language and action in concert, raising our opinion as ‘who’ we are and a shared community may occur (Arendt, 1958, 2004, 2005). By starting unpredictable new beginnings we create a chain of actions. As people are seen and heard in a community, there is also power within that community. The ‘in-between’ people create is a ‘world’, a political space (Arendt, 2005). Returning to our paths of pluralism culture and representative culture, we will further examine how these paths might be understood in context of ‘work’ and ‘action’.

In representative culture participants acted as separate from each other although sharing a common goal with the project. They related to each other rather instrumental as 'what' they were depending on 'what' action was needed in their process though it was efficient and controllable. Division of participants supported a one-perspective-position on the material and in discussions. Furthermore the material context was routinely treated and planning organised in stages.

In pluralism culture participants and users interfered in discussions not seeing themselves as experts or as representing particular knowledge. By raising their opinions, individuals were present as 'who' they were, coming together in what we have previously discussed as 'Design Togetherness' (Lindh Karlsson & Redström, 2015). They acted as distinct to each other although moved and shifted between several positions. The material context invited and supported exploration of the whole through minor divergent processes that propelled the process forward.

Adversary plural culture

These tendencies towards a pluralism culture and its relation to what Arendt's describes as 'action' can be developed further in the light of Chantal Mouffe's notion of *radical plural democracy* (Mouffe, 2005). Radical plural democracy emphasizes dissent and difference as means to constructively include minorities and different opinions. As Mouffe argues, "In a modern democratic society there can no longer be a substantial unity, and division must be recognised as constitutive." (Mouffe, 2005, pp. 51). This points to a view of identities as relational and that every identity depends on a confirmation of difference. Seeing others in a collective, include seeing others as them, and when differences negating our identity a we/them relation occur (Mouffe, 2005, pp.2-3).

While democracy as such have several interpretations in general, they all value freedom, equality and equal distributions of means to support a balance between people and protection of human rights. Representative democracy distributes authority through elections to representatives, hence have government by people through representation. Thus, it can be argued that as representative democracy rules by majority it risk exclusion of minorities. Radical plural democracy values equality and freedom but emphasizes dissent and differences as means to include minorities and different opinions such as about gender and worldviews. Radical plural democracy challenges consensus through majority by emphasising antagonism and the relation between 'we and them'. This is a kind of friend/enemy relation where enemy should be understood as a respected 'adversary'. Another important statement that Mouffe (2005) makes related to our inquiry concern how identities, although they belong to different communities, also take several positions and makes diverse interpretations. The notion of radical plural democracy is a paradox, and exists only as it cannot be reached, it is a "democracy to come" (Mouffe, 2005, p.5). In our case, such perspectives imply that certain aspects of design, certain actions, might have to be kept open for diversity and not be forced to converge.

Indeed, we argue that what happens in the situations referred to pluralism design culture above, i.e. when participants interfere, interact and integrate with each other in a process scaffold by an evolving material context, can be interpreted as matters of 'action' and 'radical plural democracy'. While participants acted in relation to each other, although distinct and rather engaged in investigating 'the others opinions' from multiple positions, they created a community and as such also a political space where voices could be raised and actions taken. In the way that participants investigated, challenged and explored content, process and the 'other' through disagreement, discussions and dialogue from multiple positions, they formed a 'we and them'. As such, they acted within a kind of shared political space where different kinds of participants engaged together from multiple positions resisting convergence. Even though they also agreed in many ways, they kept matters open for discussions and dialogue, as a result creating conditions for divergence to unfold. This presents a shift from articulating concepts of doing design together where convergence and consensus is reached through representation.

This points to a notion of doing design together as a process not ideally converging towards consensus but instead as a process of unfolding divergence within a political space still oriented towards a shared whole. This presents a break with representative culture, and the idea of collaboration as the bringing in of experts at given points in a design process.

Concluding remarks

Given the role of design in the interactions between industrial production, people and the world we live in, it is necessary to examine how industrial design deal with diversity in different kinds of doing design together. Indeed, we think it is necessary to revisit basic methodology with respect to relations, asking questions about what and who is included, what and who is excluded and how these decisions affect doing design together. With this, we want to inquire into aspects of difference, in terms of knowledge and experience. In particular, we are interested in what kinds of politics we may find, and to understand what directions industrial design education and design practice might take in the future in relation to this.

In the project courses we have discussed here, we found that participants related to each other in their processes in two different ways. One oriented around seeing others as 'what', as representing certain knowledge, coming together as 'I' in a process based on division of labour, explicit stages and roles based on expertise. However, we also found another one, in which participants related to each other as 'we and them', coming together through constructive dialogue, discussions and argumentation shifting and moving between several positions within a kind of 'political space'. When cutting through and bending perspectives in an evolving situation and its materiality, they created a whole where nuances, sensibilities and differences extended smaller divergence processes.

While design practice's relation to industry, mass-production and mass-consumption seems to require and reward efficiency and control in doing design together, these offer a

particular kind of politics and relation to diversity by a claim of expertise knowledge as authority, and coordination as rationalisation. This might be useful when design is involved in certain kinds of production aiming for efficient and controllable unified and universal mass-production of goods and artifacts. However, the relation between producer, designer and consumer is constantly evolving in response to bigger economical, societal and cultural changes. Over time, this also calls for changes in the 'social contracts' a given way of doing design builds on. With this, we aim to make a contribution to how such changes, and how to articulate the challenges they bring to our artistic and methodological foundations, can be understood.

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