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Weaving. Methods and tools against homelessness between anthropology and design

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Abstract

Starting from our long experience in a participatory laboratory conducted by means of design and anthropology, we reflect on the contribution of creative and practical activities to the creation of collaborative communities of practice. The lab involves homeless people, researchers, university students, educators, and artists in the crafting of different artefacts. By describing the processes behind the creation of the artefacts, we will examine which kind of objects are produced, and the forms of community generated through a collaborative way of making. The objects, that are not allowed into the economic circuit, allow us to reflect on participatory practices beyond the competitive modes that prevail in the market. The laboratory – which is part of the day care services for homeless adults of the Municipality of Turin – has become a space of freedom and experimentation, despite the increasing bureaucratisation of the social services system. The laboratory is also an experiment in "creative re- sistance", in which all participants can craft beauty.

Keywords: design anthropology, homelessness, participatory approach, community of practice

> «This artwork is a huge intertwinement of single pieces of wood. It is wonderful that it stands only thanks to the strength of this weaving».
> (Jhafis Quintero, artist, 23th May 2017)

«Do you think that we could build a little wooden church? We were asked to help a Panamanian artist, Jhafis Quintero, to build the house for his collection of holy "evildoers"». It's early May 2017 and we're in the laboratory courtyard of Crafting Beauty [CB], during a break in the morning's work.

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> Three of us are smoking cigarettes. The other two are resting in the sun, sitting on the little concrete wall. At this time, in the woodwork laboratory, we were finishing some shelves built with recovered material from old wooden chairs. Each shelf is a unique piece carefully tended. Compared to these small objects, the proposal to build a church seems really disproportionate. «It's a chapel with a circular base. It's meant to be three metres wide and about three metres high». We are all a little incredulous; no one has a clear idea of the project, but everyone's imagination regards the proposal as something of incredibly ambitious architectural size. «For a Panamanian artist, you say? So it's a work of art» someone asks. «Holy "evildoers"?». «They are bad guys, like us», another person jokes, «I think we can do this!». We're smiling, amused, and with a sort of arrogance (this is not the moment to worry about technical and implementation problems); we all accept with curiosity this new challenge (fieldnotes of Nicolò Di Prima, 23th March 2017).

Tackling homelessness with anthropology and design

For several years now, we have been combining methods and tools belonging to both anthropology and design, with the aim of testing out innovative solutions to homelessness.[1] Already at the beginning of our interdisciplinary research in 2009 in several Italian cities, it became apparent that homelessness comprises far more complex circumstances than just the lack of a home.[2]

During our action research, we have become increasingly aware that homelessness is a complex phenomenon requiring complex tools and interventions and extensive networks of collaboration (Buchanan 1992, Jones 2014). From the start, we have been aware that solutions should be dynamic and multidimensional, and this awareness has characterised our collaboration as anthropologists and designers, along with other stakeholders: public and third sector bodies, and private foundations. Visiting the shelters and listening to the stories of people working and living there, we have realised that observation should be conducted alongside concrete intervention, starting from reconsidering the relation between the quality of reception

1 The action research *Abitare il Dormitorio* (Living in a dorm) has been conducted since 2009 by designer Cristian Campagnaro and anthropologist Valentina Porcellana in cooperation with the Italian Federation of Organisations for Homeless People (fio.PSD), local authorities and third sector bodies from several cities in Italy.

2 A recent national survey on severe marginalisation carried out in reception services confirmed that most homeless people considered – over 50,000 Italian and non-Italian men and women in 2014 – are relatively young, still maintain some interpersonal relationships and have significant abilities, including work-related skills. People end up on the street for many reasons, mostly to do with the loss of family ties or work and the inadequacy of reception and inclusion policies, as is the case for refugees and asylum seekers (http://www.fiopsd.org/il-follow-up-2013_14/ [July 11, 2017]).

spaces and the residents' wellbeing. Despite the complexity of the phenomenon and the diversity among homeless people, housing and support services seem to follow a cultural model that simplifies the needs of disadvantaged people and stigmatises those who rely on social services, blaming them for their individual "failures". This stems for the assumption that those in extreme poverty are wholly responsible for their own situation and unable to deal with, determine, or manage their lives, including their homes. The emphasis is always on their lacks – on the negative aspects of their lives, according to society's values – and rarely on their abilities and potential. Although our research has led us, over time, to deal with difficulties related to health, nutrition, work and skills, the lack of accommodation remains one of the key problems in a homeless person's life. The shelter is the lowest level in the so-called *staircase model*[3], on which housing services in Italy are based. Shelters are often buildings adapted from their original intentions – disused schools or factories – or prefabricated constructions or containers. They can be described, drawing on Michel Foucault, as "heterotopias": places for housing those individuals "whose behaviour is deviant in relation to the required mean or norm", which presupposes "a system of opening and closing that both isolates [these places] and makes them penetrable" (Foucault 1986, pp. 24-27). Most dormitories we have visited during our research reflected this image of exclusion and instability. The buildings are often run-down and appear impersonal and inhospitable, surrounded by gates and with barred windows. Furthermore, regulations for entry and residence, restrict and undermine individuals' freedom and jeopardise their health, exposing them to unsuitable conditions or lifestyles. Open only at night-time, equipped with the bare minimum of essentials, shared by people with very different needs, such places are often scenes of malaise and violence. Miguel Benasayag (2005) describes the perturbation one feels when facing injustice as "desire". From the start of our research, we have been felt this kind of desire facing the gradual process of institutionalisation and bureaucratisation that undermines inclusion rather than encouraging it.

In the various sites where we tested out an intervention, the goals were never set *a priori* but came from an analysis of the situation, the relationships between the people involved, and between these people and objects, spaces, environments and services. The project's outcomes are linked to needs concerning workers' tasks and guests' stays in the shelters: sleeping, eating, personal hygiene, spending time with others or becoming isolated,

3 The staircase model – also defined as the Continuum of Care, Linear Continuum of Care, Linear Resettlement Model, and the Ladder – is conceived to encourage the housing and social reintegration of psychiatric patients released from care facilities. Since the 1980s, in order to move beyond the step-by-step approach and to separate the right to a home from healthcare, models of direct access to housing have been tried, based on housing as a first principle (Tsemberis 2010).

inhabiting the spaces safely, receiving and delivering information, accessing welfare services, testing one's abilities, and discovering new talents.

Methodologically, from their entry into the field, practitioners of both disciplines – designers and anthropologists – play an observational role, becoming part of the system and participating in it "from the inside" (Ingold 2013), paying attention to attitudes, behaviours, and processes. The participant observation approach has characterised each stage of our intervention: from the initial pre-project study to the participatory project, the carrying out of interventions, and their release into the system. The resulting "observational engagement and perceptual acuity" (Ingold 2013, p. 4) continually generates the elements of deep knowledge essential to the ongoing design and to the remodelling of action.

Traditionally, it has been supposed that while design both projects and produces things by means of individuals, anthropology explores how individuals are produced. Specifically, the anthropology of material culture observes all the processes through which objects themselves produce individuals. This recursive relationship simultaneously defines individual and object (Miller 2010). However, in our interventions, we have sought to go beyond normal disciplinary positions. Rather then adopting the more traditional problem solver role, we have adopted a social and systemic design perspective, in order to favour an approach that is "open-ended" (Ingold and Gatt 2013) as well as critical, creative and dialogic (Manzini 2015). Our approach is to apply and engage anthropology directly in the social sphere. The projects − not just objects but immaterial artefacts and complex processes and systems − are not only solutions to specific needs, but also useful tools for understanding and decoding the situation. This approach makes it possible to examine details that are unimportant to others, and to manage complexity by dynamically combining one's own and others' knowledge and coordinating processes towards potential transformations.

We favour bottom-up design where the group itself is a creator, over top-down design that prioritizes individual design to group action. Developing a concept from Tim Ingold (2013) – originally addressed to anthropology – the kind of design we employ is *with* someone whom we can learn *from*. This is fundamental to an extensive literature describing practices and theories of design for social impact. The idea is that anthropology and design go along together in those transformational processes that deal with constructing, inhabiting, and the mutual relationship of ongoing co-production of artefacts and individuals. Anthropology, more than any other discipline, is able to take into account this relationship and dialogue between objects and subjects, while design is particularly able to trigger transformations and to deal with material reality. To be involved in a transformational process means to lie where "things change", that means to participate in deciding how to shape reality. This happens through dialogue between individuals by way of what they design and

produce. In our experience in the field, anthropology facilitates dialogue between individuals within the transformational processes that design incites. We recognise the similarity of the two disciplines in considering, in a logic of complex systems, the connections between people's skills, abilities, life stories, and situations. The focus is always on the individual, the homeless person and his or her welfare needs, which are considered as a right.

In the course of our interventions, artisans, designers, researchers, social workers, and homeless people cooperate in creative ways, bringing to bear their various talents, to reinvent the forms of night shelter. Every tool used, and product and space that are realised, are regarded as instruments by means of which relationships of cohabitation and access to services are facilitated. Each project respects individual expectations, as developed by sharing and negotiating with the group the goals to achieve and the strategies to adopt in order to meet everyone's needs. Everyone recognises him- or herself in each of these outcomes, because everyone has contributed in some way. The outcomes are artefacts that, as mentioned above, can be either material or immaterial, and can function as powerful mediators. They engage people in matters of substance, and facilitate discussions around problems, requirements, and objectives to pursue, which would otherwise not be expressible (Bourriaud 2001, Sennett 2012).

With the intention of working *with* communities (Porcellana, Stefani 2016), the methods and tools of anthropology have been integrated with those of design, and developed into a project that goes beyond mere field research. In fact, the transformational mandate of design action opens to the political aspect of applying our disciplines in order to actively tackle homelessness, suggesting system transformations and promoting social changes.

Taking up the challenge that Sol Tax initiated forty years ago (1975), we have chosen not to be mere observers of a situation of deterioration but to be agents of change, despite all the ethical and methodological risks that this choice involves. We believe that the best way to understand something, is to try and change it. In this sense, for us to enter the housing system, has entailed understanding the inner-workings of the institution from within and working with all the players to fully meet people's needs. The change we have experienced is the result of an incremental and participatory transformational approach that fosters a positive outlook, one which recalls the "concrete utopias" discussed by Franco Basaglia (2005), and approaches the right to dignity related to home and aspirations (Appadurai 2011, 2013).

Crafting Beauty and the potential of making together

In our culture, the "poor" are only allowed to have desires and aspirations with provisos (and a certain disapproval). Even within social services, home-

less people are seldom conceived as subjects with desires beyond "home and work" (and, above all, only a certain kind of home and a certain kind of work). Anything else appears rather pointless, superfluous, almost disrespectful to those who struggle to meet their primary needs. Aspirations could be even damaging because they nurture desires which would lead to a frustration if they are not meet in reality. On the other hand, those who agreed with the aims and methods of our intervention and have invested time, faith and money into it, also shared with us the idea of a paradigm shift that would allow everyone, the poor included, to get closer to beauty. To experience it directly, construct it, appropriate it and enjoy it, in order to gain an additional tool for interpreting the world. The processes of action research promote the idea that beauty is not a superfluous ideal that homeless people do not deserve to desire, but a concrete experience that can benefit everyone. Starting with the renovation of the shelters (the most tangible entry point for the research) and through design solutions, we can speak a positive language of transformation, of a "beauty that heals" (Campagnaro, Porcellana 2013), of potential change (Verganti 2009).

As mentioned before, our research action was initiated by focusing on the observation of the physical spaces of shelters for homeless people. For us researchers, talking about the quality and the problems related to the use of these kind of spaces with people who inhabit them and work in them was a good entry point also to understand the inner workings of the whole homeless service. Shelters were the places in which we implemented our design anthropology intervention, especially because, typically, such places have not actually been *designed* (Campagnaro, Di Prima 2018). Despite this, we found out that homeless people and social workers were very aware of shelters' problems and opportunities. They are, in fact, "expert users".

With this awareness, we began to set up several workshops in various housing facilities in order to improve them in a participatory way, both with homeless people and social workers. Unlike the tendency of social services to treat people on the basis of their fragilities and deficiencies, our action research tested out a process based on recognising and developing everyone's skills and abilities. Collaborative work involved all participants that were asked to express themselves, choose, co-construct, co-produce, and take care of their surroundings. Each person involved in the projects was invited to share what he or she knew how to do best.

In this way, everyone's varying resources are made available to the group, exchanged, and synchronized with others, multiplying the potential for learning for all participants. Through these collective actions, physical space becomes an enabling device that allows interaction between people from very different cultural backgrounds and facilitates dialogue and the collective creative process (Cautela, Zurlo 2006).

We observed that the experiences of the practical workshops are extraordinary moments of intense creativity, in which each person plays a different role from their normal one, namely the role determined by the shelter circumstances. These are moments of relief, in which everything seems possible. People without a home can dispense with the competitive and aggressive behaviour adopted in the street and can let other aspects of their personality come out, and thus explore a series of new selves. By realising collective projects, unspoken or undervalued skills emerge. These skills are then shared with others and new ones are learned. Such activities involve intense relationships between people that, in designing and working together, creates a dialogue of the potential for how things could be done.

In 2014, these not-so-predictable observations persuaded us to start a permanent experimental laboratory aimed at exploring the potentials of this collaborative work outside of the situation of hospitality. We called it Costruire Bellezza (Crafting Beauty – CB) and after a first period of testing, in 2016 it became part of the Social Services System for Homeless People of the Municipality of Turin.

Since 2014, the laboratory's location was opened on the ground floor of a building that houses a public dormitory, in a high-demand neighbourhood, one that was not without social tensions. Twice a week, researchers and students in anthropology and in design, homeless people, social workers and artisans experience creative languages, new materials and innovative production techniques within different product design activities. The participatory approach allows participants to share knowledge both tacit and explicit, competences and experiences, which can lead to a mutual enrichment at both the human and at the professional level. The physical closeness between the participants during the activity of planning and working together establishes practical relationships, both between participants through the materials they work with, and with the materials themselves. These practical relationships make it possible to see others as potential resources of skills, knowledge and help. This not only fosters mutual awareness but also trust. For example, during collaborative work, a simple action such as wood cutting with a handsaw entails that one person operates the saw while another holds the wood still. In order to accomplish the task well and without injury, both must pay very close attention not only to their own but also to the other's actions. They must feel the material together; they must listen to each other and work in synchronicity. If one makes a mistake, the other is affected too. Such a practical relationship requires not only mutual trust, but that each party learns to look out both for him- or herself and for the other (Di Prima 2017). The same type of collaborative coordination occurs in all the different types of design activities that are performed in the lab: painting a wall, assembling furniture, cooking a meal together, or any other co-constructive activity that gives shape and substance to the various trans-

formational stages required in achieving projects. Within this collaborative environment, it is therefore possible to experience all of these conditions of wellbeing that are necessary to reactivate self-confidence, build meaningful relationships, flourish and recover skills for managing personal life. These are all basic elements of a path of social inclusion. In fact, thanks to these aspects, CB has also been recognised by the social services as an educational instrument that allows social operators who take care of the social paths of the homeless people involved in the lab to better perform their work in a less institutionalised environment.

In general terms, our long-term involvement in the lab allows us to state that CB highlights that even the most marginal users of welfare services could benefit from design and creativity, from which they are often excluded. In our experience, "design as an attitude" offers those involved the opportunity to experiment designerly ways of knowing. CB offers the chance to approach constructive thinking and to solicit abilities in addressing daily life problems. Here, to design means to aspire to something better, to approach the complex world with a critical and open mind-set, and to acknowledge human beings' great power of innovating both society and themselves.

Forty chairs, a chapel, and a pinball

The projects developed in CB are of various types and sizes, some more complex, others extremely simple. They arise from creative and collective processes based on the exchange of knowledge between the members of the community of practice (Wenger 1999) organised around specific requests and located in a real field of intervention.

In the following sections we propose to reread CB through some of the objects that were produced there. As mentioned above, these collaborative practical activities demonstrate a potential to activate fruitful relationships among participants. For this reason, we call them 'relational objects'. Within the participatory activities the concept of beauty is, again, central. All the people are involved in the project from the process of design to that of production, negotiating every step in order to pursue an idea of beauty on which everybody agrees. Describing the lab through the objects produced is a way, similar to the 'material culture' research approach, to explore the inner mechanisms of collaborative production. This method of inquiry is aimed at investigating objects in order to bring out the interconnected elements that affect different aspects. The quality of each product, its actual use and its perceived usefulness level; the sense of belonging centred on the output; the participants' sense of wellbeing and the quality of the relationships between them.

The following descriptions take into account the participant observation data produced during the processes. Our involvement in the lab consists of two principal dimensions: that of guidance and facilitation, concerning in particular practical design activities, and that of participant observation. These activities use ethnographic tools such as pictures, informal interviews with the participants, and logbooks.

So, our analysis of the objects starts from their physical characteristics such as the materials they are made of, in order to reflect on how they are used and perceived. These elements are connected to the *projects' stories*: the genesis of the projects, the degree of definition of the preliminary project, the object's stated purpose, the role of clients and actors external to the laboratory. Lastly, we focus on the degree of involvement that we observed within the laboratory during the production process and the sense of belonging it generated.

The objects we would like to focus on are a collection of chairs, a chapel made of wooden slats which houses a collection of "holy evildoers" from South America, and a "non-technological" pinball machine made with wood leftovers. We have chosen these three projects because they bring out different elements of the collaborative processes. We consider them as prime examples of the kind of projects that are developed in CB.

The collection of chairs – about forty items – was born out of the request to furnish the rooms of a dormitory for women adjacent to the laboratory. The Municipality of Turin had numerous chairs that were no long in use which, once restored, would have been perfect for the purpose. They were very common wooden chairs, painted in chestnut with a wax finish. Some of them were very unstable, with the paint blown in several places and the seat surface almost always broken. In July 2014, the workshop participants were given a catalogue of forty projects developed by second-year students of the BA programme in Design and Visual Communication of the Polytechnic of Turin. The projects had previously been evaluated by some guests of the dormitory and the workshop participants were asked to carry out some of the proposals. Together they browsed the catalogue and assessed the aesthetics, usefulness, degree of creativity, and novelty of each project to elaborate their feasibility. The main feature of the first project they chose consisted in its graphics, namely the representation of the evolution of a butterfly chrysalis on the seat.

> June 2014. The first task of the laboratory in which I am asked to participate consists in restructuring some chairs recovered from a municipal warehouse, and intended for the dormitory rooms adjacent to the spaces where the laboratory takes place. The goal is to work together with the homeless people who rely on the social services of the Municipality of Turin. The design of the

> chairs has been developed by some students of the Polytechnic. Together with Professor C. we leaf through a catalogue of proposals for the renovation of the chairs. There are about forty different projects. We comment on each of them, leafing through the pages. «That's crap!» is a frequent expression among the workshop participants. Sometimes I think so too, but I don't say it aloud. «Let's do this» says R., one of the homeless trainees. Disregarding other more technically elaborate chairs, R. is pointing at "Metamorphosis" (the name given to this project by the students), i.e. a chair whose only peculiarity consists in the butterflies represented on the sitting surface. The image designed by the students shows the transformation of a caterpillar into a butterfly. A slipstream of bright colours accompanies this transition. It seems to me that the project suggests (too forcibly) a symbolic reading, namely the opening of the butterfly's chrysalis as a metaphor for freedom. My aesthetic judgment is very negative, but it seems that R.'s choice (and the others, too, quite agree) is in line with that of many guests of the dormitory on the upper floor of via Ghedini 6. Over the previous days, in fact, the projects have been judged and voted for or against by some women on the first floor, since the chairs, once completed, are to furnish their (temporary) bedrooms. Trying to please everyone, we choose three or four more projects to develop. Then everyone starts to give their opinions on how to carry out the projects. I don't speak much and I listen a lot. Some ideas seem unconvincing to me, even entirely incorrect. The discussion comes alive. Everyone expresses their ideas with ostentatious self-confidence, as if they knew exactly what they were talking about: you need this sandpaper, that spatula or this type of brush and then that specific paint. On the basis of my previous experience, I can't help doubting the goodness of many of the ideas that come up. Despite this, I do not intervene and I nod trying to be as compliant as possible: I do not want to make the discussion even more complex (fieldnotes of Di Prima, 26th June 2014).

"Metamorphosis" was the first and only chair which was made respecting the students' design as closely as possible. From that moment on, in the following months and years, the chairs produced inside the laboratory were the result of a creative dialogue between the participants. Every single chair was designed as a unique piece by the group of participants who "took care" of it. The creative approach of the laboratory led the participants avoid creating replicas and focus on making new pieces. Some of the chairs were simply restored by removing the old paint and then dyed with coloured impregnating agents, focusing mostly on the graphic component. Others feature a more elaborate transformation of the structure. This is the case of the rocking chair and the double seated-chair that acts as a lamp. Once the chairs given by the Municipality of Turin ran out, one of the coordinators of the project brought some old chairs from the social cooperative he was working at to the laboratory. The original shapes of the chairs became much more varied; this allowed the group to concentrate on the seat without the risk of producing duplicates. Dozens of different seats were developed through

the weaving technique and the mosaic technique using wood pieces from other, recovered chairs. The colour of the threads, the weft of the weave, the materials that were used, and the colour of the pieces of wood all made it possible to invent new combinations, obtaining different aesthetic results. Since several designs of chairs were carried out in the laboratory at the same time, the need to give names gradually arose, in order not to confuse the different parts. At first, giving a name to the chairs had a purely logistical function; after a while, it became a new activity, with people making jokes about the names, while they looked for names that could best capture the peculiarities of the chairs. Sometimes the name was given before the chair was completed, thus directing the creative process. This is the case of "The Chair for Unwanted Guests", which prompted the participants to build a seat with pointed wooden scraps facing upwards.

Following the suggestion of some collaborators of CB, the collection of chairs was brought on display in several city exhibition spaces, open to the public. As a result, the chairs took on the status of "inalienable objects" (Bernardi, Dei, Meloni 2011). In fact, from that moment on the chairs have taken on the value of a sort of "legacy" of the laboratory. The original purpose − to build them for the shelter's guests − was not accomplished. Their emotional and expressive value also prevented them from being sold or donated. The totality of the chairs has become a collection to show the deeply participatory spirit of the laboratory to those who enter it. Each chair is, in fact, the bearer of a story made up by those who participated in its construction.

An object with a remarkably different story is the "Domus Sanctorum" wooden slat chapel. This project stemmed from the collaboration between CB and the Panamanian artist Jhafis Quintero. The centrepiece of the work is a collection of statuettes of "holy evildoers", which are mystical-religious figures of popular criminal saints typical of Latin America, collected by the artist over the years. CB was involved in the preparation of a chapel to house the statuettes, allowing access to visitors. The first architectural prospects of the structure proposed by the artist included construction techniques – such as the use of curved beams and formwork – which were far beyond the workshop participants' practical skills. Thus, the architectural project was reworked and readjusted, according to the know-how of the participants. The structure of the Domus was meant to be three metres wide and three metres high. Compared to the laboratory's other projects, this work was ambitious and complex: it had to be accurate and detailed, with little room for creative improvisation; furthermore, there was a clear due date which required shorter and more organised working times than usual. In order for everyone to be able to participate in the project, the technical and operational procedures and steps had to be displayed in the simplest way possible.

A series of assembly instructions were printed and posted in the laboratory. After some e-mail discussions about the project proposals, Jhafis Quintero confirmed his agreement: he would be a guest of CB for the construction of the chapel. The meeting with Quintero was exciting. The CB group, the artist, and his collaborators immediately bonded. In the laboratory, Quintero explained his artistic project and showed the statuette of the "holy Raton," which would be placed in the wooden building along with the others. The final architectural design of the Domus involved the use of approximately 600 linear metres of wooden strips (with a section of 4 centimetres by 5). The material arrived during the days Quintero was our guest. Unloading the 4-metre-long fir strips from the van was the first activity we did together. By the end of the third day of collaboration, we completed a small-scale model of the chapel. The model helped us to envision both possible structural problems and the formal rendering, in order to develop further adjustments to the project. In addition, working side by side allowed us to discuss and decide together some of the details of the final structure. This time of practical work, however, resulted in an exchange between the builders and the artist that was not merely technical: it was a human exchange, in which the sharing of personal stories allowed us to get to know one another and to better understand Quintero's artistic intentions. This created a feeling of belonging that bound us together and pushed us to do our best. We met Quintero a few months later, when the work was completed. This time it was possible for us to enter the Domus. Although still imperfect and without saints, the Domus left us with a sense of amazement, satisfaction and pride for our great achievement.

One last important observation about this project regards the assembly of the chapel during the exhibition preparation. The group had three days to finish the work. The stress in doing it was palpable because we did not follow the usual calm rhythm that characterises the CB lab. This context, more similar to real professional working situations, negatively affected the relationships between participants.

The third "relational object" is a pinball machine, which was built out of scraps of wood sourced in the laboratory. This pinball machine is a "non-technological" game designed for children who live in a structure adjacent to the laboratory, which hosts families in economic and housing difficulties. After carrying out research on the wooden toys that were used in old village fairs, the CB carpentry work group came up with the idea of a pinball machine. The project was presented to the group through a very simple design developed by one of the designers: a wooden table slightly inclined downwards, supported by four legs; on it were some obstacles that defined and "obstructed" the route of a ball, which ended its descent in a hole at the bottom of the table. The design phase was very complex because it was not

possible to see the project on paper for a long time. Everyone was bound to their own imagery, without being capable of sharing it. The group fumbled around in the dark for days. The topics to discuss were many, but they were poorly defined. Some approached the project from a technical point of view: they spent several hours to understand how the table should stand, on which legs it should rest, what the right height for children aged from four to ten was, how much it should be tilted. Others wondered more about what the purpose of the game was and how to make it sufficiently fun. For example, they asked questions such as: should the obstacles be mere barriers to the trajectory of the ball? Should they rather score points when the player touches them? Is the aim of the game to direct the ball into the only hole present at the bottom? Is it possible to multiply the gates and assign different scores? Everything was painstakingly discussed together, trying to figure out the perspective of children. During the early stages of the design process there were no children who could express their opinion about the game, so everyone was bringing ideas according to their own concept of fun and their childhood memories. The design's turning point occurred when all these adults, temporarily children again, physically began to place obstacles on the inclined table – in short, when they began to play with it. Plastic cups and wire attached with tape: gradually, pieces of scrap wood from various previous works were added to these objects, in particular some pieces of chairs with very elaborate geometries. A Spanish designer, who happened to visit the laboratory out of curiosity, advised on how to use some of the pieces at hand more effectively, in particular some legs of chairs, which had curves that could divert the path of the ball in unexpected and very funny ways. Following his advice, the oddest pieces of scrap found in the laboratory were integrated in the pinball machine. At this point, the group was divided into three subgroups. The first group continued to elaborate the route, while the second group focused on the structural support of the table – which was built of legs of chairs, due to formal continuity reasons – and the third group worked on the graphic side of the table, on the setting, and on the 'landscape' through which the ball passes in its course. We chose the theme of the Mad Max saga because it managed to unite the younger and the older people in the group, although children would probably not know it. The graphic design was applied to the table and obstacles, adopting the technique of pyrography. This technique was proposed by some CB participants who had been using it for months on another project.

The construction of the pinball machine lasted about six months and the degree of satisfaction on the part of the craftspeople was palpable. The test phase, carried out by the team, turned into a series of challenges and tournaments. One person specialised in making the ball take the most difficult trajectories that give the highest score. "Champions" were identified, who were impossible to beat at the game. It was unanimously decreed that the

pinball was fun. When the moment came to deliver it to the children for whom it had been designed, the pinball nonetheless remained in the CB laboratories for many days. The participants in the project proved to be reticent to give away such a successful game. It is interesting to observe what happened to the pinball once it was delivered to the recipients. The children immediately tried to move the pieces of wood fixed on the table, breaking some of them. At this point the pinball machine was promptly returned to the laboratory to be repaired, but after being returned the coordinator of the cooperative decided not to let the children play with it anymore because «It's too beautiful to play with, and to risk breaking it». So the pinball was stored in a room of the structure, visible but not usable, as if it had been a real sculpture, a work of art. In this sense it is interesting to note the near total absence, throughout the entire design and production process, of the end users, i.e. the children. This rendered the pinball machine an absurd and totally useless object for them.

The degree of freedom in design was in some respects extreme, which produced an unprecedented effort by the participants in an imaginative, intellectual dialogue. We experienced both the beauty and the difficulty inherent in approaching a project as Ingold suggests designers should: not predicting but foreseeing, thinking into the future, not trying to predict or control it (Ingold 2013). The history of this pinball, then, is hyperbolic and almost representative of the way work is carried out in the laboratory.

Making together. Some insights

As we have shown, CB is above all a *practical space* through which meetings and relationships between people are fostered and cared for, and the choice of projects to be developed contributes to produces such a welcoming environment. The "clients" we have chosen to collaborate with, in this sense, are always social organizations that share the desire to find the answers to their needs in a collaborative way. They understand the value of working with those people who are deemed more frail by society, valuing their skills and capabilities instead of judging them for their frailties. From the simplest project, such as that of the chairs, which leaves room for the creativity of each participant, to the most demanding objects, such as the chapel, working with non-profit oriented clients allows us to preserve the inclusivity of the lab's environment, in particular with respect to the working rhythm, which must be kept tranquil. In general, the choice of project to be developed takes into consideration how it will be able to allow the intertwinement of skills, stories, inspirations and aspirations of involved participants. This means that all the projects are conceived as open-ended. One of the main aims of CB is to create the conditions for everyone involved to collab-

orate in order to achieve a common goal (a material object usually). But the ways and procedures to do it are not always the same. The quality of collaboration changes depending on the freedom of the group to decide how a project should be carried out in terms of rhythm, adopted techniques, perceived "beauty". So, as one can see in the projects we have discussed, a complete openness in a process can also be very tiring (as in the case of the pinball) and will produce a beautiful but totally extraneous object. In turn, too strict delivery deadlines can be stressful (as in the case of the chapel) and can affect the freedom of creativity. Finally, a total freedom about the final purpose of a project (as in the case of the chairs) can produce the risk of not being able to respond to the original expectations. An excess of freedom can also make workshop's designers to forget to involve the intended users. As in the case of the chairs and that of the pinball, the almost complete absence of them produced quite useless objects.

These critical observations can help one not to idealise the goodness of participatory projects *tout court*, and to consider "relational objects" as complex entities. In this sense, it is important to observe all the different criteria that characterise projects like these: usefulness, for example, is sometimes not the principal one. The chairs, in particular, were the first collaborative design experiment within the lab that taught us, in a way, how to lead a participatory design project. It is for this reason that, over time, they have become inalienable objects, a collective heritage. The "Domus Sanctorum" chapel was, in turn, an opportunity for visibility within the city. The artist was the link who had the merit of activating this synergistic network between people working in the same territory; but he, too, was activated by it. This was possible because the proposal of the artist − or the designer in the case of the other co-construction experiences that we have faced in CB − is open to the community. In this way, the work belongs not only to the individual, but to the entire community which supports it, and which, by participating, legitimises and recognises its value.

The pinball created another type of cohesion within the project. Every item was selected by the group; the elements of the pinball were moved, replaced, rotated many times, and it was the group that decided together the final positioning of the pieces. In this case, the power of the relationships occurring during the crafting is what keeps the pieces together. In this project, the value of each component changes depending on its relation with others. This project, more than others, demonstrates how this attention and care in enhancing and connecting every single element with respect to its peculiar characteristics and history, is one of the most important principles guiding the entire CB workshop.

Describing all these *projects' stories* shows us how the mutual relations between participants are inseparable from the crafting activities that always involve concrete matter. Participants exercise their capabilities of collabo-

ration and negotiation by means of the matter, dealing with the need for "keeping the pieces together" in order to complete the projects. This happens at many levels. Between the materials: we wanted every piece to work together with the other pieces so as to function in a harmonious, integrated and, when possible, fun way. Between the materials and the individual: practical work creates the conditions for a tangible exploration of the features of the materials; in fact, this connection between the individual and the materials is necessary to "interpret" them in their uniqueness. Between individuals through the material: the physical closeness of the participants during the activity, the planning and working together, establish a "practical relationship" between individuals. This kind of relationship fosters freedom of expression and mutual awareness, but also trust in the other.

In doing so, the group learned how to negotiate the functionality, aesthetics, usability, meanings, and quality of the artefact. This means working together, that is, making sure that nobody is excluded from the process. In general, all the artefacts we design in CB are unique, but the creative process is the same: open, practical, careful towards relationships. This is because every project depends on the specific input that each participant brings to the group, not only in terms of practical skills but also of perceptions, desires and visions coming from individual life stories. What helps this inclusive process? For us, every element of the process (human and non-human) is kept together by three methodological tools. *Creative boost* and *creative direction* are both intended as specific contributions by design. Design can anticipate, stimulate, and orient the process with the aim of "keeping the pieces together". *Participant observation* is intended as a careful attitude towards other people, being open to everyone's contribution and point of view.

The difference between the various actors' levels of involvement is another important issue that concerns collaborative and participatory projects. Working on a shared practical goal is the means by which we keep together heterogenous groups of people. However, the type of collaboration tested out in the laboratories is what Richard Sennett describes as

> a demanding and difficult kind of cooperation; it tries to join people who have separate or conflicting interests, who do not feel good about each other, who are unequal, or who simply do not understand one another (Sennett 2012, p. 16).

The participants clearly have distinct interests, since they come from different contexts (social assistance, university, the productive or creative world, etc.). Moreover, the very presence of homeless people is an indicator of the social inequality between participants. Given the differences in cultural capital (above all, educational and generational differences), it cannot

be assumed that they easily understand one another, even if they speak the same language. In this demanding type of collaboration, "the challenge is to respond to others on their own terms" (Sennett 2012, p. 6). This requires a practice of empathy, over which an aggressive and violent attitude, one that is enacted while on the street, often prevails. Without this empathy, rather than collaboration we would encounter conflict, and at worst no collaboration at all – that is, no relationship. These three factors − distinct interests, social inequality, and challenges in communication − are unavoidable. They are the critical points of contact that emerge during the encounter.

To ensure that everyone can take part in the laboratory activities, each individual is only asked to do what he or she is capable of; thus, generally, no-one is formally excluded from the process. This non-exclusion puts all participants on an equal footing. Given that differences between participants outside the laboratory are undeniable, we are speaking of an equality that is related in particular to the laboratory activities, in terms of possibility of access and of personal expression. This type of equality is based on the idea that each person's multiple and diverse "practical capital" (Di Prima 2017) has an equal right to expression. More precisely, it means that each individual enjoys the same freedom of expression, despite each practical asset is qualitatively and quantitatively different. Such equality gives freedom of expression to everyone's diversity which is, as we have noted, what actually nourishes the group itself.

To analyse this intersection of equality and diversity, it is helpful to turn to Sen's capability approach, according to which "a person's position in a social arrangement can be judged in two different perspectives, viz. (1) the actual achievement, and (2) the freedom to achieve. Achievement is concerned with what we manage to accomplish, and freedom with the real opportunity that we have to accomplish what we value" (Sen 1992, p. 31). In Sen's approach, the measurement of inequality is more correct once the capacity of individuals to live a good life has been assessed, as well as their freedom to pursue a good life through "the various combinations of functioning (beings and doings) that the person can achieve" (Sen 1992, p. 40). This approach is based on the concept of capability:

> What is this person able to do and to be? In other words, they are […] "substantial freedoms", a set of (usually interrelated) opportunities to choose and to act […] They are not just abilities residing inside a person but also the freedoms or opportunities created by a combination of personal abilities and the political, social, and economic environment (Nussbaum 2011, p. 20).

Applying this approach to our interventions, we can remark that participants enjoy the same opportunities to do what they know and are able to do obviously within the limits of the activities proposed in the situation, and as

long as they are willing to discuss it with the whole group. In fact, this ongoing discussion among participants allows for a continual recalibration of the context and of what it offers to participants. Ongoing discussion helps to understand whether the type of work, the chosen subject, or the pursued project are satisfactory to the individuals – for example, because someone is not able to collaborate or is not interested in doing so – and whether it's necessary a redirection of activities or not. The capability approach, therefore, turns out to be a useful tool not just for analysing social situations, but also for participatory design, since it is capable of addressing choices so that the situation always offers a high level (or at least the same level) of opportunities to all. Another factor that helps to maintain a certain level of equality among participants, is that relationships between individuals are practical and collaborative, since they are established through the transformation of materials. This ensures that aspects of inequality grounded in other variables (income, wealth, education, class, background, gender, age, etc.) are pushed to the margins when it comes to defining group relationships.

Conclusion

In summary, the long-term experience of CB has allowed us to understand how a collaborative and participatory manners of designing can be used as a tool for social inclusion, while taking into account the diverse elements that can affect it. The collective design process is facilitated through the lens of two different disciplines: design and anthropology. These two disciplines choose which project to initiate through a non-trivial interpretation of the actual situation regarding the varying backgrounds of people involved in the lab, of the final purpose (or purposes) of the project, and of the project's partners. Through collective work with materials and objects created together in the laboratories, we can test a process of participatory, direct and deliberative democracy, based on listening and responding to all voices involved: "A process of compromise and synthesis meant to produce decisions that no one finds so violently objectionable that they are not willing to at least assent" (Graeber 2007, p. 341).

This inclusive approach cannot be practised without a constant reflection-in-action mode, supported by participant observation, intended not only as a method, but as a "posture" that implies constant attention to others, openness for dialogue, and being open to the possibility that everyone can contribute to "crafting beauty".

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