DESIGN.LIVES LAB:
A CASE TO INTRODUCE SOLUTION-FOCUSED DESIGN METHODOLOGY FOR PARTICIPATORY DESIGN FOR SOCIAL INCLUSION

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ABSTRACT
The Design.Lives project is collaboration between the disciplines of design and sociology. This paper unfolds our latest attempt on the practice of design participation through educating young designers. We discuss a three-week Design.Lives Lab, a workshop for practicing our approach in a design education context. The design lab was inspired and informed by solution-focused approach and employed three tactics namely confrontational, empathy and the imagination of replacement so as to bring forth reflectivity on the role of designers and users. We finally found that these three tactics are significant in opening up the design community and sensitizing novice designers to the power of pre-reflexive being and dispositions. Our attempt has shown the significance and effectiveness of using solution-focused approach as a design methodology.

Keywords: Design, sociology and participation

INTRODUCTION -DESIGN PARTICIPATION FOR SOCIAL INCLUSION

We always expect to map out our understanding about the tenets of Participatory Design because we keep asking about its significance in the practice community of design profession. Our instant response to such a question is that participatory design has a strong link with Inclusive Design. After the initial developments in the 1960s and 1970s, the user-centred approach in design has attracted more concerns over the right ways of dialogue and interaction between designers and users, and triggered off greater awareness of the needs of users’ involvement. According to Coleman (2000), there were two different strands over the past twenty-five years: in the USA, designer Ron Mace and others led to the concept of ‘Universal Design’ (Ostroff, 2001) which have been influential in Japan, Australia and elsewhere (Kose, 1998) whereas, in Europe, this idea has been in the name of ‘Design for all’ after a range of initiatives supported by the European Commission and national research funding bodies that were prompted by European aspirations for social inclusion within the context of cultural diversity. Whatever names the idea of Participatory Design has taken and no matter if Inclusive Design has been developed into different design programs, our view is that it remains a kind of ‘design for’ version, in which designers are located in a powerful position to judge which design outcomes are preferable. This is our underlying reason for us to turn to use reflexive ethnography to study design practice in general and see if it is possible to develop a better version of participatory/inclusive design in which designers are designing with potential users.

However, Davies (1998,2008) has stated that this approach can ‘lead to a form of self-absorption that is also part of the definition of reflexivity in which boundaries between subject and object disappear, the one becomes the other, a process that effectively denies the possibility of social research’.
To many social scientists, this warns us of using a method that leads to nowhere. To us, we continue our journey in the light of the ideas from action research methodology promoted by Reason (2003) and the philosopher Richard Rorty.

**WHY DO WE PRACTICE SOLUTION-FOCUSED DESIGN?**

The solution-focused approach to design has been pinpointed by Nigel Cross (2006), a notable design methodologist. As Cross (2006) pointed out, the core features of design ability comprise strengths to:

- resolve ill-defined problems
- adopt solution-focusing strategies
- employ abductive/productive/appositional thinking
- use non-verbal, graphic/spatial modeling media

The use of solution-focused strategies is related to the nature of problems in design practice as ‘design problems are inherently ill-defined, and trying to define or comprehensively to understand the problem (the scientists’ approach) is quite likely to be fruitless in terms of generating an appropriate solution within a limited timescale’ (Cross, 2006:18-19). Underlying the solution-focused strategies is the abductive logic in the sense that while ‘…induction shows that something actually is operative; abduction merely suggests that something may be…It is therefore the logic of conjecture’ (Cross, 2006:19). In our view, design does not start with any propositional logic or scientific hypotheses then employ scientific methods to identify the ‘real’ nature of the problem, and finally put forward designers’ solutions. Conversely, we starts with a view put forward by Cross that which emphases ‘the role of the conjectured solution as a way of gaining understanding of the design problem, and the need, therefore, to generate a variety of solutions precisely as a means of problem-analysis’ (Cross, 2006,17). Moreover, we stress on Schön’s ideas of ‘a reflective conversation with the situation’ and designers are encouraged to use non-verbal ways of knowing as design works might happen outside the boundary of verbal discourse.

In light of the combination between solution-focused design process and non-verbal means for reflective communication, we would highlight the limitations of designers themselves. Our reason is related to our understanding of the concept of experience. Certainly, design process in the form of solution-focused ways of knowing could be regarded as a kind of experience. Actually, it is a kind of learning experience. This echoes Dewey’s (1916) idea of education and experience that true education can only happen with empirical situation and reflection of the real world. Once we work in the real world, we know that we are dealing with a real social situation in which it is not only designers but also ordinary people, potential users and many others are living there. When we are doing inquiry into the problem in our hands, we, together with potential users and even the public, constitute a community. By conceptualizing the context in which designers encounter potential users as ‘the community of inquiry’, we encounter the issue arising from the nature of such a community.

While in traditional scientific domain scholars and researchers play a dominant role in designing and monitoring the process of research, the community of inquiry in design is completely different. As abductive logic is for searching ‘something may be’, we need opening up the communicative space in the community. The term ‘opening up’ could be interpreted in two senses: firstly, it implies a more ‘open’ attitude in performing conjecture; secondly it implies a more democratic arrangement among the members, i.e. both designers and the public (or the potential users in the narrower sense), of the community of inquiry. Such an understanding of ‘opening up’ falls in line with Reason’s tenet of action research in which the major concern is not about accurate representation of the external world, but about whether our knowing, our belief, could provide reliable guidelines to getting what we want. This is the reason why the traditional role of science and the dominant positions of social scientists have been challenged. Designers are not looking for any triangulation to support or validate their hypotheses, but are attempting to accomplish the target set by the ‘community of inquiry’. Generally speaking, this is a perspective against metaphysics and against the correspondence of truth: ‘We cannot regard truth as a goal of inquiry. The purpose of inquiry is to achieve agreement among human beings about what
to do, to bring consensus on the end to be achieved and the means to be used to achieve those ends. Inquiry that does not achieve co-ordination of behaviour is not inquiry but simply wordplay’ (Rorty, 1999, p. xxv). Given that our understanding of the purpose of research is to improve human’s living, the aspiration of action research is somewhat consistent with our reason of adopting participatory design. Both orient to achieving agreement among members of a community, whatever it is, and to bringing consensus on both the end and the means of human activities.

In order to achieve consensus, the opening up of communicative space is necessary ‘to keep the conservation going is a sufficient aim of philosophy, to see wisdom as consisting in the ability to sustain a conversation, is seeing human beings as generators of new descriptions rather than beings one hopes to be able to describe accurately’ (Rorty, 1979:378).

Following this debate, it is owing to the nature of problems in design practice, i.e. wicked problems, we should employ solution-focused methods to start a design process. The teaching and learning of this kind of method would be facilitated if abductive logic is introduced. Underlying the application of abductive logic is the opening up of the practice community where both designer and potential users are involved. Finally, we bear in mind that rational deliberation and communicative rationality would govern design practice.

PRACTISING SOLUTION - FOCUSED DESIGN THROUGH DESIGN.LIVES LAB

In order to introduce solution-focused design methodology to address the specific subject social inclusion, we have conducted a three-week Design.Lives Lab as visiting scholars with staff members from a design school in Hong Kong. This is a new campus built in 2010 and surrounded by six different housing estates where over 20,000 households are residing (Figure 1) in this new town of the city.

Originally, we are invited to conduct a research project about developing design implications for the ageing population. We intended to expand the focus from aged people to ageing process and local community with asking three layers of research questions to rethink the design implications for our future selves for a new design school:

- What is the research direction in ageing and community?
- What is the NEW research methodology to investigating ageing and design? i.e. problem-solving or solution-focused
- Who are the research targets and how to describe the relationships with them? i.e. design for older customers, design with local ageing communities, or design by ingenious aged people/amateur designers

Figure 1. Location map of the HKDI with six housing estates around it

HOW DID WE PRACTICE SOLUTION-FOCUSED DESIGN?

Six teams were formed with over 30 Higher Diploma design students from three-design discipline: Interiors, Products and Graphic Design. A three-week design workshop was organised for students to experience solution-focused design and participatory methodology in design with local community. Students were briefed to act creatively about the concept of design outside their disciplines and beyond. Each team is responsible for designing ‘something’ with the residents of an estate around the design school.

PROCESS: FROM PROBLEM-SOLVING TO SOLUTION-FOCUS

There are three stages of the workshop. In the first week, we are inclined to allow more free space for
the students to practice problem-solving methodology in the sense that they just employed their favourable methods to find out their concerns, such as visits, interviews and data mining and we conducted short design exercises (Figure 2) to give students a chance to present their tentative results and building team spirit.

In the second week, we intended to challenge students’ habitual ways of knowing. Therefore, we invited a social designer from Brazil as part of our team, to conduct games with students in order to understand the significance of non-verbal experiences. In this stage, the students were asked to invite residents from their assigned estates to join a tea party at the design school (Figure 3). In tutorial section, we also started to present our ideas about solution-focused methodology and participatory design.

In the third week, students are responsible for setting up six design booths to create a Chinese New Year Market to ‘sell ideas’ to the local residents, in order to build bridges between the design school and the residents of the six estates in the neighbourhood.

RESULTS: DESIGNING PARTICIPATIONS

The brief to students was unlike ordinary design projects during their study. We did not ask for a final design proposal. We commissioned a local bamboo structure master to build six traditional temporary market stalls for the six teams to install their designs.

Instead of designing objects for sale to celebrate Chinese New Year, students were asked to design means of participation to engage the local community. Each team was guided to identify an object to represent their experience (Figure 4) and design their booth around the object.

After two days construction, the final task for each team was to ‘run’ their stalls and develop operation ideas for further interactions with residents (Figure 5). There was a team who aimed to encourage residents to have more physical interactions than online debates, they used balloon as a mean to invite people to leave messages for the others. Similarly, a team was focused on developing methods for residents especially with those are disabled to express their wishes, they collected fallen leaves for people to write message on them and send them back to the others. A big lantern was constructed with colourful colanders to attract visitors to make Chinese New Year wishes. Recycling was a popular issue around design students and two teams collected wastes from their housing estates and reconstruct something and send them back to the community. One team was using used newspaper to recreate plant plots for fresh plants to give back to local residents. Another team collected many unwanted furniture and deconstructed them into new pieces of furniture to demonstrate new ideas of uses. Finally, there was a team made many paper speakers for people to shout on the design school campus.

DISCUSSIONS: DIVERSITY AND UNITY: RELATIONSHIPS BETWEEN DESIGNERS AND USERS

What are the relationships between designers and users? It is not easy to understand and in this experiment, we have witnessed different answers to this question. Basically, we found that the moment when people participate in design process and design
research is highly related to the role assigned to the participants by designers or design researchers, and the assignment is based on ‘political’ consideration. In the conventional practices, users are regarded as the party whose members enjoy the fruits of design. In this view, participants are just involved in a very passive way, simply serving as informants for the designers and design researchers. They were ‘used’ as the subjects, with little power to direct relevant activities. Given that people are regarded as users, in design research process, users could be playing the role of the source of knowledge that would be conducive to the outcomes of design practice and research but people have not been granted the authority to participate in any ‘restrictive areas’ in the design process, such as bringing in applicable theories and interviewing skills or tasks at larger levels of scope and complexity (Sander et al., 2008).

Deviating from this instrumental view on the role of people’s participation, the advocates of co-design/participatory activities have maintained that participants (other than designers) in design research are partners and so involved in selecting the problems and sanctioning the search for solutions. Recently, the role of people in the process of design has been re-shaped as that which is tantamount to professional practitioners, termed as ‘extreme users’, ‘active design partners’, ‘experts of their experiences’ or ‘co-designers’. They are regarded as crucial in knowledge development, idea generation and concept development (Sanders et al., 2008; Visser et al., 2008). There has been a more extreme version about the role of participants, as suggested by Banham (1972) that the only real Design Participation is ‘do-it-yourself’. This configuration of the roles between participants and designers is based on the idea that users should have total autonomy to invent their rules in order to enhance the efficiency of the designer-user game. In other words, Banham suggested that designers are relegated to a considerably passive position.

Whatever degree of autonomy has been granted to participants, nonetheless, all of these suggest that designers, as the organisers of the design activities and events in which people are involved, have the final authority (even if it is based on scholarly justifications) to shape and determine the roles of participants and the nature of participation. This reveals the covert power exercised by the designers in participatory design activities. Yes, this awareness has already aroused the query on the legitimacy of designers’ authority in setting the rules of the game and the roles of the participants in participatory
design. However, the reason for rethinking the role of the users in design process is somewhat political in the sense the participation rights of users are yet highlighted.

Inspired by the solution-focused methods, we argue that the participation of users is more methodological. As Reason et al argued, the demonisation of knowledge led to full involvement of participants with a view of having “the action turn in the social sciences is a turn toward a kind of research/practice open in principle to anyone willing to commit to integrating inquiry and practice in everyday personal and professional settings” (Reason and Torbert, 2001, 7).

However, the natural attitude of design students has been identified as one of the barriers against the practice of opening up of the design practice community. In our view, the pre-reflexive designerly attitudes, or what phenomenologists refer to as natural attitudes, are “our original, world-directed stance, ... the default perspective, the one we start off from, the one we are in originally” (Sokolowski, 2000, p. 42); or simply put, our taken-for-granted attitudes. This natural attitude of designers is usually more visible when we observe designers in action.

THE CASE: DESIGN.LIVES LAB TO RETHINK DESIGN FOR AGEING AND COMMUNITY

In this Design.Lives Lab, we found that design students always perceived as problem solvers, opportunity seekers or change agents, to name a few roles. This reflects that the design students regarded themselves as craft makers whose responsibilities are to solve problems and to produce appropriate artefacts.

All six groups in this lab attempted to use social science methods to identify the prevailing problems happening among the estate residents in the first week. This manifests a kind of pre-reflexive being in the mindsets of the design students. They are the designers who are able to find out the users’ problems and rectify them accordingly. Basically, the design students used to criticise the others who includes their peer groups and users. For example, one team constantly described their targeted estate as ‘bedroom community’ in the sense that the residents there are cocooned within their flats. Their first proposal was to find ways drawing residents out of their accommodation units. Another group commented that the residents do not laugh. The third group depicted the residents as “never-say ‘Hi’”.

Of course, they had no idea why people are inclined to stay within their flats, if the residents were unhappy, if the community lacked dense social relationship or whether they have the legitimate authority to comment on other people’s ways of living. One of the natural attitudes of the design students is the identity as active citizens who have the ultimate role as responsible change agents to tackle social and environment issues. From our case, design students easily acquired a conception in which potential users are subject to their ‘analysis’ and ‘modifications’. As a result, owing to their pre-reflexive ways of knowing, design students tend to disregard the presence of ‘real’ users, and treated users merely as a ‘constructed concept’ or a ‘collective identity’ that represents a group of people. When discussing about users and personas, they tended to focus on the data said to be representing the users, or on abstracted features that can be easily ‘made up’ on the basis of their so-called ‘user research’ rather than on their experiences coming from their interaction with users (Ma, Ho & Chuah, 2010). The understanding of ‘real’ users seems to be less important to most students. And according to Davis (2008), “[F]or the typical design student, clients and users are exotic others, understood from the student’s own observations and assumptions, not through much input from real people” (p. 32). ‘Learning to act as a designer’ is possibly turned into a process of constituting power relationship between designers and users. It is socially desirable to say that designers is ‘making a difference’ and ‘doing for the own goods of the users’. However, this attitude stops designers from getting closer to the ways of knowing of the potential users, and from shaping a future anticipated by both designers and potential users.

As a concomitant of the natural attitude of problem solvers, it is somewhat inevitable to see that design
students consciously pursue ‘scientific methods’ to sustain the legitimacy of their ideas. In our interviews, most of them expressed that they were very anxious throughout the whole process, especially when the deadline was approaching. Their reactions included searching more data from websites, grounding the ideas on some premises that are supposed to be commonly and popularly recognized. Their justification of their ideas was not based on their own experiences but on authoritative sources of knowledge. We found that they had a very clear intention to find out the ‘true’ answers and the ‘genuine’ features of the social world in which they are interested. By doing so, they believed that their design outcomes could be supported and endorsed. Perhaps, we could say that design students have learnt to act as opportunistic entrepreneurs, being designers to utilise appropriate skills, knowledge and attitudes to create opportunity for themselves and/or their client to do something.

After being problem solvers, craft makers, active citizens, and opportunistic entrepreneurs, design students would take up one more role as meaning makers or ‘cultural intermediaries’. It seems that, in this group of design students’ mind, design becomes a ‘value-driven’ activity and its ultimate goal of a design solution is to construct human experiences in the forms of representation to signify the problems and needs of the potential users.

In the first week of the lab, all groups attempted to do two tasks. The one was to educate people, for instance, helping residents construct a better community, and the second is to tell residents what went wrong. One group designed twenty boxes signifying the prevailing problems of an estate whereas some groups tried to modify some ‘under-utilised’ facilities of the estate in order to enhance residents’ living quality. Looking into the six final designs for the Chinese New Year Market, we could find such messages. The network symbolises the possibility of building social network apart from digital networks, both the re-used furniture and the green gardening are to teach residents how to live in a more sustainable way, the wish-leaves and the ‘balloon’ monument are to reach for better social relationships and the sixth group promoting ‘shouting-out’ is to encourage more grievance expression.

We concede here that the conventional idea of using theory to guide method is just a problematic corollary of the conception about cognition, which is regarded philosophically as an inner state, being independent and as something special. This would lead to the dominance of an ‘expert-driven’ role for designers and the ignorance of reflexivity.

Furthermore, the expert-driven role has turn into a kind of conceptual framework constituting the pre-reflexive being of the design students. Rorty (1997), as a pragmatist philosopher, has suggested the abandon of the philosophical conception as it also results in a metaphysical belief that we could find out objective truth on the basis of human reasoning. Instead, it should take practice as a point of reference and see the contingent nature of practice and knowing. We take the view that design is a kind of practical knowing and thus Rorty’s pragmatic approach is appropriate in the design community of practice. In the design of our training workshop, we stress on the ‘doing’ and ‘being’ side rather than ‘observing’ side along any process of design. We have also pointed out that design problems are fundamentally wicked by nature (Rittel & Weber, 1973, cited in Coyne, 2005; Dorst, 2006). This suggests that, essentially, each design problem is unique and that the solutions are usually distinctive (Dorst, 2006; Löwgren & Stolterman, 2004) as each designer tends to approach and frame the problem differently. Reworking on the similar design problem is likely to yield a different approach and result based on the previous experience (Lawson & Dorst, 2009). In our lab, we also create more chances for discovering the nature of problems through solution-focused methods. In the next section, we present our effort in introducing solution-focused methods and some insights we could identify.

**INTERVENTIONS: PRACTICING SOLUTION-FOCUSED METHOD**

Our ways of doing design research is basically informed by Reason’s action research. We know that the research process does not emerge in tidy and
linear manner. The outcomes may not be eventuated as what we have planned to.

Some intervention tactics and advices as well as comments to students may be on ad hoc basis. However, three components are essential. First, it is necessary to find channels to work with potential users whose practical knowing implemented and practiced in daily life are valuable for design ideas. Secondly, outcomes are tentative always ready for modifications, and thus design is a process through which solutions are continuously proposed, tested and evaluated. We are not looking forward to ‘design in one go’. As Thomas and Carroll (1979) conducted, after a number of experiments and protocol studies of designing, that ‘a fundamental aspect is the nature of the approach taken to problems, rather than the nature of the problems themselves’ (quoted from Cross, 2006, 19). In other words, focusing on continuous modification and evaluation of the proposed solutions is not owing to the necessity of checking the nature of the problems, but examining the nature of our approach taken to problems. The third element is the awareness of pre-reflexive thinking. Our preliminary findings have shown in the last section that problem-solving method encourages the dominance of expert-driven role of designers and discourage reflexivity. Students also easily took design education as a kind of craftsmanship rather than a process of exchange between designers and people. We also found that students took design as a kind of technical profession which would be translated into a number of roles as problem solvers, craft makers, active citizens, and opportunistic entrepreneurs. However, all these roles are built on the foundation of the expert-driven role of designers at the expense of users’ participation. We argued that reflexivity and awareness of this kind of pre-reflexive being are need in order to accomplish participatory design. We attempt to ask designers to identify their pre-reflexive being which to a large extent ‘unconsciously’ shapes designers’ orientations and interpretations of roles, needs, natures and the kind of lives toward which participants should live up to. In order to achieve this, we make us three tactics, namely, confrontational tactics, empathy and being as users. We practiced these tactics in this Design.Lives Lab with the design students throughout the third week of the event.

A. CONFRONTATIONAL TACTICS:
It is a common practice that novice designers would take their works as the final products of design process, leaving little room for modification by others, let alone by users. In our design lab, one group revealed a strong inclination to treat their work as a ‘monument’. In day two of the market, they just left their created lantern as a monument there unnoticed. We, together with a guest, found it strange to see the absence of responsible design students there and decided to dismantle, or re-modify, the work. Cutting down all the ropes hanging the sieves, which are supposed to be the place where residents could place their Chinese year greetings (Figure 6). The design students just thought that it was a design as it provides a tool by which residents could communicate, and of most important, it is aesthetically sound and acceptable. Twenty minutes after the ‘intentional attack’, one of the students from this team came back and asked the ‘destroyer’ for the reasons of the attack. She said the work is ‘sacred’ and deserved ‘respect’ from all people. We asked her that, supposed that we were residents, whether we would be granted the right to ‘modify’ or ‘re-design’ the work. She looked speechless. We further asked her about their coded message underlying their work. She revealed that it was a tool for communication and a place for putting and sharing Chinese New Year greetings. She further explained that they would stand by the work and tell any onlookers the way of using their work. A few minutes later, three more students came back and expressed their grievances. Clearly, novice design students would really treasure their work, but in the context of participatory design, they give no room for manoeuvre for any potential users. Users could participate in ‘using’ and ‘expressing their feedbacks’, but not in any process of design.

Our reaction to their unhappiness, we asked the students to think about the objective of their design. As our rationale of our workshop is to design with the people who are believed to be protagonists to enjoy the fruits of design, we should work out a way for
both the designers and the potential users to know what the best design is. We asked the students to think about what kind of design they could at least make both parties happy.

The Brazilian social designer at this moment started using the sieves as footballs and invited other groups to play together. Those design students really felt embarrassed as it seemed that their work was insulted. But they found that the participants were really happy with playing together. Then, they attempted to transform the ‘monument’ into a game-like activity. They used the robes to make a net and participants were invited to write their greetings on a small piece of paper, put the paper into the sieve and threw the sieve onto the net.

After that, participants could pick one sieve and took the greeting paper back home. Although this game was not designed by any local residents, it was co-designed with other participants who are onlookers, their classmates and some guests. At least, they found that participants could enjoy the activity of throwing and picking, and at the same time have a chance to share Chinese New Year greetings. Of most important, the novice design students could understand that they have a pre-reflexive habit that their work would be treated as sacred and is not allowed to be modified. However, this is one of the major hurdles against participatory design.

B. EMPATHY

In our view, empathy grounded on intersubjectivity helps us understand user experience as, in the view of the phenomenologist that there is ultimately something in common in individual’s intending toward a thing in the world, the shared realm of experience can be achieved through reciprocally understanding self-experience when experiencing of the others’. Understanding self-experience, however, is not easy, because it takes reflective efforts to transcend from the immediate experience and natural attitudes. Husserl suggested that individuals are expected to transpose themselves to the other’s place so as to achieve the meditation of empathy. Therefore, it is necessary for the researcher to experience how subjects experience their lives in situ. As Husserl (1989) suggested: ‘I secure [the person’s] motivations by placing myself in his situation, [with] his level of education, his development as a youth, etc., and to do so I must needs share in that situation; I not only empathize with his thinking, his feeling, and his action, but I must also follow him in them … (ibid).’

We have accordingly broken this phenomenological task into three layers. The first layer is to listen to the details of the others’ discourses. This is the initial step of constituting intersubjectivity. As Finlay (2005) suggests, ‘the researcher’s task is not simply to listen to another’s story: the researcher also needs to be open to being with the participant in a relationship.’ Following this initial activity, the researcher should practice ‘doing empathy’ by connecting of the other’s embodiment to one’s own. Essentially, it is to achieve empathetic understanding of the other’s embodied experience by intimately connecting to the lived experience of the researcher’s own. This is informed by the phenomenological approach suggested by Finlay that, ‘the researcher’s task is not simply to listen to another’s story: the researcher also needs to be open to being with the participant in a relationship’ (2005, 277). Apart from the two layers, the third empathic act of acting into the Other’s bodily experience brought forth the imagination of replacement.

In our design lab, however, the first failure is the low participation rate of residents. The novice design students were upset as they could not find effective promotion channels to attract more residents to come to their booths. Hence, we were not able to practice the first layer of empathy. In the final days of the event, we asked the students to try the second layer, namely ‘doing empathy’ by connecting of the other’s embodiment to one’s own. We asked the students to recollect their experiences, which
are supposed to be similar to those of the residents. We could illustrate such a process in our workshop by focusing on the group whose members collected dumped furniture at the estate.

The design students reported that they had found a large pile of dumped furniture in the estate. They commented that the residents there wasted a lot of useful resources, so were intended to educate the residents to live sustainably. They recollected the dumped furniture and placed them in their booth. The setting was decorated like a furniture showroom as those run by IKEA. Lines were on the floor to indicate the distinction between exhibition areas, and customers’ path. Things were re-built and put orderly on the floor or on the wall. Signage was also provided. It seemed that participants were customers who should follow the signage and designated path to ‘appreciate’ the re-built works and finally acquired a moral statement that dumping is a kind of waste.

We gathered the design students one afternoon and asked them to choose one item from the booth and imagined where the item would be placed in their home. The basic requirement is that they should be true to themselves and really willing to ‘use’ the piece of furniture. Finally, few showed their willingness. The students were further asked if they willing to re-use some pieces of furniture which were supposed to be dumped by their neighbours.

Moreover, they were asked if they felt embarrassed once their using dumped furniture was known by their neighbours. After that, the students were invited to walk along their designated path, act like another participant, and feel about the journey. Finally, they reported that it was a very strange experience, as they seemed to be acting like a customer looking over something ‘useless’. The journey was somewhat unpleasant. This indicates that novice designer would find it difficult to go beyond their expert-driven role as a professional designer. Once they leave their designer role behind and take over a new one, they could discover something different.

They found that residents would not be pleasant either when walking along this path. We asked them to try to recount their experiences, especially searching for the moment when they were shocked by the large pile of dumped furniture. They had to search for the astonishing feeling at that time. We asked the novice designers to connect the moment of astonishment to the potential users’ possible feeling. Then, they decided to re-arrange their booth and began piling up the pieces again. They just wanted to re-build the pile just as the one they discovered in the estate at their first visit. After that, more participants, mostly were their classmates, joined in and asked why they did it. The students gave no answers and just recommended the participants to try to choose one and use it immediately. Some students re-built the ‘things’ and sat on them. After a short period of time, it seemed that participants were no longer conscious of sitting on their own designs. Most of them chatted there for a rather long time. The booth was extended into its front area and transformed into a temporary public area (Figure 7). One student commented that it seemed to be a kind of magic that more participants found the dumped furniture interesting and some even could immediately ‘design’ its alternative usages. At this moment, we asked the student to try the third layer of empathy, that is, the third empathic act of acting into the other’s bodily experience which brings forth the imagination of replacement, that means, we asked the students to imaginatively change their identity from designers to participants. This tactic is to encourage the designers to think about the bodily experience of participants when using their design, and in this process the student designer is the participant. We asked the students if we could understand why participants were willing to sit one the dumped furniture publicly, and under what circumstances the participants are willing to ‘design’ their own furniture. The design students however could not make sense of the tactic of the imagination of replacement while this tactic has been performed well by another group.
C. THE IMAGINATION OF REPLACEMENT

We learned this concept from Finlay. The original interpretation is to perform a kind of empathic act through which an observer and observant would become one, each is absorbed into the other. We change this interpretation in a way to the practice of design. The imagination of replacement is the moment the practitioner takes up two roles at the same time, namely a designer and a user. In other words, the design student performs ‘a DIY designer’. The idea was introduced to the one group of the students after they had finished construction of their booth. The booth was titled ‘shouting-out’, an area where different forms of paper-made speakers were placed. Participants were invited to use the speakers to express their grievances. The idea came from the experiences in their visit that the residents living in the estate, which the students were assigned to study, were very unhappy with many restrictions of the environment set up by the estate management. However, after they successfully mounted up all the speakers, only a few people went into their booth and tried the speakers. We asked the students to give some reasons about why the residents would come over and use their design. They had no ideas about the residents’ preferences. We further asked the students, given some residents came, if the residents would have some grievances that should be vented out. One final question: who needed their design? After the questioning time, the students were instructed to try out their own design. They shout, they yelled, and they roared (Figure 8). The content mostly revolved around inviting people to come to join them, making some noises and testing their personal vocal capacity. They began finding this activity meaningless. There was no impact. Then, they were asked to use their designs on their own way. They started persuading their schoolmates to come to join them. They expressed their dissatisfaction with their academic assignments, their grievances against their lives, etc. One of the students found that the speakers could be used for amplifying her voice. She then went around the campus to test the effects of using different paper-made speakers. She further found that the speakers were not only for venting but also for making wonderful sounds in the campus.

This experiment went no further. But one student expressed that it was possible for them to use it to persuade the residents to design their own audio instrument to make different kinds of sound within their estate. According to this student, they could think of the possible ways of designing with the residents to improve the living quality through better audio environment. Surely this idea comes from their experiences of the imagination of replacement. It is not only from the empathic act of putting one’s feet into other’s shoes, but also from the empathic act of being the user. To us, this tactic is important as this would facilitate us to move onwards in the direction of ‘designing by the user’.

CONCLUSION

This is an attempt to incorporate solution-focused method into design research and practice. We do not regard this method as one of the many methodologies that could be employed by designers. Rather, we argued that, as Cross suggested, the nature of design practice is necessarily determined by its target, i.e. the wicked problems and by the ability it needs, i.e. design ability. It has been pointed out by Cross that ‘design ability is therefore founded on the resolution of ill-defined problems by adopting a solution-focussing strategy and productive or appositional styles of thinking’ (2006, 19). By using appositional styles of thinking, we understand that no one can claim any prestigious position to judge what the best practice is. In light of this understanding, we suggest the opening up of the design practice community in which both designers and potential users should be allowed to involve in the design
process, since the knowledge and practice of both
parties would contribute to the design process.

We have attempted to translate this idea to practice
through our participatory design labs. We worked with
the design students firstly to use their own
approaches to write their design problems and brief
and then scrutinized their outcomes. Clearly, the
students are informed by conventional problem-
solving method, which leads to very implicit roles of
designers as problem-solvers, change agents, active
citizens and opportunistic entrepreneurs. All these
roles are grounded on the idea that designer could
employ some sort of academic or even scientific
methods to support their views, actions and design
outcomes. However, this covertly suppresses the
possibility of opening up the design practice and its
relationship to community. As we believe that the
roles taken by novice designers rooted in level of their
pre-reflexive being, we designed different events in
which the novice designers could be sensitized to the
power of pre-reflexive dispositions. We had made use
of three types of tactics including confrontation,
empathy and imagination of replacement. All these
tactics result in different level of increased awareness
of designers' dominant position and the advantages of
using solution-focused methods. Of most important,
this group of novice designers expressed that they
had learnt a lesson that design is an emergent
process, which needs the contribution from designers
and the users.

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