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Future-Focused Thinking

EDITED BY:
PETER LLOYD
ERIK BOHEMIA

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Peter Lloyd and Erik Bohemia

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SECTION 21

INCLUSIVE DESIGN

DRS2016
Design + Research + Society
Future-Focused Thinking

2016 Design Research Society
50th Anniversary Conference
27-30 June 2016, Brighton, UK

Introduction: Inclusive Design

Hua Dong

Tongji University
DOI: 10.21606/drs.2016.610

The Inclusive Design Research Special Interest Group (Inclusive SIG) of the Design Research Society provides an international platform for researchers, design practitioners, and the general public to exchange knowledge about accessible and attractive design and to empower wider participation in the design process.

The main foci of the Inclusive SIG include:

- Building and advancing knowledge for inclusive design and research
- Creating and evaluating tools and methods for inclusive design practice
- Developing strategies for engaging designers and the public
- Exploring new territories of inclusive design for the majority world
- Through these activities, we aim:
- To share best practice in contemporary design, research, education, and public engagement
- To keep pushing the boundaries of inclusive design and explore its potential in different contexts

As one of the special interest groups of the Design Research Society (DRS), Inclusive SIG organizes symposia on a regular basis, and the inclusive design session for the 2016 DRS received 18 papers, in addition to the relevant submissions from the open call. Following a thorough review process and strict selection criteria, 11 papers were selected for presentation at the conference. These papers cover a diverse range of topics, from redefining ageing, measuring user capabilities, to assessing product-related stigma.

For example, the paper 'Designing for older people: But who is an older person?' by Raghavendra et al. from University of Canberra, Australia， addresses one of the critical aspects of inclusive design discourses, i.e. the definition of ageing. It reports the experiment investigating if redundancy in interface design can facilitate intuitive use in older users and

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users with low technological prior experience. The findings proved that diversity in older age groups presents a great challenge in developing intuitively usable interfaces. The research suggests that looking at a target group based on their cognitive abilities instead of chronological age will provide an much more effective approach in dealing with this challenge.

Understanding user capability has been a topic for inclusive design for many years; the main challenges include: lack of appropriate definition of product-design related capabilities or related measurement scales and methods. The paper 'Towards designing inclusion: insights from a user data collection study in China' by Ning and Dong from Tongji University, has attempted to collect user data of 130 older persons in China, covering many areas of competence, from the more quantitative domain of biomechanics, interaction, to more subjective and qualitative areas (e.g. comfort). As a pilot study in collecting Chinese older people's capabilities in relation to product use, the study explores the relation between 'maximum' and 'comfortable' capability measurements, and verifies the feasibility of establishing predictive models of successful product interactions in the 50-70 user group. This study has provided promising directions for further exploration of user data.

With increasing longevity and changes in population demographics; designers, engineers and architects are faced with the challenge of providing older adults with enabling technologies and home environments that facilitate physical activity and wellbeing. For instance, there is an overall theme that older people encounter difficulty in opening household packaging for a variety of reasons. Ma and Dong's paper reports upon a survey-based investigation into such difficulties encountered by older Chinese individuals. The paper not only identifies difficult packaging types from the older users' perspectives, but also tackles the problem by considering several critical design research areas such as user participation in the design process, end user acceptance, decision-making and inclusion.

Lim and Nevay from the University of Dundee also focuses on the design process. Their paper reports a co-design project, involving care-home residents, to address the issue of acceptance and adoption of wearable technologies for older adults to monitor their activities and movements. It describes a 'craft-based' approach 'to allow designers to understand and uncover people's capabilities and needs in a non-intrusive and empathic way'. The paper raises, at the outset, the issue of non-compliance of current wearable technologies, and posits that co-design of these with older adults - through a 'crafting' process - will provide a greater sense of ownership and acceptability of designs. The authors' particular emphasis is on the 'crafting' of these artefacts, suggesting this is being led by 'non-techies' which may prove of significance in the design of acceptable technologies.

Dijk and Verhoeven's paper 'to shed some light on empowerment: towards designing for embodied functionality' uses a participatory design project to examine whether an interactive lighting system could empower a person with autism by supporting domestic activities. Reflecting on the case the authors develop the vision of *Embodied Functionality* (EF) and argue that designing for EF goes beyond 'distributing' information technology in the

environment and opens up an alternative design space, holding the promise of a more successful appropriation of interactive (assistive) products into people's everyday lives.

Stigma is a subject frequently discussed within the field of inclusive design, however measurement of this trait is under-explored. The paper 'Product stigmaticity: measuring product-related stigma' (by Kristof Romain Viktor Vaes, Pieter Jan Stappers, Achiel Standaert) presents two measuring techniques that aim to objectively assess the 'degree' of 'product-related stigma' (PRS) that is 'attached' to products. It is argued that both experimental techniques are predominantly suited as comparison tools, able to compare products on their PRS-eliciting potential. It is expected that designers and developers to use these results to justify design decisions with quantitative data, to assess which product properties have influenced certain reactions, and to what extent subsequent improvements have been successful.

The selected papers not only address the traditional dimensions of inclusive design, i.e. young-old, able-disable, professional-lay, but also raise emerging topics such as participatory action and the cultural aspect of inclusive design.

Through case study analysis, Nicola St John's paper 'Towards more culturally inclusive communication design practices: exploring creative participation between non-Indigenous and Indigenous people in Australia' explores and discusses a more culturally inclusive communication design practice particularly in relation to framing a process for creative participation and creation between Non-Indigenous and Indigenous people within Australia. It draws from and applies principles of Transformative Participatory Action research to communication design practice. This approach moves away from co-design and participatory design models to focus more on participatory action, active engagement and empowering Indigenous communities through design.

Zhao Chao, Popovic Vesna and Lu Xiaobo's paper 'Designing meaningful vehicles for older users: culture, technology, and experience' investigates Chinese middle-aged vehicle users and older vehicle users pertinent to their current travel experience and future travel needs. The study utilizes grounded theory to analyze the travel activities of two age cohorts and compare the travel-needs-influencing factors. The researchers have adapted technique of interviews, logbook and co-discovery to help collect data and explore these factors within the Chinese cultural frameworks. The study contributes to a framework and method for automotive designers to incorporate user feedback in a human-centered design process, aiming at designing vehicles that are both meaningful, functional and locally relevant for an aging population in China.

Grangaard's paper 'Towards an innovative and inclusive architecture' describes a study investigating how architectural firms and organizations related to disability in the built environment perceive and work with the Danish Building Regulations Accessibility

Requirements. It discusses about accessibility regulations, in particular the challenges they present by forcing the firms to consistently meet the prescribed requirements as opposed to

the behavioural/experiential needs of the users, when not all users have the same accessibility needs.

David Fassi, Laura Galluzzo and Liat Rogel report a series of design interventions that open up the Bovisa Campus of the Politecnico di Milano as a hidden space to its surrounding communities, aiming at making normally hidden marginalized public spaces within a university campus accessible to the wider community. The paper presents a means of engaging students in future thinking and how design and design education might play a more active role in enabling such practices to be more systematically developed through a series of social activities, highlighting how design research as a creative and active force invites reconsideration of ideas about design and its role in shaping our lives in more expansive ways.

With these interesting papers addressing inclusivity from a variety of perspectives, I expect that the Inclusive Design session to provide an inspirational form for discussion and debate. For example, although engaging users creatively in the design process could help increase the sense of ownership of the participants, thus increasing the acceptance of the final design, with designers being knowledge users of inclusive design knowledge, there is a challenge yet to be addressed, i.e. how such user data would be made available, accessible and attractive to designer practitioners to exploit. We hope participants will share experience and good practice and help move the filed forward.

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Hidden public spaces: when a university campus becomes a place for communities

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Abstract: "C'è spazio per tutti/There's room for one more" is an event that took place in November 2011 at the Milano Bovisa Durando campus of Politecnico di Milano, Italy with the purpose of opening up the public spaces of the university to the inhabitants of that area through a series of design actions to offer opportunities for understanding, observation and enjoyment of a public space. That was the beginning of a series of design for social innovation projects connected to the Bovisa neighbourhood organized over the following years. In this paper we will describe the need to open-up hidden (unknown) public spaces like the Milano Bovisa Durando campus and the idea that through small rapid design experiments we can immediately test the efficacy of tools made to enable people's and communities' use of the public space.

Keywords: Hidden public space, Toolkit, Communities, University campus

1. Introduction

1.1 The city and the need for communities.

The activity of communities in public spaces is a key feature of moving towards a more sustainable way of living in the urban area. It is not surprising that the city has been a favourite discussion topic (for bad or good) in the recent years, and for a good reason: the world's population is becoming concentrated in urban areas; therefore, taking care of the city means taking care of large numbers of people. The common image of the expanding city, however, is far from ideal. The most frequent words describing urban realities are: social exclusion, alienation, segregation and loneliness. More than a crisis of the city we should rather talk about a crisis of city life. Globally, cities are growing, changing and developing, and international metropolises share more features than they do with their local contexts (Sassen, 2004). It has been clear for some time now that new development

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strategies are needed, but: where to begin? In the United States many authors have criticized urban planning processes and accused them of not considering the residents' needs, some offering concrete solutions and alternatives. In 1970, Richard Sennet (Sennet, 1970) wrote about the crisis of the city, introducing an idea that differed from that of Jane Jacobs in *"The Death and Life of Great American Cities"* (Jacobs, 1961). Jacobs, he says, is nostalgic about the past and the relationships between people in small towns; she tends to suggest a restoration of past conditions. Sennet (1970) states we can not think that the past can give us elements to improve our present city problems, as the solutions we want must be adapted to an affluent, technological era. The answer is probably to be found between these two arguments, or perhaps they are not so far away from each other to begin with. They both conclude that communities must have a need for, and the will to re-reach some values that have been lost in modern urban life, such as mutual support and conviviality. Although written some years ago, these books still represent important and contemporary criticisms of today's urban planning. More and more people in cities are finding creative ways of refilling those gaps. They collaborate in various ways using new and old tools. These creative communities (Meroni, 2007) are producing social innovation. They are a sustainable resource that must not only be recognized but also supported and disseminated. According to Manzini (2015), "social innovations are solutions based on new social forms and economical models. They are those social changes towards sustainability when they can reduce the environmental impact, regenerate common goods and social fabric". These innovations often deal with public space because communities often act in and for public space. What kind of public spaces and how they are connected with the university realm is the key issue to be discussed in the next paragraph.

3.2 Space for urban communities

Independent events have started to grow in the city, in those areas where there are particular problems which are shown by increasing the consciousness of the residents (Bostjan, 2010:22). The city is read as an independent container of public spaces even if, according to Rem Koolhas, the distinction between public and private is nowadays out-dated. We are faced with residual spaces, abandoned and not controlled. Giovanna Piccinno in *Space Design* (Piccinno, 2008, p.11) says that "[…] the contemporary designer must listen to new places (without distinction between places and non-places) and new citizens (local or itinerant) and answer in terms of design with the operative tools he has.[…]". The action is generally done in places which are not offered freely or donated, but, on the contrary, are lent or temporarily given for a specific use (Haydn and Temel, 2006). And we are not only talking about those places recognized as possible sites for temporary urban solutions (Fassi, 2012)[1] (squares, parks, stadiums), but about those areas at the margins, which have been

[1] "Temporary urban solutions" (TUS) are project answers put in place by professionals in a sector or by groups of people lead by a team of
project specialists, which change into devices, set up, collective actions, emergency displays, project strategies which contaminate the single building, an agglomerate of them, a urban interior or an open space or a passage space with a

stolen from an inattentive urban planning project or infrastructures that do not enter into dialogue with their context (Navarra, 2008).[1] Or it is the "space of abandonment" as the "Stalker" group defined it (Careri, 2006), which is a space "where complexity survives to the mono-functional colonization and the city experiments generating a neutral area which gives back a sense of concept to public space as a creative space and sharing space" (Romolo, 2005, p.18). Luciano Crespi (Crespi, 2009, p.20) says that the "true act of recognition of the place is only through the presence on the place itself, within the internal and external areas, whose changes need to be foreseen. Where staying means something deeper than stopping for a moment or being there by chance. Staying means the need to understand, to listen to the place, to recognize the soul" in the sense provided by Hillman (2004). The sense of ownership of space reflects the reading of the city as a "place of self-identification of the individual" which, according to Barcellona (Barcellona, 2006, p.17) "is possible through the personalization of the urban space which is at the same time the structured image of values and community bonds and the place of distinction for the relationship between single and community". Feeling an urban space means perceiving a shape of what is empty and what is full, of high and low spaces, above and below spaces, but also recognizing a system of relationships between the people who live in these spaces, the neighborhood, the life in the residential areas, true centres of communication (Barcellona, 2006, p.17).

As Francesca Zajczyk states, the neighborhood is a portion of an urban area, both physical and social, where plenty of resources, factors and critical situations can be found. It underlines the identification with the local side of the city, is able to read the micro-social dynamics and to express the relationship among citizens/social groups and urban areas (Zajczyk, 2008).

2. Hidden public spaces

Sometimes public space is not obvious. When the borders between private and public are blurred, new kind of spaces are born that even if they belong to everyone they are not visually public. These are public spaces we define as 'hidden'. Traditional houses and apartment blocks in Milan were designed to have an inner courtyard that generally gave access to other buildings inside, but is not seen from the outside. These courtyards have direct access from the streets that brings the user to a semi-private area. It means they are open to the public even if they belong to a private property. It is this feature that makes them hidden places, since citizens, tourists or casual passers-by are not directly aware of them and could only discover them if needing access. This courtyard distribution system comes from the farmhouses ("cascina"), a traditional system of buildings, now found only in

process of functional and perceptive change on the occasion of temporary events linked to hospitality, to sales, to leisure time, to entertainment" in Fassi, D., Temporary Urban Solutions, Maggioli, Rimini, 2012, p.12.

[1] "Infrastructures compose an articulate vocabulary of shapes which defining the covered spaces with a variable height, interfere with the urban network. Thus there are some special points which form residual spaces, not accessible to cars and separated by houses. In these knots there are the spontaneous and temporary actions which bring to their use with absolutely variable ways and time", Navarra, Marco, (a cura di), *Repairing cities*, Siracusa, LetteraVentidue edizioni, 2008, p.14

the countryside close to Milan, which serves both residential and work purposes. In Milan we may find "a city within a city"[1] made up of these hidden places: some are unknown even if located on main urban pathways, other are invisible because they are located in an urban "backstage". They may be classified as those that have a cultural heritage value (material or immaterial) and as those that have potential to be explored and valued in a community. Public university campuses are included in this latter category. Even if they are used by a specific kind of user (people who study or work there) and are perceived by other people as a private area (belonging to university); in most cases, however, campus spaces are public. According to Zukin (Zukin, 1995) "public spaces are important because they are places where strangers mingle freely" and since "metropolitan universities offer the possibility of creating a dialogue across the difference that largely defines metropolitan life in our time" (Bender, 1998) we may consider the campus located in the Bovisa area in Milan as an example of how this dialogue could be developed by merging the neighborhood and the academic staff. The crucial location of this campus is described in the next paragraph where a strong connection among spaces, buildings and communities emerge.

2.1 The Milano Bovisa Durando campus

Bovisa is an ex-industrial district. In the second half of the 20th century it was subject to great change due to the removal of almost all the industries. The district was left with many abandoned areas that were soon to become a problem for the residents as they attracted homeless people, drug dealers etc. The quarter had lost its main reason of existence and did not initially transform into a suitable residential area with appropriate public spaces. The population has become more and more mixed as immigrants came to the district. Various re-construction projects slowly began in the area and the biggest one was the creation of two university campuses for the Politecnico di Milano, Milano Bovisa Durando and Milano Bovisa La . The arrival of Politecnico di Milano in the Bovisa area changed the district again, bringing in young students and commercial activities related to them. The new life of the neighbourhood has indeed brought an improvement of public transportation and the building of new residential areas, but public spaces like green areas or squares with street furniture are still missing. The Milano Bovisa Durando campus, hosting the School of Design, was built at the end of the 90s on the grounds of "Ceretti & Tanfani", a long-established company that had produced cable railways and had made Bovisa a working class district. The place is part of the historical memory of the local inhabitants. Today it is a green space with places to sit as well as a cafe. In spring and summer many students sit outside, enjoy the sun and doing outdoor activities. It is a hidden public space since no one beside the university community uses it as such. The campus remains an "island for students" and most of the people who once knew the place as a former industry did not even have the opportunity to see how it has transformed. The two types of 'users' (university community and the local

[1] The hidden Milano is now at the centre of a tourist promotion activity by the city council. It is described in detail at www.turismo.milano.it

residents) have very few contact points in common. The potential for improvement the campus could have offered is huge, but unfortunately it has not been fulfilled.

3. Hidden public space and design education experiment

Following the premises described in the previous paragraph, as a research team dealing with design for social innovation, we started to investigate how this hidden public space could have been opened up by the university community (students/designers/staff) to create extra space in the everyday life of permanent residents. To answer this question we tested a design education experiment based on user/community centered design, using co-design methods and creating a deep immersive experience in the neighborhood for postgraduate students. We embraced the theory of designers as solution-developers for people to one that allows people to design by and for themselves (Brown, 2009) asking the students to open a dialogue with the local community, with associations or informal groups. In 2011, when we established a workshop at the School of Design this offer was addressed to postgraduate students from MSc Interior, Communication. Fashion, Product Service System and Product Design. This created an intra-disciplinary class that was useful to merge skills, competences and approaches since the students were working in teams. It was the first time that a course with a strong connection with the neighbourhood and with a deep in-the-field immersion was held at the School of Design. At the same time, a Polisocial programme was starting: a programme for university social responsibility. Polisocial aims to place the university in close contact with the dynamics of change in society, extending the university's mission to social issues and needs that arise from the region, on both a local and global level. Polisocial promotes and encourages new multidisciplinary approaches in human and social development, developing training opportunities and opportunities for exchange and research offered to students, researchers, and the university's teaching and technical-administrative staff. "The goal is to foster a responsible attitude and to develop skills, expertise and new values, in future generations of professionals and citizens, increasingly more aware and prepared to handle ethical challenges" [1].

3.1 Methodology

A Participatory Action Research (PAR) was used to define the workshop activities. At the heart of this process is five-day workshop for design students ending in a one-day event to test the ideas immediately. Since a prototype can not only be viewed as a thing (an object) (Anders et al., 2011) but also as socio-material relations where matters of concerns can be dealt with (Björgvinsson et al 2010), we encouraged the students to work on both these features. That is why the prototyping action was connected to an event where not only product/spaces/service are shown and but where relations take place helped by the use of toolkits. The toolkits are made to be used directly by the end users, thus empowering them to develop certain actions or to achieve specific goals. This kind of fast, small design

[1] http://www.polisocial.polimi.it/it/home/

experiments allowed us to reach quick conclusions and continue towards more stable and organized solutions (Fassi, Meroni, Simeone, 2013). Our PAR process was organized in this way:

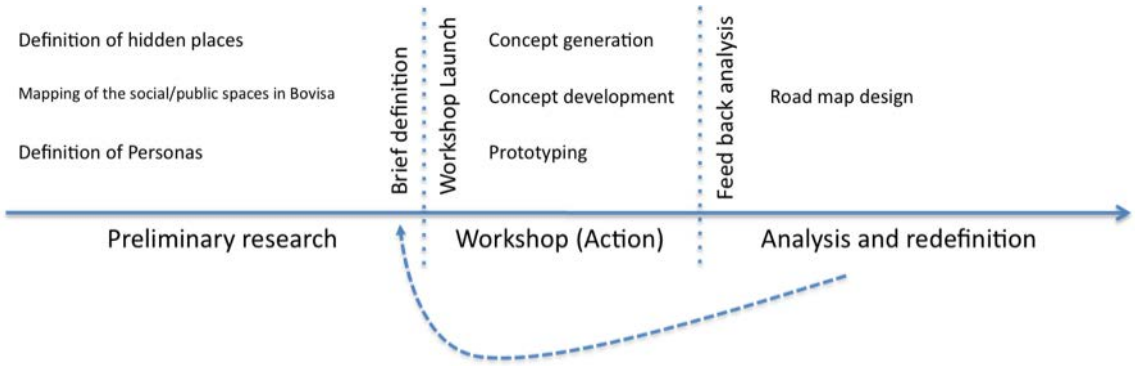

Figure 1: PAR (Participatory Action Research) Model

The research began with a preliminary study of available literature about conventional and non-conventional public spaces. Through this, a definition of hidden public spaces was made available (see above). The Campus Bovisa area was then chosen in order to generate an applied activity on the topic. The second part of the preliminary research is context-related and included the definition of personas and the mapping of the area's social places.

3.3 Mapping of the social/public places of Bovisa

An immersion took place in the social/public places of Bovisa, including schools, local associations, public services, libraries, parks etc. From this mapping it became clear that public areas that involve the whole community are missing and the existing social places are related to specific communities and are semi-private. Some of the hypotheses previously formulated were confirmed by this phase of the research: the Milano Bovisa Durando campus is not considered a public space for the residents and there is a vast interest in having more space available for age- and culture-crossing activities. Also, the campus is very intriguing for the people and most of them, especially the retired people, expressed a need and real curiosity in seeing what Politecnico di Milano is and how it uses those areas. Most of the new local shops that were opened after the arrival of Politecnico di Milano are used by the university community and experience a loss of customers at weekends when there are no activities in the campus.

The research and mapping brought a definition of the brief to the student workshop. The students were asked to:

- develop ideas for collaborative services on the campus area for local residents
- design a toolkit to enable people to participate in/initiate the services

- test part of the toolkit or prototype the service where needed, in the one-day event scheduled after the workshop.
- let the people do social activities in a "design context" (i.e. School of Design spaces of the campus)

A few more specific topics emerged from the first part of the research: 1) the lack of green spaces and the relationship with nature, 2) the absence of a cultural heritage related to everyday spaces 3) the desire for a sense of community and the need for dedicated spaces, and 4) a constant need to re-vitalize the neighborhood from a cultural point of view. These results produced four topics that were presented to the students by the tutors as part of the brief:

- Food: green spaces, contact with nature, cooking
- Places: local cultural heritage valorisation, explanation of Politecnico di Milano facilities
- Free time: public sport facilities or spaces, spaces for group activities
- Entertainment: events, exhibition, open air activities.

4. The workshop

4.1 Concept generation for services, concept development:

42 international students joined the workshop as an elective course on the MSc Product Service System. Students were asked to split in teams and work on one of the four topics assigned. One team focused on managing Saturday morning events, including communication strategy, fund-raising to produce toolkits, logistic issues and promotion/advertising to guarantee an adequate number of people would attend. On Wednesday the event-managing team went to the local market to promote the Saturday event through a flash-mob that focused on the idea of providing a chair for people to come and sit with them to have a chat in a public space. It was a way of letting local people know that a "hidden place" was asking to be discovered.[1] During the week the same team went to the mapped schools to advertise the event to the children and to their parents/grandparents at the end of the school day to spread the word. Small groups of students worked on concept generation for the first two days and then moved on to the development of the project and the production of the "material" outputs included in the toolkits. Five concepts were presented according to the topics suggested and the "personas" identified. Workshops with children, gardening, tours of the campus, and light sports activities were some of the visions designed by the students that received detailed feedback in a session where students and tutors were to produce five projects to be developed in the following three days, which would then be presented at "C'è spazio per tutti/There's room for one more" event. During

[1] Short movie about the flash-mob can be viewed at http://www.youtube.com/watch?v=PzyhIXTBhD8

the second part of the week there was a huge effort by the students to get in contact with local shops for the supply of raw materials that would useful to the projects.

Five toolkits were designed for the five outputs of the workshop:

- "C'è giardino per tutti/There's a garden for everyone": to create a urban garden for the area in the green spaces of the campus. A community garden inside the Politecnico campus would enable people to create a community, enhancing trans-generational exchange and promoting a sustainable lifestyle

Figure 2 "C'è giardino per tutti" toolkit

- "Il mio taccuino/My notebook": to introduce the natural part of the campus to children through collecting leaves, drawing and using the "frottage" technique. The main purpose is to let children understand what the design process is through a series of guided exercises inspired by our activities. As well as new techniques, the children will learn how to discover new places and know more about specific contexts by using a different approach.

Figure 3 Il Mio taccuino toolkit

- “Piccoli cuochi/Little cooks”: to apply the design process to cooking according to Enzo Mari’s theories, involving children. It encourages people to get to know each other and collaborate while being engaged in a cooking process which reflects the design method. The toolkit includes: 20 cards – ingredients, 20 cards - cooking utensils, 1 instruction card with rules of the game, 1 method card with recipe.
- “Poli-tour”: to discover the past and present of the campus, through some traces left by the former factory “Ceretti&Tanfani” and discovering the facilities of Politecnico di Milano. The toolkit is made up of 6 elements: a map including clues to find the path of the quest; information postcards and photo panels, providing information about the past history and the present of the campus, the red chair where people would sit and have a picture taken in the campus context.
- "Peter e Gisella": to reclaim the public space through light sports activities linked to campus areas (fig. 4). The toolkit includes 7 illustrative boards, which can be printed to create different areas where participants do different healthy activities, magenta stickers to indicate where the activities take place, and moustache stickers for the laughing activity. Users can also add new activities to customize it to their own wishes.

Figure 4 "Peter and Gisella" toolkit

4.2 Prototyping of service ideas

Some guidelines have been followed to prototype the toolkits to guarantee scientific results. First: the toolkits had to present as a physical output including the rules and tools to be used. Second: the toolkits had to be produced in a series of fifteen items (as a minimum) to allow appropriate sufficient number of people to be involved in testing them. Third: three to four facilitators had to be present to help users engage with the toolkit and use it. Fourth: the facilitators had to collect feedback directly (through an informal conversation with the users) and indirectly (through observation of the interaction between users and toolkits). Fifth: every activity had to be recorded through pictures and/or movies.

When the gates opened a reception desk was placed at the main entrance and the event managing team was in charge of welcoming the people and explaining the project. People of the neighborhood were invited to use the space (often for the first time) as a public space and they were given a map of the campus, including where they could find the toolkit to be tested.

4.3 Feedback.

200 people entered the campus that day and the general feedback was positive. Feedback was collected by interviews, surveys and active observation on the day. The surveys/interviews asked mainly:

- if people could see themselves coming more frequently to the campus to use it for their own activities or enjoying the activities provided
- their opinion about the one-day event and the individual activities
- their wishes for future events in the campus

Active observation, including taking photographs and filming, was important in understanding different behaviours. The students could immediately understand if there was something in their project that needed modifying and some did it on the same day to have immediate results. Others took notes for a future design of the project. [1]

5. Analysis and road map design

The feedback was analysed into points of strength and weaknesses (as described below). In order to achieve continuity and arrive at a repeatable model we designed a road map for future steps.

5.1 Results

The overall results of the research have shown:

- Interest by the people to discover the campus as it is today. Many of the visitors knew the place in it former use and during this event had the chance to see it for the first time as a university campus. Elderly people were very keen to see the transformation and tell the students about what used to be there before, having a real wish to strengthen their memories.
- Understanding by the people of the new opportunities offered by the space (how they can use them). Entering the campus and participating in the initiative made people understand how they can use the space on an everyday basis. Many people showed interest in coming there with children to enjoy being in the open air or ride bicycles because the space is well-protected. Also, people involved in local associations were interested in initiating their own activities in the space. A group of neighbors was interested in maintaining the vegetable garden and creating a new green space for the neighborhood, as they do not own a private one.
- A better understanding of the local context by the university community. The event allowed the university community to know more about the context (and not only the limited places where they have lessons)

[1] A short movie about "C'è spazio per tutti/There's room for one more" made by the event managing student team is available at http://www.youtube.com/watch?v=atvk7kw5_Ic&feature=related

- Offering a mixed space for several categories of users. The Bovisa campus space was transformed by the designed toolkits into a multi-user space with very different activities. The people participating noticed this and the feedback was very positive.
- Generating new economic dynamics among local shops, citizens and students. The fund-raising done by the students among the local commercial activities allowed them to become acquainted with the economic (and not only social) potential of the event. Those who understood the potential of collaborating with the university showed great interest, and availability and connections were made for future projects.
- Limited time of the event. 3.5 hours is a rather limited time for an event. On one side it allowed us to achieve a good level of results and tests but, on the other, it could have been longer and lasted for the whole day so as to not only get in touch with the "morning" users of the area but also with the "afternoon/evening" ones.
- Campus boundaries. Politecnico di Milano campus has physical gates that are perceived by residents as a barrier. This created some difficulties during the event, because, even if they were open and advertised as the entrance, they were still perceived as a restriction to accessibility.

6. Follow up and discussion

6.1 Follow up

The need for spaces for the community in the city was confirmed by our PAR. According to certain targets set in the goals, the results of the "C'è spazio per tutti" workshop and event have generated scenarios that could be systematized to give the prototyped solutions a temporal continuity and interaction by generating new solutions for integration with the space. The time pattern in which the research/action was set, has been effective because there was an area of direct consciousness as to the failure or success of the project. The workshop, thanks to the Masters level students, a good mix of background and skills of the team members, and to rhythm and aims set during the initial phase, was a research method with a high level of instantaneous experimentation generating ideas to be put into effect. It soon brought results thanks to a rapid phase of development.

The hidden place started to be discovered by the neighbourhood. The depth of existing boundaries between the university area and Bovisa was decreasing through word of mouth and signals left on the campus as a memory of the event.

"C'è spazio per tutti" gave rise to several subsequent initiatives. The format we used was so successful, both in terms of the quality of the solutions and of the number of citizens involved, that we decided to use it as a model to be repeated. In October 2012, we organized a second version, where we proposed ten different design activities with the result of opening up the campus to more people.

In 2013, the name and format changed due to a systemization through a Masters thesis in Product Service System Design[1]. In March there was the first "Il Sabato della Bovisa" (Bovisa Social Saturdays) to further underline the context of the Bovisa district, where it takes place. In that year the event became a monthly appointment for the campus by a regular involvement of the local associations to gather more people. The format was repeated for five months (from March to July 2013) with four main activities focusing on book sharing, children's games, gardening and light sports activities. It was then held twice in 2014 and in March 2015, where it was doubled (over two different days) and took place not only in the Bovisa campus but also in another hidden public space of the neighborhood (called Bovisasca).

6.2 Discussion

The main characteristics of this format are, first of all, the relationship between the campus and its neighborhood, and then the focus of the projects: all are toolkits designed by the students with and for a local association; and again, the temporary nature of the format.

The success of these events can be seen by their numbers: from 250 visitors in the first edition in 2012 to 750 in March 2014. This underlines the results of making a hidden public space more visible to a larger number of people by using design actions.

This result is not only connected to the individual events but it also has a long-term application. One of the projects designed for the first event (C'è giardino per tutti) was carried forward and became a permanent project: *Coltivando - L'orto conviviale al Politecnico di Milano (*Coltivando - The convivial garden at the Politecnico di Milano).

Coltivando was the result of a deep research on the urban agriculture topic within a public space and of a co-design process, lasting four months, which brought people back to the university campus more regularly by involving them in continuous activities (set-up, maintenance, etc.) in the garden. *Coltivando* was founded in October 2012 by a group of professors, researchers, and graduates of the Department of Design, and the School of Design of the Politecnico di Milano. Its main objective is, again, to connect two spatial and social entities that co-exist but do not connect with each other through conversation: the Durando university campus, established at the end of the 1990s, and the surrounding neighborhood of Bovisa. After more than two years, the garden is a thriving hub of community activity, and is considered a success. The team of organizers is made up of 15-20 participants from the neighborhood.

These two initiatives, a temporary event and a permanent community garden, generated awareness in the local neighborhood of the role of the campus and the university. But how could these projects become economically sustainable and/or adapted in other similar contexts?

This question is at the core of "campUS" – Incubation and Settings for Social Practices", a funded research project financed by the "Polisocial Award", a prize that awards social

[1] Roberta Motter, Il Sabato della Bovisa, MSc Product Service System Design thesis, Politecnico di Milano, 2013

innovation research projects within Politecnico di Milano. The project encompasses four different initiatives: the drawing up of guidelines for the design and the realization of urban community gardens, a neighborhood social TV network, a traveling pavilion to host the activities of the local associations; and the study of the economic sustainability of the three preceding initiatives. This research project is currently ongoing and underlines how the role of the designer as activator can enable people to live and use spaces on their own. The expected results at the end of the project (October 2016) will be a model of economic sustainability that will allow the outputs (community garden, social TV and traveling pavilion) to continue for a longer time.

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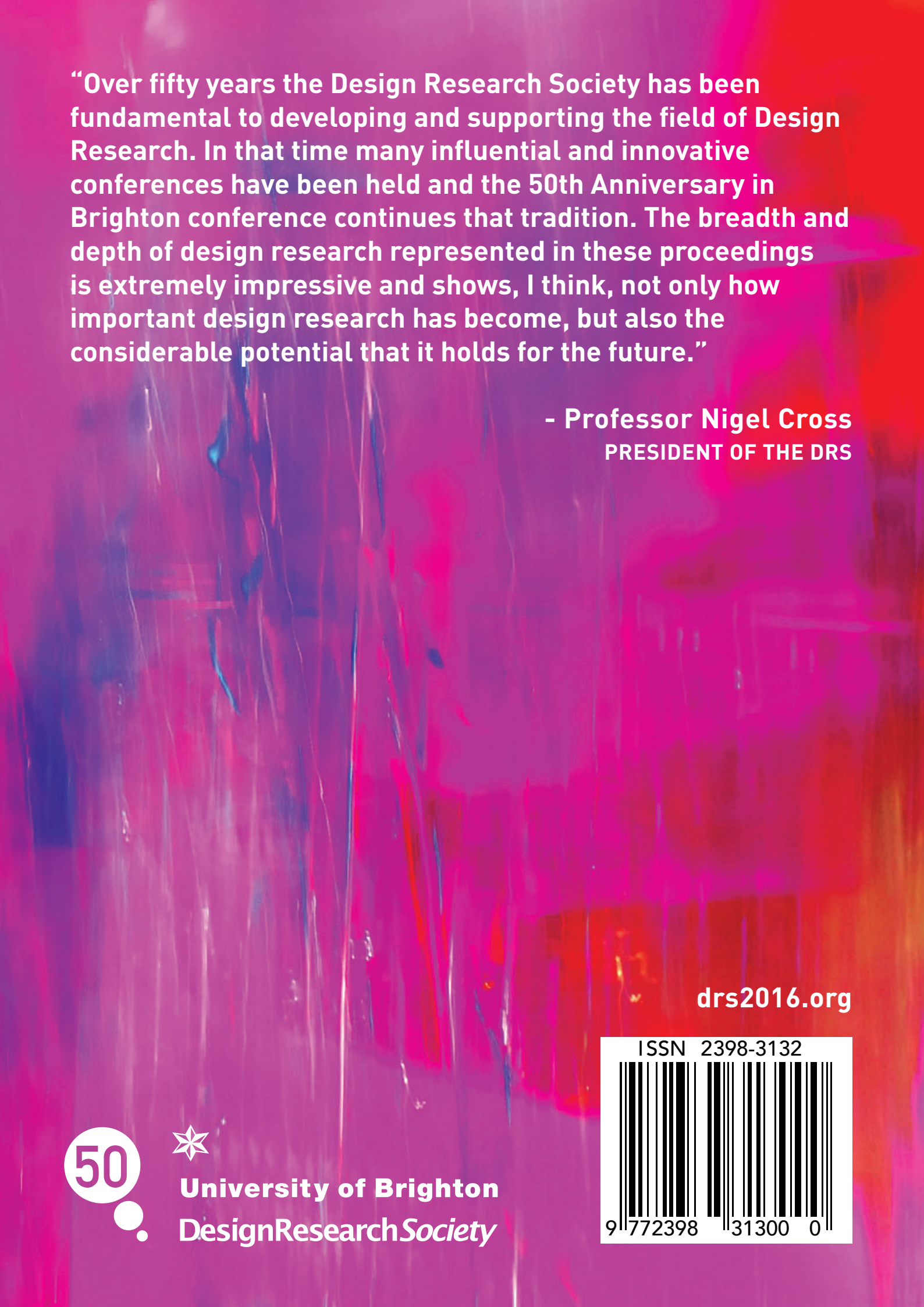

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