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Design for social sustainability.

A reflection on the role of the physical realm in facilitating community co-design.

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Abstract: Understanding the environmental conditions that shape the physical support for developing social sustainability requires analysing the symbiotic relationship of people and place. Place is considered an essential aspect in shaping social identity, identification and cohesion. Thus, this paper explores the role of the physical realm in enabling co-design practices within community initiatives. It outlines two PhD research projects focused on strengthening community engagement using co-design approaches. It evidences its findings analysing two different settings. Firstly, a PhD research project exploring the mutual influences between spatial and service design also through the investigation of public spaces as platforms for strategic interventions with experimentations in the urban fabric of Milan (Italy). Secondly, a doctoral research exploring the value of community co-design on rural areas in the Highlands and Islands (Scotland) associated with Leapfrog, a three-year-funded project by the Arts and Humanities Research Council (AHRC). Conducted by two different research teams, we analyse to what extent participatory processes can strengthen communities and their identities, as well as reflecting on place-based approaches for design strategies of territories.

Keywords: design for social innovation, social sustainability, co-design, design activism, design ethnography.

1. Context of research

The aim of this paper is to discuss the role of the physical realm in supporting co-design practices and shaping social identity, identification and cohesion from a design research perspective. It outlines two PhD research projects focused on strengthening community engagement using co-design approaches. It evidences its findings analysing two different settings: firstly, a PhD research project exploring the mutual influences between spatial and service design also through the investigation of

public spaces as platforms for strategic interventions with experimentations in the urban fabric of Milan (Italy); and secondly, a doctoral research analysing the value of community co-design on rural areas in the Highlands and Islands associated with Leapfrog, a three-year-funded AHRC project. Both research projects are design processes that support social innovations, which are part of Social Design - design motivated by social demands and not by the market - that fosters social change towards sustainability (Manzini & Meroni, 2014). Human activities are highly dependent on the relationships people establish with their milieu¹ - enabling or inhibiting action/interaction (Buchanan & Margolin, 1995). The milieu consists of tangible and intangible components that have been designed by humans. Consequently, it can be supported, implemented or radically changed in a continuous process. Therefore, we focus on the environment impact upon people's actions within co-design processes: place and the interactions occurring on it compose an interdependent relationship that has its basis in design research and social sciences.

1.1 Social sustainability

There are myriad definitions of sustainability and a great number of disciplines involved in the debate. However, almost all definitions rely on the three pillars established by the United Nations (2002): environment, economic and social systems (White, 2013). Dempsey et al. (2011) aver that these three systems need to be balanced in order to address holistically the 'wicked problems' (Rittel & Webber, 1973) that sustainability embraces. Hopwood et al. (2005) explain that the dominant Cartesian perspective of the world, which separates the environment from humanity and its actions, is unable to explain the complexity and uncertainty of human life. This demands alternative frameworks able to integrate qualitative methods that can bring deeper understanding about people's lives and help foster social innovation and sustainability. In this regard, design activism plays a key role in enabling social change and in raising awareness about communal values and beliefs (Markussen, 2013), where these improvements emerge from existing physical and social resources (Cipolla et al., 2015). Social sustainability remains unexplored both theoretically and in practice, identifying "trust, common meaning, diversity, capacity for learning and capacity for self-organization" (Missimer, 2015, p.5) as crucial elements for developing sustainability. Thus, we emphasise the social system in supporting the other two because, as González-rey (2008) states, culture works as a catalyst for human behaviour. Therefore, enhancing sustainability inevitably implies a process of social learning (Dyball et al., 2007) and the co-construction of a common language.

1.2 Community engagement: a societal and design shift

Recently we have witnessed how community engagement has become prominent on the agenda of governments and non-profit organisations (Forss & Schwartz, 2011). This is in response to the current sociocultural context characterised by the proactive involvement of people in community initiatives through bottom-up and informal movements (Matarrita-Cascante & Brennan, 2012), as a result of the scarcity of local and national authorities' actions. According to the Scottish Government (2016), community engagement ensures citizenship participation in the decision-making of public services. This needs non-profit organisations, public sector and grassroots movements working collectively, sharing resources and creating partnerships - developing a renewed multidimensional

¹ Milieu: "the aggregate of objects, activities, services and environments that fills the lifeworld" (Buchanan & Margolin, 1995, p.122)

framework between institutional networks and interpersonal bonding - to support unfettered social learning. These partnerships also gain resonance on the European Commission research agenda, where the co-creation of public goods can become a way for engaging citizens and stakeholders in shaping European identity. Yet citizens perceive public engagement as a tokenistic and insufficiently inclusive process, generating scepticism and apathy (Escobar et al., 2014). These challenges require identifying ways to understand holistically the cultural-historical context of communities in order to design participatory approaches that foster sustainable engagement.

1.3 People and place

Contemporary territories are increasingly infinite areas of urban fabric (cfr. the "no-stop city", Branzi, 1970; Burdett et al., 2011) blurring the limits between urban and rural spaces (Lefebvre, 2003), where infrastructures of economic supplies and new forms of mobility re-shape the environment and our lifestyles (Park, 1967; Webber, 1998). Here, the infrastructure system - motorways, railways, electricity and the like - has a huge impact on redefining the diverse uses and identities of the different rural-urban geographies (Soja, 2000). In this context, the relationship between people and place has a different meaning due to the economic changes. According to Castells (1977), the capitalist model needs a balance between the public goods - items of collective consumption - and the private sector in order to support the social fabric. However, in the last decades, collective consumption has been privatised (Marrifield, 2014), leading to a transformation of the relationship between citizens and the public realm, from one of collective action to one of privatised consumption (Hoskyns, 2005). This has restyled a society that leans toward individual values and where the global economic model is located at the centre-stage on the strategic agenda of governments, and crises arise surrounding the urbanisation process (Harvey, 2012). This new culture leads to the devaluation of work and the increasing value of place where people develop the need of belonging to a particular geographic place as a way to redefine their identity (Sennett, 2006).

Concurrently, "more and more people are collaborating with each other to live more socially cohesive and sustainable lives" (Manzini & Staszowski, 2013, p.1). This action-reaction to economic and societal challenges affects the transformation of the physical realm; indeed, interpersonal relationships are strongly connected to the development of the sense of community, which occurs in places affected by renewed uses and identities. Hence, the physical space assumes the role of a social actor in enabling or preventing social interactions where the social sphere is also spatially constructed and the way society works is influenced by its spatial structure (Marchart, 1998).

1.4 Design activism: strategies for enhancing transformations

Design methods are able "to advance public and social innovation and achieve creative solutions beyond the reach of conventional structures" (Mulgan, 2014, p.1), providing a strategic approach to complex systems of things. Design research is progressively focused on the role of design as an activator of change: assuming that "all we do, almost all the time, is design" (Papanek, 1972, p.17) and that everybody designs (Manzini, 2015), "design is an act of deliberately moving from an existing situation to a preferred one by professional designers or others applying design knowingly or unknowingly" (Fuad-Luke, 2013, p.5). These well-known statements shape the scenario that design studies and design thinking methodologies are approaching, pinpointing the considerable debate around the boundaries of design and the role of designers in the 21st century.

Design, as a process for achieving change, embodies activism as a form of shifting to new paradigms and values. Addressing our focus, the act of designing is a way to intervene in people's perceptions and assumptions about their realities, influencing and affecting people's behaviour. According to Markussen (2013), "design activism has the potential to re-negotiate the relationship between people's doing [...] and their feelings about this doing" (p.6), furthermore the ability to interlace people's needs in order to evoke new forms of inhabiting, thereby encouraging new identities.

These two on-going PhD research projects focus on conscious design acts, including Participatory Action Research (PAR), a qualitative research framework involving researchers, practitioners and people acting for a planned organisational change (Avison et al. 2007) through inclusion and collective action. Co-design is our design approach, one which consists of integrating people from different backgrounds and levels of expertise into the creative process (Sanders & Stappers, 2008) enabling designers to co-create with people and not for them (Bason, 2010) in pursuit of a transformative process in an immediate problematic situation (Gilmore et al. 1986). Context-based approaches are central for designing strategies that promote new forms of engagement and help develop a sense of community identity. This reflection defines our theoretical research framework.

2. The contemporary city as a living lab: applied educational methodologies through co-design approach

This doctoral research is associated with the Polimi DESIS Lab², a research team of the Design Department of the Politecnico di Milano, in Italy. The Lab, part of the worldwide DESIS Network - Design for Social Innovation and Sustainability³ - involves a group of researchers adopting a strategic and a systemic approach to design, particularly focused on design for services and interior/spatial design⁴. We use a community-centred design approach and our objective is to explore how design can enable people, communities, enterprises and social actors to activate and manage innovation processes, aimed at experimenting with sustainable, convivial and collaborative ways of living and doing.

My PhD research project focuses on analysing the mutual influences between Design for Services and Spatial Design as, especially addressing their disciplinary connections in research and applied approaches, in educational methodologies and processes. The doctoral research uses the DESIS Lab's activities and projects in a mutual nourishment, along with teaching activities - at Politecnico School of Design and other partner institutions - based on an experiential learning approach. The dialogical relationships in-between the two disciplines have therefore been analysed also within the context of urban public space transformation, in order to get insights for one of the research questions: how could spaces influence, generate and be used through services, and vice-versa?

The field research approach established in local contexts benefits from the involvement of design students and researchers/professors, forming a system of actors - including local communities and

² www.desis.polimi.it

³ www.desisnetwork.org.

DESiS Network, born in 2009 from three international activities, is a no-profit and cultural association since 2014 and an evolving network of Design Labs based in design schools and in design-oriented universities operating with local, regional and global partners to promote and support social change towards sustainability.

⁴ alongside contributions from strategic design, user-centred-design, design for territory, communication, economics, planning and sociology. The Lab is involved in several local and international research projects and the group runs also post-graduate courses and design studios.

organizations, public administrations and ventures - involved in design actions for social innovation. These are experiments supporting research and applying a 'Living Lab' methodology. The 'Living Lab' is a long-term environment for open innovation that enables experimentation with real people in real contexts. This fact helps unfold the more intractable problems through taking a system approach - comprising methods of design thinking and prototyping in an iterative way. In the experiments, co-briefing sessions, co-design activities and the prototyping of design solutions represent tangible and intangible components of the design process.

The project-based experiments, conducted within the Polimi Desis Lab, pursue specific goals in different urban contexts in the city of Milan and are pilot-cases for my doctoral research to advance insights (emerging from the practice) and will support the development of a framework.

One of these, here briefly described, is 'Human Cities - Challenging the City Scale'⁵, a EU-funded research project that explores how inhabitants reclaim the constantly-evolving contemporary city, especially through experiments in the public realm, and ways of re-inventing city life. The Milan work programme within the research project has been systematised in an overall process to make the most of the complexity of an PAR-based project (Fig.1).

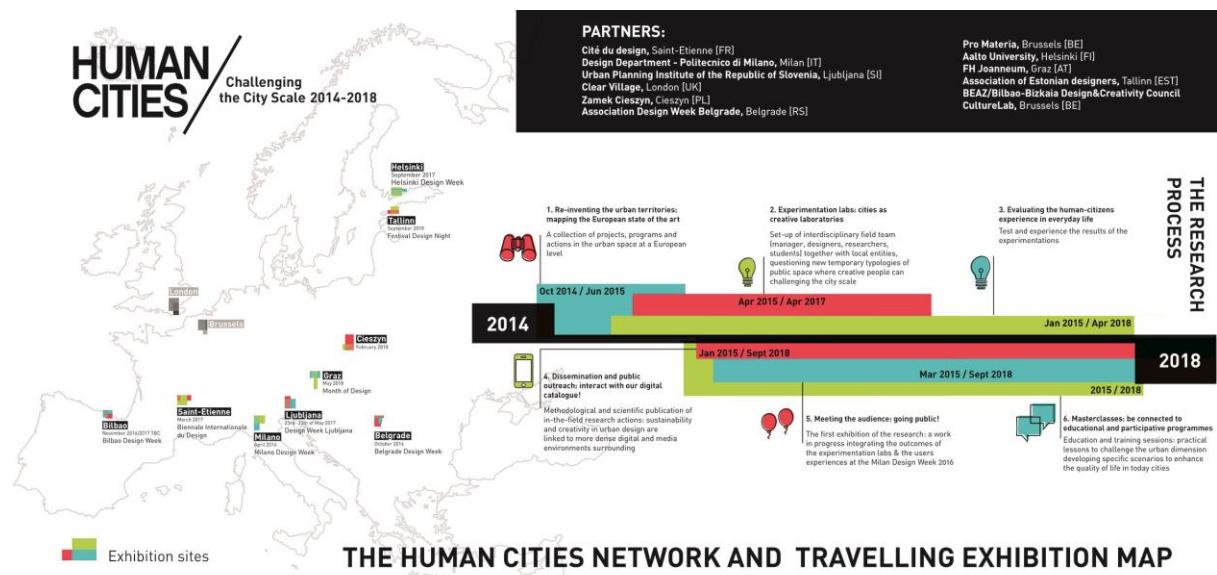


Figure 1. "Human Cities/Challenging the City Scale" research process diagram; created by the Milan Department of Design team for the Human Cities exhibition at BaseMilano during the Milan Design Week 2016.

The Lab team (5 design experts) framed an educational design programme to set-up the 'in-the-field actions' conducted by design students and researchers working together. The idea was to involve in a long-term and articulated process citizens and local organizations, selected for the experimentation labs, from La Piana - a hidden, elevated and pedestrian square - and the neighbourhood around it in Milan. La Piana is a no-man's-land public space and is actually the outdoor area of Atir Ringhiera theatre. The process comprised collaboration with the active Social Programme of the theatre, hence

⁵ "Human Cities – Challenging the City Scale", research project co-funded by the Creative Europe Programme of The European Union, 2014-2018. The network includes eleven partners: La Cité du design (FR), Politecnico di Milano (IT), Urban Planning Institute of the Republic of Slovenia (SI), Clear Village (UK), Zamek Cieszyn (PL), Association Design Week Belgrade (RS), Pro Materia (BE), Aalto University (FI), FH Joanneum (AT), Association of Estonian designers (EST), Beaz (ES) and Culture Lab (BE).

creating a legacy between the lab results and the future of the physical realm. It was involved throughout: the co-creation briefing sessions (Oct 2015), the design master-class⁶ (Oct 2015-Feb 2016) and in-the-field experimentations (Jan-June 2016). The participatory process was established in order to enhance the relationship between citizens and the public space by using design approach, tools and output. The impact of addressing contemporary needs with strategic thinking acts on multi-levels: on the one hand, the sixty-two international design students – who enriched their skills with the ability to critically reflect and analyse physical and social contexts - and on the other, the engagement of local communities (ten stakeholders: local organizations and informal groups) identified implementers (collection of needs and stories), supporters (co-design activities) (Fig.2), participants (experimentation labs) (Fig.3) and readers (dissemination process) throughout the whole process. Moreover, the theatre acts as a catalyst in the process of restoring the idea of a social and cultural incubator within the urban context. These temporary design experiments allowed reaching quick conclusions and ‘put on stage’ citizens’ stories.



Figure 2. One of the co-design sessions organised during the Masterclass “Temporary Urban Solutions” within the research framework. Sixty-two international design students meet ten local organizations and informal groups from La Piana area with the support of the Social Programme of ATIR Ringhiera Theatre (local partner).

⁶ “Temporary Urban Solutions”, transdisciplinary elective course, Master Level. School of Design, Politecnico di Milano. Course leader: Davide Fassi



Figure 3. First Experimentation Lab at La Piana, 30th of January, 2016: Temporary Urban Solutions to inhabit the square.

As stated above, my doctoral research takes advantage of these experiments as pilot-cases. It seeks to lay a theoretical foundation for a reflection on how these processes can evolve from design experiments to a more strategic, long-term development, based on the concepts of agonistic space and infrastructuring: “a more open-ended long term process where diverse stakeholders can innovate together” (Hillgren et al., 2011, p.170). The combination of PAR and service design become fundamental since both deal, constitutively, with actual contexts: current conditions, needs, uses and users. Their constant adaptability to change provides reflections, approaches and actions open-ended. Therefore, the PhD focus is on spatial and service design aspects, trying to respond to the following questions: how continuous changes in the transformation of the built environment affect public spaces (physical and service infrastructuring), and their uses and identities in an open-ended way? How the design of spaces and places is affected by the added use of service tools within the design process? How the spatial design is taking advantage of UX design and service design? I argue that urban public spaces could be understood as platform of change able to connect trans-national communities – at the macro-scale – and to be tested – at the micro-scale – through prototyped design scenarios (Manzini, 2003). Hence, they are going through a continuous overlapping of configurations, depending on: (1) how people reclaim their use in terms of time (temporary, medium and long term) and in terms of function (retail, entertainment, hospitality, work, leisure, conviviality and the like); (2) how people go through them (new forms of mobility); and (3) new societal dynamics.

This is the wider sense in which the relationship of people and place is analysed. Starting from a local scale of experiments - through the application of co-design activities and PAR-based methodologies - and observing the ripple effect that these experiments have on a wider urban scale, the doctoral research aims to understand how temporary and local experimentation can become sustainable over

time in terms of services and spaces impact both in their contexts and orientation of thinking as well as in their contexts of application, in addition to understanding how they affect the global system as part of a wider research on spatial and service design methodologies in design education.

The following phases of my PhD project are going to be conducted at the UFRJ Universidade Federal do Rio de Janeiro (March/April 2016) and at the International College of Design & Innovation of Tongji University, in Shanghai (May/June 2016). These fieldworks will provide me new and different scenarios of research.

The aim is to analyse - through didactic activities in different local contexts and with students from different backgrounds - educational methodologies and processes applied with a focus on the participative use of public spaces looking at direct or inverse relationships with levels of privatisation, on one hand, and with levels of engagement on the collective realm, on the other.

3. Design ethnography on the Isle of Mull

This section outlines PhD research associated with 'Leapfrog', a three-year-UK design project funded by AHRC, concentrating to designing and evaluating alternative approaches to community engagement. The PhD research project aims to understand how and in what ways co-design can be used as a vehicle to promote social change, in addition to understanding some of the processes, such as informal learning, that co-design ignites. Hence, the PhD research question is: How can design research identify and visualise the informal learning process that community co-design affords?

The pilot study involved immersing myself within the human dynamics around a community process in which people got involved, seeking to learn how to better engage within their communities. This entailed the introduction of co-design practices to develop engagement tools with community members drawn from different organisations located on the Isle of Mull, in the Highlands and Islands of Scotland. Conducted over six months with a total of four visits, the fieldwork adopted a design ethnography approach enabling me to take a role of insider-outsider. Design ethnography is based on traditional ethnography, yet it lasts a shorter period of time, enough to grasp the context for building empathy and insight (Hammersley & Atkinson, 1995). Here, I used Grounded Theory as the theoretical framework because one of the issues of being an insider-outsider within communities is that, as researcher, I bring my assumptions and theoretical standpoints and this can mislead the research. In qualitative research, the researcher is an active actor in data collection and in the analysis (Corbin Dwyer & Buckle, 2009), and also shapes the context alongside the community members. About this, Asselin (2003) recommends researchers to adopt an approach of knowing nothing about the context as a way to prevent bias. Besides, theory cannot lead; rather, it is the immersion in the context that explains what is happening. Grounded Theory relies on the principles that everything is continually changing and therefore nothing can be predetermined because people have the means to respond to the changing contextual factors (Corbin & Strauss, 1990). This enables the context to bring forth knowledge that comes out from the practice.



Figure 4. Isle of Mull map: location of the pilot case. Author: Mirian Calvo.

3.1 Human scale: enclosed semi-public spaces

In my first and third visits, I attended, as a participant-observer, several co-design workshops facilitated by the Leapfrog team. Participant-observation is an ethnographic method that enabled me to envisage a greater awareness of context and build empathic relationships with participants (Calvo, Slater & Smith, 2016). In the first workshop the purpose was to identify barriers and opportunities and afterwards, co-negotiate the intended outcomes by paying attention to individuals' conflicts. Focused on improving community engagement, the second workshop consisted of collectively – i.e. in groups of three people with one facilitator each - co-designing engagement tools that will potentially enhance public engagement. Thereafter, in the third visit we brought the prototypes of the engagement tools previously co-designed, and I conducted interviews. I was also invited to collaborate in a consultation event with one of the participants (co-creators) in her community setting.

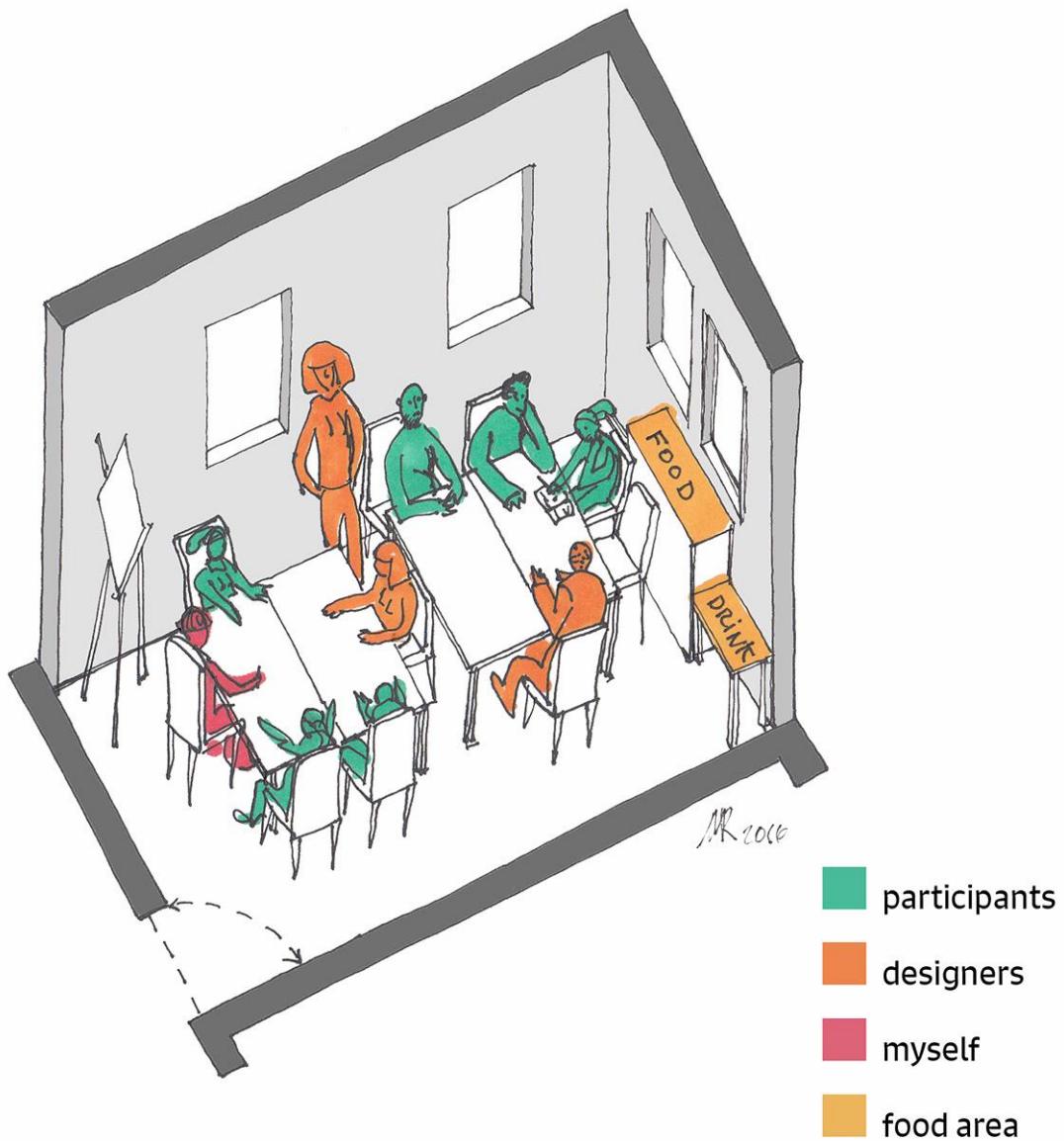


Figure 5. Axonometric drawing: Co-design Workshop 1. Author: Mirian Calvo.

Reflecting on the environmental conditions of the room which hosted the events, my insight was that the physical space was too small to accommodate collective and creative activities. The physical realm plays its role in enabling or preventing human behaviour and social interactions (Gehl & Svarre, 2013; Whyte, 1980). The space was occupied by two rectangular tables and nine chairs (Fig.5). Participants arrived, sat in one place and stayed there until the break, when people gathered in the food-drink area, creating a bottleneck and a long wait for food. Then people sat back down in their seats. The use of tables and chairs enables certain types of human behaviour such as taking notes, listening, being comfortable and relaxed (seat down), but it also encourages people to behave as students - passive agents in a one-way conversation (Fig.6). This behavioural pattern is largely caused by the traditional use of the space and the elements in it. This also affects the power dynamics between participants and designers who have all the power in these conversations because participants adopt a more passive and student role.

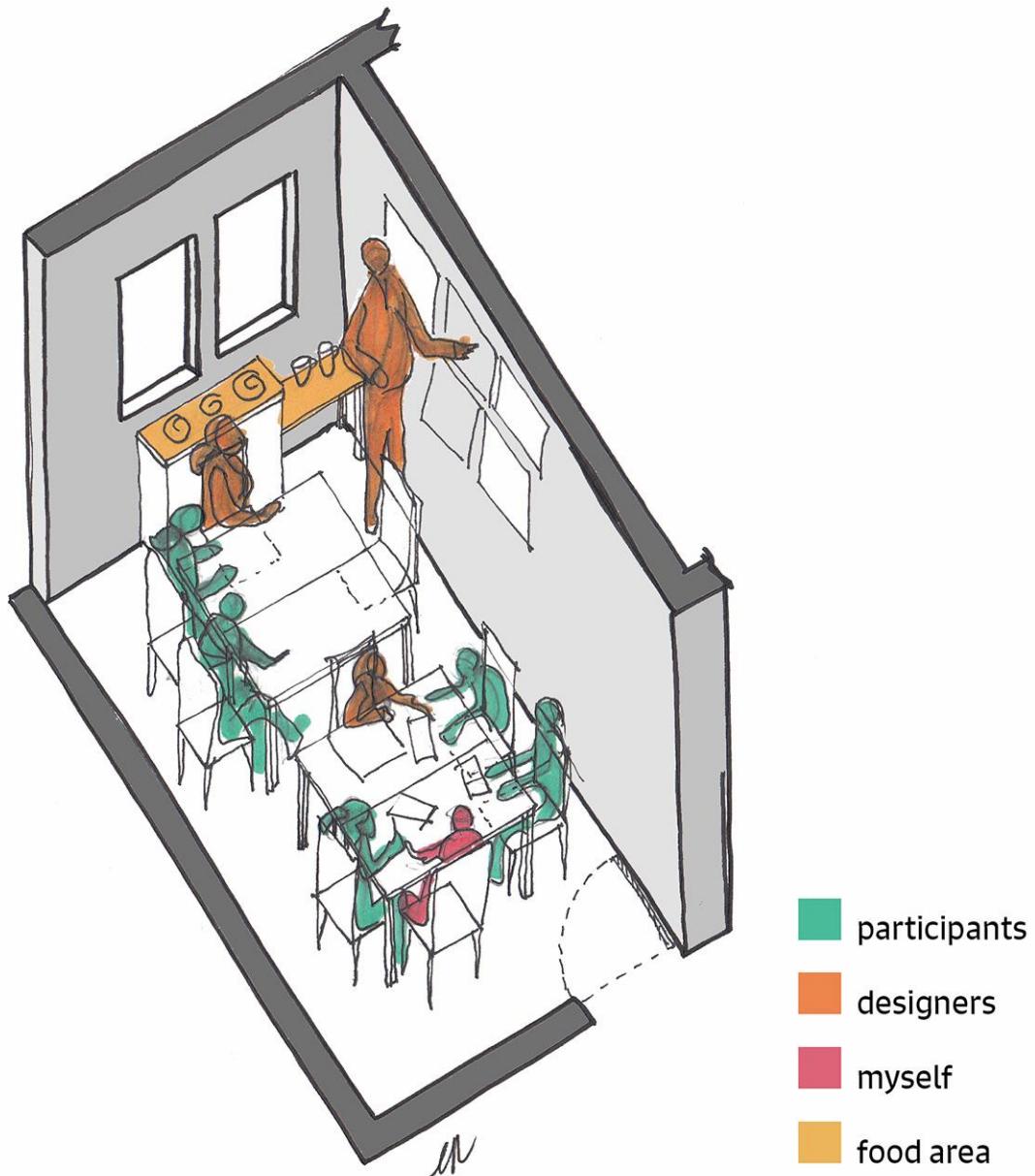


Figure 6. Axonometric drawing: Co-design Workshop 2. Author: Mirian Calvo.

The room had a wall that was used to project presentations and to stick idea-generation concepts. The wall, used as a physical display in workspaces, is a key component that facilitates dynamic participation (Fruchter & Bosch-Sijtsema, 2011). Moreover, it is an environmental condition that enables individual and collective reflection-in-action (see Schön, 1987). The problem was that the furniture inhibited participants from moving freely and mingling with people at the other table, as well as interactions with the wall. This could be addressed by taking the furniture out, which would permit people to move as they please, sparking collective conversations. Even leaving the chairs and shaping a circle could ignite more innovative and creative activities (Fig.7).



Figure 7. Axonometric drawing: alternative use of the wall and the physical space. Author: Mirian Calvo.

3.2 Territorial scale: the geographic physical realm

My other visits consisted of ethnographic trips in which I also ‘shadowed’ one participant in her natural setting. ‘Shadowing’ is an ethnographic technique that enabled me to holistically observe the participant’s moods, body language, her pace and the way she interacted with other people. In the workshops I noticed that participants’ conversations were related to a particular physical place. Hence, it became crucial for me to know better the territory and the geographic features of the island. The territory affects human settlements and hinders the construction of infrastructures – roads, broadband networks and the like. As a result, communities become isolated amongst themselves shaping their lifestyle and developing a strong bond with their place (people-place). This insight is evidenced in the following quotes:

"The major population is up here. This is Tobermory and that is a very mixed community but it's also pushed to the top of the island. You realise, it is a big island, and it takes quite a long time to get round it through those roads. [...] There are many other small communities spread on the rest of the island. [...] This is the Ross of Mull. They tend to be almost a separate community because it is a long way through here by road" (participant 5).

"This is a very isolated place, you need space in a house because if it is raining outside and you have a one-hour drive to the nearest shop, you need to be comfortable and happy in your home" (participant 3).

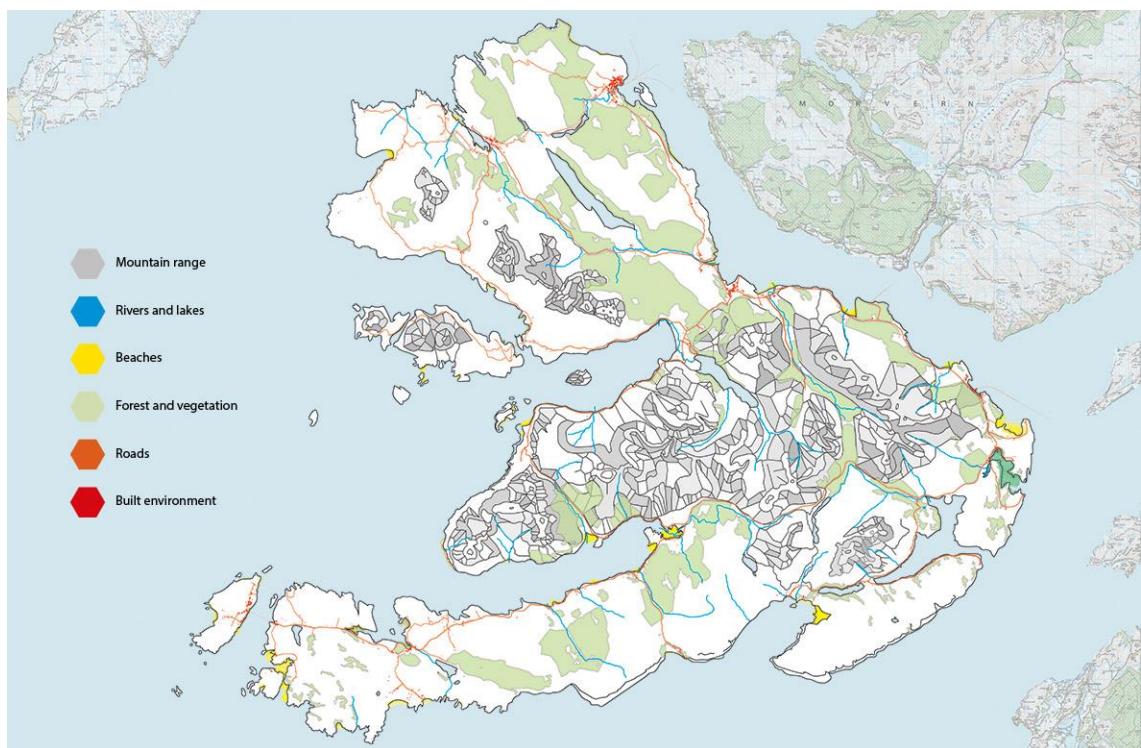


Figure 8. Reflective drawing: Isle of Mull map: natural and built environment (visit 2). Author: Mirian Calvo.

From a territorial standpoint, shortage of public spaces typifies rural areas, as in this case. One of the biggest issues we have in these communities is that there is not enough public life and therefore it fails to have enough impact upon the community (Alexander, Ishikawa & Silverstein, 1977). Nevertheless, there are people conducting community initiatives to counteract this phenomenon, such as Participant 8 who was working in a community project which consisted of refurbishing a piece of land in disuse and she said:

"It is about providing them a place where they can go with their friends and families and use the park, so they go for their lovely walks and children learn to ride a bike there, things like that... things that now we don't have. So it's a very much social place anyway".

4. Discussions

From a human scale standpoint, based on our reflections we draw attention to the role of the physical realm as a key (and largely still untapped) dimension to take into account in the design process of community co-design activities. Our early findings suggest that the physical space has the means to enable or hinder creative and collaborative interactions amongst participants in co-design activities in both case studies analysed: enclosed semi-public spaces and open public spaces.

Conversely, the design of community spaces and collaborative actions through the direct involvement of citizens contributes to the process of strengthening long-term relationships between people and places. This mutual influence plays a key role in the process of application of such methodologies. In this regard, there is a great diversity of co-design activities, from community planning events to informal/formal interest group meetings. The nature of the type of a co-design activity hinges on the aim of the design context, as well as the audience. For instance, Fuad-Luke (2013, p.178) classifies co-design activities based on two variables: public-private, and designer-led versus non-designer-led. In fact, within the variable of public-private, there are myriad physical spaces supporting such co-design activities, as can be appreciated within our cases studies. Indeed, a co-design process might entail a series of co-design activities which respond to the different phases of the process, where some of them might be hosted in enclosed private spaces with small numbers of participants and others in open public spaces with a large number of participants. Therefore, we argue that design strategies oriented to embed the material ecologies which sustain co-design activities should not be addressed following a prescriptive approach; rather, looking for qualities of the physical realm. Additionally, our reflections also unfold how the use of co-design becomes a vehicle to engage citizenship towards the transformation of our environment. According to Meusburger (2009), this interactional dimension plays a key role in the development of creativity, where the social and material ecologies can foster or hinder such a development. Sternberg and Lubart (1991) add that before a creative process starts, an individual needs to interact with a stimulating environment. Here, we look for spatial qualities such as flexibility, adaptability and sensitivity - spaces that enable the flourishing of creative and collaborative processes. Indeed, the use of co-design in environmental transformation, where processes "refer to the creativity of designers and people not trained in design working together in the design development process" (Sanders & Stappers, 2008, p.6) and where these processes "act as designing networks [...] in which everybody, non-expert and expert alike, designs" (Manzini, 2015, p.49), does not provide specific recipes for the spatial definition. Yet the use of co-design in this context helps unfold a reflection about to what extent project-based experimentation might guide infrastructuring in the development of democratic processes. Co-design is, in fact, a value-creation and not a value-delivery process, which aims to contribute to a context transformation through an informal learning process (Calvo, Sclater & Smith, 2016) – also called 'mutual learning' (Fuad-Luke, 2013, p.147) - that enables knowledge-exchange, the acquisition of self-awareness and self-responsibility, as well as capacity building. Central to co-design is the process itself - not the final outcomes - since it provides inspiration to the design team for the development of concepts and innovations, which includes the designing of tools for ensuring the continuation of such co-design activities once the designer is no longer present. Especially, co-design becomes a vehicle to reveal both opportunities and dilemmas, through an iterative process that has the means to reduce conflicts and to foreground 'agonistic spaces' (see Mouffe, 2007). 'Agonism' is a term that denotes a democratic model that defines 'the political' as the dimension of confrontation, which is inherent to human relationships (see Mouffe, 2000). Hence, agonistic space refers, within this model, to a permanent (abstract) space where such interpersonal confrontations can be expressed and re-channelled in a collective positive way through the compromise of diverse standpoints - observing the conflict as an opportunity to create positive

change. Democratisation helps turn “antagonism into agonism” (Björgvinsson et al., 2010, p.48) and is fundamental in enhancing a sense of shared ownership, engagement and legitimisation of the process of transformation of a given space. On this matter, we suggest to look at the qualities of agonistic spaces in order to find inspiration to frame the spatial dimension of co-design activities, where co-design creates a boundary space (Edwards, 2011) - also referred to as a ‘third space’ (Gutiérrez 2008) - for transforming environments or societal problems.

Corresponding to the temporariness of places and settings, it is the temporariness of users, the so-called ‘interim user’ (Belloni, 2008) who *lives here and now* in the urban place and generates the transformation. In this sense, we live and undertake activities within a framework defined by time and space, in an environmental system that we have created (Park, 1967), which is different from the natural one and which we call culture (González-Rey, 2008). This system operates on symbolic and emotional levels; hence the environment acquires symbolic and emotional meanings based on the people using it. “People make places, more than places make people” (Worpole & Knox, 2007, p.2). Simultaneously, on a micro level, individuals adopt different behaviours depending on the environmental conditions and on the people surrounding them. About this, Harvey (2016) states:

"Environment' is whatever surrounds or, to be more precise, whatever exists in the surroundings of some being that is relevant to the state of that being at a particular moment. Plainly, the 'situatedness' of a being and its internal conditions and needs have as much to say about the definition of environment as the surrounding conditions themselves" (p.160).

Here, the notion of environment acquires movement and evolves in relation to the socio-historical context. People live experiences, establish relationships and shape their personal stories in paths rather than in places because life binds time and place at the same time (Ingold, 2016). The idea of transforming the environment that surrounds us could be seen as one of the basic motives which trigger us, human beings, to make things (action-oriented) through a process of interacting with the material ecologies – observing and experiencing until we feel comfortable enough in the modified environment. However, as Hoskyns (2005) states, the design of the environmental conditions that support human activities can only create possibilities for social interactions. The same physical space changes its functions concerning the use that people make of it.

“Explore how co-designing our services could be the next critical evolution of SD to ensure the sustainable integration of human and natural ecologies of our cities. Indeed, the proposition here is that co-designing services in an open innovation environment is a pre-requisite for co-futuring” a term the author coined in 2009 to signify more participatory democratic forms of decision-making informed by design and leading to anticipatory democracy (Fuad-Luke 2012, p. 103).

From a territorial scale perspective, public life happens in public spaces and the relationship between people and place is described as a self-organised cycle that comes to fruition once a place seems attractive because people start gathering there (Mikoleit & Pürkhauer, 2011). Thus, public space plays a crucial role in the social life of our communities and reflects a wider social, economic and political condition. Without it, we would have neither the physical support for expressing ourselves, nor the symbolic meaning and its relationship with our identity. Furthermore, it encourages us to

think as a collective and to be part of the community. It entails the relationship to people, to nature and the technology we decide to use. On this matter, we have identified differences between the urban experiments in Milan and the pilot study in the rural communities on the Isle of Mull. As we mentioned before, the lack of public spaces in rural areas inhibits the blossoming of public life, something fundamental in developing community life. We could argue that, on the Isle of Mull, only the main street of Tobermory could be considered as a public space, defined as a place that is open and accessible to all kinds of citizens, regardless of gender, race, ethnicity, age and socio-economic class, which becomes a vessel to carry positive communal meanings shaped by the community. Instead, public life mainly occurs in churches, non-profit organisation venues, and/or pubs - private spaces - somehow increasing the feeling of isolation. Conversely, in the urban environment of Milan in peripheral areas, isolated public areas are the result of specific conditions due to a hidden position, unfavourable use in the past, or are around leftover places and buildings. These conditions inhibit and hinder new forms of living and any new sense of belonging. The city and its close surroundings provide spaces that are unused since they fail to reach the actual needs and implied will of citizens, entailing a waste of resources and potentialities in terms of social, economical and human capital. In fact, as we mentioned at the outset, sustainability inevitably requires simultaneously working on the three systems - environmental, economic and social - in order to address the major problems that society faces in the 21st century. However, we emphasise the role of the sociocultural system because social behaviour is, to some extent, governed by the power of culture. Therefore, from our understanding, a social reflection about sustainability is needed in order to change individuals' behaviour and bring accountability to their everyday lives through a process of social learning. In this sense, community co-design processes have the means to ignite this social learning by providing spaces for reflection, and potentially collective action.

In a connected world, the local joins with the global: microenvironments, activated by multiple interventions and interrelated actions, compose a permeable, denationalised platform. They act in a holistic way in which even marginal locations can become part of global networks, spreading their influence and influencing the global system (Sassen, 2004). Simultaneously, at the community level, the micro - individual psychological and behavioural conceptions – and the macro levels - institutional and community conceptions – are mutually influenced (Perkins et al., 2002). This last relationship influences high or low “social capital”⁷ levels, extremely relevant in developing interpersonal, community and institutional sense of trust, social commitment and sense of security, and with a clear impact on the use of public spaces.

Therefore, effective experimentation, strategic co-design approaches and qualitative enquiry are fundamental to enabling or inhibiting actions and interactions in places in a participative and inclusive way: any exclusively top-down action in public spaces would lead to new spaces without meaning as well as the absence of trusted milieu would lead to an increase of a privatised consumption of the public realm, as it occurs in marginalised or underserved populations contexts. Instead, dialectical and reflective approaches strengthen the implementation of its potentialities in a more enduring way, within an ecosystem favourable to the inclusion and the collaboration among institutions, citizens, public administrations and ventures.

⁷ “Social capital is generally defined and measured at the interpersonal, community, institutional, or societal levels in terms of networks (bridging) and norms of reciprocity and trust (bonding) within those networks. Social capital should be analyzed in a multi-level ecological framework in terms of both individual psychological and behavioral conceptions (sense of community, collective efficacy—or empowerment, neighboring, and citizen participation) and institutional and community network-level conceptions.” (Perkins et al., 2002, p.33).

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