



**JANAINA  
TELES  
BARBOSA**

**DESIGNING COMMONING:**

Uma investigação em design sobre desafios da construção de colaborações sustentáveis para transições urbanas

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A design research about the challenges of building sustainable collaborations for urban transitions



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Tese apresentada à Universidade de Aveiro para cumprimento dos requisitos necessários à obtenção do grau de Doutor em Design, realizada sob a orientação científica do Doutor João António de Almeida Mota, Professor Auxiliar do Departamento de Comunicação e Arte da Universidade de Aveiro.

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## palavras-chave

Colaboração, commoning, common, participação urbana, co-produção, dinâmicas comunitárias, espaço público, dinâmicas de poder

## resumo

O design permite a colaboração por meio de técnicas de co-criação, as quais facilitam a participação de todos no processo de design com o objetivo de sugerir soluções adequadas para problemas específicos. No contexto de dinâmicas comunitárias, este processo implica desafios em relação às dinâmicas de poder que constituem tanto a comunidade como a própria prática de design. Neste sentido, esta tese está localizada no domínio da pesquisa de design para estudos, visando compreender como a colaboração pode emergir nas dinâmicas comunitárias e como as práticas de design podem facilitar processos de construção de colaborações, garantindo sua sustentabilidade ao longo do tempo para gerar novas mudanças. Assim, esta pesquisa explora novas agências de design produzidas por práticas urbanas de cooperação (commoning), em que a colaboração é construída a partir de duas perspectivas: “comunidade” e “projeto”. Assim, esta tese explora diferentes configurações de agência de design produzidas através da interação entre designers e não-designers através de uma análise qualitativa de quatro estudos de caso específicos localizados no Brasil e em Portugal: A Batata Precisa de Você (São Paulo); Casa do Vapor (Almada); Acupuntura Urbana (São Paulo); e VivaCidade (Aveiro). Esses projetos se esforçaram para promover dinâmicas participativas por meio da co-produção de eventos, objetos e espaços em diferentes contextos urbanos.

Esta tese gerou um mapa analítico de novas configurações de agência de design localizadas em espaços de interseção entre formas de construção de comunidades “de cima para baixo” e “de baixo para cima”, as quais podem promover colaborações mais sustentáveis em espaços públicos. Portanto, esta tese oferece contribuições para melhoria da participação urbana em processos de decisão, como também a melhoria de práticas de design para a construção de colaboração que gerem transições sustentáveis nos espaços urbanos. Primeiro, esta pesquisa sugere que a criação de processos colaborativos para o desenvolvimento de sistemas mais horizontais de tomada de decisão requer negociações contínuas, incluindo conflitos, dissensos e os diferentes interesses de poder que compõem uma ação coletiva. Em segundo lugar, a análise empírica realizada por esta investigação sugere que a ação do design em comunidades pode criar condições através de programas flexíveis que permitam emergir diversas agências que constituem cada comunidade urbana, permitindo que os problemas e soluções sejam gerenciados pela própria comunidade. Em terceiro lugar, esta investigação sugere que a colaboração pode ser questionada e explorada pela pesquisa e prática de design por meio de processos de performance, interrupção e sustentação da participação com a intenção de catalisar processos contínuos de mudança local. Esta pesquisa também chama a atenção dos atores urbanos para a constituição da agência de design por meio da produção, negociação e pertencimento do processo local de participação, viabilizando colaborações sustentáveis.

Portanto, esta tese é dividida em quatro partes principais. A primeira parte apresenta a fundamentação teórica e o argumento desta investigação a partir da compilação de conceitos e ideias desenvolvidos pelo campo transdisciplinar de “common” e abordagens dentro da pesquisa em design associados a prototipagem, infrastructuring e articulação de comunidades. A segunda parte descreve a abordagem metodológica usando métodos de coleta e análise de informações do trabalho de campo providas das Ciências Sociais, tais como entrevista qualitativa e codificação. A terceira parte deste documento apresenta e interpreta um conjunto de estudos de caso de projetos participativos realizados em espaços públicos, os quais deram suporte à elaboração de uma análise estruturada de quatro estudos de caso principais. Finalmente, a quarta parte desta tese apresenta as contribuições deste trabalho para o campo da pesquisa em design e para a prática de design, chamando a atenção para a necessidade de produzir novas abordagens em design que possam incorporar a complexidade de projetar a participação em espaços urbanos.

## keywords

Collaboration process, commoning, common, urban participation, co-production, community dynamics, public space, power dynamics.

## abstract

Design enables collaboration through co-creation techniques, which can allow multiple stakeholders to participate in the design process with the aim to suggest suitable solutions for specific problems. In the context of urban communities, this process entails challenges with respect to the power dynamics that constitute both community and design practices. In this sense, this thesis is located in the domain of design research for studies, aiming to understand how collaboration can emerge from community dynamics and how design practices can facilitate processes of building of collaborations, ensuring its sustainability over time towards novel transitions. This research has been conducted by investigating emerging design agencies carried out by urban “commoning” practices, when collaboration is built from both “community” and “project” orientations. Thus, this thesis explores different configurations of design agency produced by the interaction between designers and non-designers through a qualitative analysis of four particular case studies located in Brazil and Portugal: *A Batata Precisa de Você* (São Paulo city); *Casa do Vapor* (Almada city); *Acupuntura Urbana* (São Paulo city); and *VivaCidade* (Aveiro city). These projects took efforts to promote participatory dynamics through design activities such as the co-production of events, objects and spaces.

This thesis generated a comprehensive map of emerging design agency configurations placed in spaces of intersection between top-down and bottom-up social forms of community building that might promote more sustainable collaborations in public spaces. Therefore, this thesis offers contributions related to both improving user participation in urban environments in the decision-making process and designing collaboration for commoning practices for sustainable transitions. First, this research suggests that the creation of collaborative processes for the development of horizontal decision-making systems require continuous negotiations including conflicts, dissensus and different power interests that comprise a collective action. Second, the empirical analysis carried out by this study suggests that design agency in communities might create conditions through flexible design programs in order to emerge diverse agencies that constitute a certain urban community, allowing ways to rise issues handled by the community itself. Third, this investigation suggests that collaboration can be questioned and explored by design research and design practice through processes of performing, disrupting and sustaining participation for catalysing continuous processes of local change. This research also calls the attention of urban actors for the constitution of design agency through the interplay between making, negotiating and belonging the participation process into collective actions for the formation of sustainable collaborations.

Therefore, this thesis is divided in four major parts. The first part presents the theoretical background and the argument of the research project, including a compilation of concepts and ideas developed by the transdisciplinary field of common theory and design research approaches associated with the domains of prototyping, infrastructuring and articulating communities. The second part describes the methodological approach by using gathering and analysing methods from the research field of social sciences, such as the qualitative interviews and coding process. The third part presents and discusses a set of case studies of creative participatory projects carried out in public spaces, which gave support to the elaboration of the structured analysis of the four case studies. Finally, the fourth part of this research project presents the overall outcomes of this thesis on its contribution to the field of design research and design practice, pointing out both the main conclusions and implications of this work in addressing how design research and design practice might shift their approaches to acknowledge the complexity of designing participation in urban spaces.

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## GLOSSARY

<b>add coding</b>	method created in this research project in order to identify opposite things that coexist at the same time in the material collected in the field work.
<b>adversarial design</b>	research design approach in which the design takes efforts to construct publics or communities through tactics of "revelling, reconfiguring and articulating" (DiSalvo, 2012, p. 5).
<b>affective map</b>	collective activity used to activate the mindfulness of the participants relating to the potentialities of the neighbourhood with the aim to produce a collective appreciation of the urban environment.
<b>agonistic spaces</b>	spaces where radical democracy takes place, i.e. the consensus built through antagonism for the harmonization of positions gives place to agonism, in which consensus is built through conflicts of positions (Mouffe, 2013).
<b>co-production</b>	activity associated with the increase of the accessibility to means of production, fostering future scenarios of production in the called "Third Industrial Revolution". The notion is associated with the concepts and practices of openness, sharing, and collaboration in the process of making goods and delivering services (Seravalli, 2014a).
<b>coding method</b>	systematic operations of selecting, integrating and collating of relevant elements in the collected data in order to establish sensible links between what is specific and what is general, as well as what is practical and what is conceptual (Saldaña, 2009, p. 8).
<b>collaboration for sustainability</b>	collective action that seeks to build more resilient ways of living through long-term negotiation process based on cooperation, involving the exchange and reuse of the available and local resources.
<b>common knowledge</b>	intelligible ideas, information, and data, that when interconnected are able to construct types of understandings grounded from experience or study, such indigenous and academic knowledges (Hess & Ostrom, 2007, p. 7).
<b>commoning</b>	social practice used to produce, use and play collectively what is common, i.e. creative interaction between individuals that is adjusted over time in order to guarantee equal use of the resources (Bollier & Helfrich, 2012; Massimo DeAngelis & Stavrides, 2010; Linebaugh, 2008).
<b>configurations of design agency</b>	emergent design agencies in which designers and non-designers work together in order to solve collective problems. This research analysed two different configurations of design agency, i.e. "community" in which the energy to construct collaboration come from a more bottom-up orientation, and "project" in which the energy to construct collaboration come from a more top-down orientation.
<b>core categories</b>	categories that express the key and relevant points of this research (Saldaña, 2009, p. 163).
<b>creative community</b>	groups of people who cooperate in inventing, enhancing, and managing viable solutions for new and sustainable ways of living in common (Meroni & Bala, 2007).

<b>cross coding</b>	method created in the third and final coding cycle of this investigation in order to identify patterns between the codified interviews of each case study, as well as between the core categories of the four case studies.
<b>cyclical coding</b>	term created in this research in order to nominate the successive coding steps of the interview analysis conducted in the structured phase of this thesis.
<b>descriptive coding</b>	method that summarizes a passage of the text with a single noun in order to identify the relevant topics discussed by the interviewees (Saldaña, 2009, p. 70).
<b>design agency orientations</b>	capabilities to build collaboration from the bottom-up perspective, in which creative communities use diffuse design skills to build collaborations and communities, as well as from the top-down perspective, in which expert designers within institutions use design skills to build collaborations and communities.
<b>design agency</b>	creative energy that is distributed or replicated by different participants involved in the collaborative projects in community environments (Barbosa, Wiltse, & Mota, 2017, p. 8).
<b>design experiments</b>	prototypes, events or sketches created in the process of generating new design knowledge (Krogh, Markussen, & Bang, 2015).
<b>design for social innovation</b>	"everything that expert design can do to activate, sustain, and orient processes of social change towards sustainability" (Manzini, 2014, p. 62).
<b>design research for exploration</b>	term that characterizes methodologies in which the object of study is the critical formulation of problems within the design process through the construction of objects and artefacts.
<b>design research for practice</b>	term that characterizes methodologies in which the object of study is a design artefact, using specific methods within the field of design in order to produce more efficient material results.
<b>design research for studies</b>	term that characterizes methodologies in which the object of study is the construction of concepts and theories that can contribute to better understand the process and practices of design.
<b>design things</b>	design practices that work with “things”, which are not just about artefacts designed for particular users, but they are related with the effects of the interaction between users and artefacts when they become public through matters of concern (Binder et al., 2011, p. 6).
<b>design with communities</b>	set of practices that strive to develop, together with the participants, the necessary conditions to produce collective actions capable to innovate through existing local resources (Manzini, 2014, p. 62).
<b>designerly way</b>	way of observing and thinking relating with the culture of the design field, which is based on the reflective practice (Cross, 2001).
<b>designing commoning</b>	conceptual verbalization of this thesis, which refers the efforts that were taken to better understand how design practices can incorporate the power dynamics in building collaboration with communities, as well as how design can contribute to sustain collaboration over time for the construction of more resilient and sustainable urban environments.

<b>disciplinary power</b>	mechanisms of power that regulate ways of thinking and behaving through the sovereign force exercised by different social institutions such as the prisons, schools and hospitals (Foucault, 2013).
<b>disruptive aesthetic</b>	designedly ways of intervening in people's lives by exploring the interference of material objects and artefacts in the public sphere and in the urban environments. The activist design projects present the disruptive aesthetic through activities of "walking, dwelling, playing, gardening and recycling", which can cause "contest, revelation and dissensus" effects (Markussen, 2013).
<b>emerging design agency</b>	different design agency configurations composed by designers and non-designers located in spaces of intersection between diffuse and expert design capacities (Manzini, 2014, p. 44).
<b>exploratory and structured phases</b>	two phases of the methodology applied in this research project, when the gathering process was carried out in parallel with the analysing process, generating a set of theoretical-practical propositions that sought to give answers to the research questions.
<b>expressions of design agency for commoning</b>	set of creative tactics and strategies identified by this study to activate participation and promote collaboration in the public spaces.
<b>Hackerspaces or Makerspaces</b>	community-driven spaces where people interested in technology share tools and knowledge experimenting physical production of objects according to similar values and aims (Seravalli, 2014b, p. 118).
<b>FabLabs</b>	concept developed at MIT (Massachusetts Institute of Technology) with the aim of creating an open-source infrastructure for learning and experimenting with personal fabrication machines (Seravalli, 2014b, p. 118).
<b>field notes</b>	concrete descriptions of what is observed during the field work (Marshall & Rossman, 2010, p. 98).
<b>form</b>	shape organized in the service of content, being a term with a long and contentious history in the theory of aesthetics (Erlhoff & Marshall, 2008, p. 169). Normally the concept of form in design is associated with semiotic signs, such colour and sound, but it is important to understand how a form meets the user in the form of experience (Redström, 2017, p. 68).
<b>gambiarra</b>	Brazilian term that is associated to the construction of artefacts through forms of improvisation conducted by the subversion of industrialized artefacts (Bouffleur, 2013).
<b>gentrification</b>	urban phenomenon in which cultural planning and artistic practices are used for the overvaluation of zones, generating social segregation, concentration of wealth and exclusion of a great part of the local population (Deutsche, 1996).
<b>grounded theory</b>	methodology in which new concepts and ideas emerge from the systematically gathering and analysing qualitative data, taking efforts to develop a logical system of understanding that links practice and theory (Strauss & Corbin, 1994, p. 273).
<b>holistic coding</b>	method that identifies themes in extensive portions of the sample, preparing the material to be coded in detail in the next steps of codification (Saldaña, 2009, p. 118).

<b>in vivo coding</b>	method that identifies words or phrases exactly how were pronounced by the interviewees, being used for the purpose of identifying and collecting key statements related to the participants' voices (Saldaña, 2009, p. 74).
<b>infrastructuring common</b>	development of thinking and doing design process to open modes of access, collaborating and sharing production in building new ways of living in common (Marttila, 2016; Seravalli, 2014a).
<b>initial codes</b>	in vivo, values, versus, add, process and descriptive codes identified in the second coding cycle of the qualitative interpretation of this study.
<b>institutions of commons</b>	social mechanisms that may support commoning practices and their effects at micro and macro scale.
<b>islands of enclaves</b>	metaphorical image of the contemporary city, which is visualized as an archipelago composed by islands with internal control mechanisms that work in parallel with the central and regulatory power of the state, such as closed neighbourhoods or huge building complexes with restricted access to public areas (Stavrides, 2016, pp. 13–30).
<b>making experience</b>	design practices of co-production of temporary artefacts, spaces and events as means of developing local collaborations.
<b>manual maps</b>	notes and drawings of relevant parts of the data in order to facilitate the interpretation.
<b>modes of designing</b>	ways of designing within different design agency configurations, such as “designing in communities; designing with designers and designing with institutions”.
<b>online information</b>	technique in which the researcher collects information in the flows of online publications and official news.
<b>open laboratory</b>	can be called by open lab or living lab. It is a physical place where civil society, companies, public sector stakeholders and city residents are invited to discuss and operate solutions through the constant exchange of knowledge in practical workshops and everyday coexistence.
<b>open online calendar</b>	calendar created through a open platform, where all the participants of the project can post the activities that will be carried out by themselves.
<b>participant observation</b>	research method used to connect the researcher to the human experiences, allowing the understanding on how and why human behaviours occur in certain contexts (Guest, Namey, & Mitchell, 2013, p. 75).
<b>participatory design</b>	highly political approach of design oriented toward democratizing the design process in order to enable worker participation in decisions about how work is done (Ehn, 1989).
<b>pattern coding</b>	research method that allows to identify patterns between the participants of each case study (Saldaña, 2009, p. 152).
<b>permaculture</b>	system of agricultural and social design principles centred around simulating or directly utilizing the patterns and features observed in natural ecosystems, integrating a truly sustainable system (Laurikainen, 2017).

<b>poetic activities</b>	aesthetic form that involves the active participation of individuals in the generation of new meanings (Carlsson, 2010).
<b>post-it coding</b>	method created by this research project in order to organize the codes through coloured post-it on a large format white poster in a wall.
<b>process coding</b>	method that identifies important individual or collective actions, such as individual tactics, strategies and routines that make up either large collective actions or more general conceptual actions (Saldaña, 2009, p. 77).
<b>production of subjectivity</b>	set of conditions that define ways of being, thinking, feeling and acting in society. The subjectivity can be presented itself in an individual dimension, in which a person is product of its familiar relations, as well as in a collective dimension, in which a person acts according social norms (Guattari, 1992).
<b>prototypes</b>	artefacts or systems often fabricated by hand or with rapid prototyping technologies with the intention to test the function and performance of a new design before it goes into production (Erlhoff & Marshall, 2008, p. 317).
<b>public spaces</b>	this research considers the public spaces as potential places for establishing and expanding commoning practices and social capabilities of sharing things (Stavrides, 2016, p. 6).
<b>quick coding</b>	term created by this research in order to nominate the method used to organize the material collected in the exploratory phase of the field work. The method consists in listening of the recorded interviews, by taking notes on key words, handling materials produced by the projects, and by designing visual diagrams and mental maps through collages and post-it's on the wall.
<b>reflective practitioner</b>	theory that explores how designers set problems and solve them in real world professional contexts. The activity of research-oriented design can be defined as a "reflective practice" because it is a process of understanding professional practice through the researcher's own experience "in" or "on" action (Schön, 1983).
<b>relational aesthetic</b>	aesthetic experience that focuses on the emancipation of the relational dimension of the human existence, being collectively produced in ordinary and casual micro-spaces of everyday life (Bourriaud, 2009, p. 22).
<b>seed bomb</b>	ball of compost, humus and seeds of different native plants used in guerrilla gardening activities (Gartenfreund, 2011).
<b>semi-structured interview</b>	method applied with a list of research questions, which works as flexible guides open for new questions and different ways to answer these questions (Edwards & Holland, 2013, p. 29).
<b>sharing economy</b>	elements that identifies commoning practices, such as sharing, collaboration and DIY practices, that are used to develop profitable innovation by the market (Gruber, 2015, p. 68).
<b>sketches</b>	simplest form to materialize ideas through visual expression in design experiments (Erlhoff & Marshall, 2008, p. 360).
<b>table coding</b>	method created in the second coding cycle of this study, consisting in the construction of flexible tables through the use of Adobe Illustrator software.

<b>tacit knowledge</b>	central element in the production of design knowledge, in which theories, concepts and design meanings are produced through the practice of design in situations of uncertainty, instability, uniqueness, and conflict (Schön, 1983, p. 308).
<b>threshold spatiality</b>	experiences caused by rituals of passage, which define and control the transition from an old to a new situation. In the case of commoning practices, the experience of passing is reflected in the exercise of sharing with the others, creating bonds, identities and common goals (Stavrides, 2016, p. 5).
<b>total experience</b>	aesthetic experience in everyday life that undergoes a process of adaptation of its consequences, producing a meaningful perception of the world (Dewey, 2010).
<b>transition coding model</b>	model created in this research in order to transform the information from an empirical form to an analytical form. The model intended to be cyclic because it must allow the researcher to go and back along the process of codification.
<b>unstructured interview</b>	method that allows the interviewees to talk about their own perspective using their own references about their participation in the projects (Edwards & Holland, 2013, p. 30).
<b>urban commons</b>	small-scale community experiments that search for alternatives to the current economic system through cooperative and collaborative social practices (Susser & Tonnelat, 2013).
<b>user</b>	the purpose of design is to produce an object or system to be used by a user. The designer can create objects with regard to one or more uses (Erlhoff & Marshall, 2008, p. 429).
<b>values coding</b>	method that identifies the main values, attitudes and beliefs that represent the worldview of the interviewees (Saldaña, 2009, p. 89).
<b>versus coding</b>	research method that identifies critical conflicts in binary terms between individuals, groups, social systems, organizations, phenomenon, processes or concepts (Saldaña, 2009, p. 94).
<b>writing analytic memo</b>	technique that registers reflections about the data in order to document each coding choices and the process of analysis towards the production of new theory (Saldaña, 2009, p. 32).

## ACRONYMS

<b>CASE 1</b>	Case study <i>A Batata Precisa de Você</i> (São Paulo-Brazil)
<b>CASE 2</b>	Case study <i>Casa do Vapor</i> (Almada-Portugal)
<b>CASE 3</b>	Case study <i>Acupuntura Urbana</i> (São Paulo-Brazil)
<b>CASE 4</b>	Case study <i>VivaCidade</i> (Aveiro-Portugal)
<b>CORDA</b>	Associação do Bairro Histórico Rua Direita de Aveiro
<b>CPLP</b>	Comunidade dos Países de Língua Portuguesa
<b>DIY</b>	Do It Yourself
<b>IPIU</b>	Instituto de Pesquisa e Inovação em Urbanismo
<b>MEDEA</b>	Research Lab for Collaborative Media, Design, and Public Engagement
<b>MTST</b>	MTST- Movimento dos Trabalhadores Sem Teto
<b>NGO</b>	Non-governmental organization
<b>RMBA</b>	Rede Municipal de Bibliotecas de Almada
<b>TISA</b>	TISA- Escola Informal de Arquitetura
<b>1A_agent+user</b>	Case 1 ( <i>A Batata Precisa de Você</i> ), interviewee “A”, Profile “agent and user”
<b>1B_agent+user</b>	Case 1 ( <i>A Batata Precisa de Você</i> ), interviewee “B”, Profile “agent and user”
<b>1C_agent+user</b>	Case 1 ( <i>A Batata Precisa de Você</i> ), interviewee “C”, Profile “agent and user”
<b>1D_agents</b>	Case 1 ( <i>A Batata Precisa de Você</i> ), interviewee “D”, Profile “agent”
<b>1A_public sector</b>	Case 1 ( <i>A Batata Precisa de Você</i> ), interviewee “A”, Profile “public sector”
<b>1A_users</b>	Case 1 ( <i>A Batata Precisa de Você</i> ), interviewee “A”, Profile “user”
<b>2A_agent</b>	Case 2 ( <i>Casa do Vapor</i> ), interviewee “A”, Profile “agent”
<b>2B_agent</b>	Case 2 ( <i>Casa do Vapor</i> ), interviewee “B”, Profile “agent”
<b>2C_agent+user</b>	Case 2 ( <i>Casa do Vapor</i> ), interviewee “C”, Profile “agent and user”
<b>2D_agent</b>	Case 2 ( <i>Casa do Vapor</i> ), interviewee “D”, Profile “agent”



<b>2E_agent</b>	Case 2 ( <i>Casa do Vapor</i> ), interviewee “E”, Profile “agent”
<b>2A_public sector</b>	Case 2 ( <i>Casa do Vapor</i> ), interviewee “A”, Profile “public sector”
<b>2A_user</b>	Case 2 ( <i>Casa do Vapor</i> ), interviewee “A”, Profile “user”
<b>2B_user</b>	Case 2 ( <i>Casa do Vapor</i> ), interviewee “B”, Profile “user”
<b>2C_user</b>	Case 2 ( <i>Casa do Vapor</i> ), interviewee “C”, Profile “user”
<b>2D_user</b>	Case 2 ( <i>Casa do Vapor</i> ), interviewee “D”, Profile “user”
<b>2E_user</b>	Case 2 ( <i>Casa do Vapor</i> ), interviewee “E”, Profile “user”
<b>2F_user</b>	Case 2 ( <i>Casa do Vapor</i> ), interviewee “F”, Profile “user”
<b>3A_agent</b>	Case 3 ( <i>Acupuntura Urbana</i> ), interviewee “A”, Profile “agent”
<b>3B_agent</b>	Case 3 ( <i>Acupuntura Urbana</i> ), interviewee “B”, Profile “agent”
<b>3A_public sector</b>	Case 3 ( <i>Acupuntura Urbana</i> ), interviewee “A”, Profile “public sector”
<b>3B_public sector</b>	Case 3 ( <i>Acupuntura Urbana</i> ), interviewee “B”, Profile “public sector”
<b>3C_public sector</b>	Case 3 ( <i>Acupuntura Urbana</i> ), interviewee “C”, Profile “public sector”
<b>3A_user</b>	Case 3 ( <i>Acupuntura Urbana</i> ), interviewee “A”, Profile “user”
<b>3B_user</b>	Case 3 ( <i>Acupuntura Urbana</i> ), interviewee “B”, Profile “user”
<b>4A_agent</b>	Case 4 ( <i>VivaCidade</i> ), interviewee “A”, Profile “agent”
<b>4B_agent</b>	Case 4 ( <i>VivaCidade</i> ), interviewee “B”, Profile “agent”
<b>4C_agent</b>	Case 4 ( <i>VivaCidade</i> ), interviewee “C”, Profile “agent”
<b>4D_agent</b>	Case 4 ( <i>VivaCidade</i> ), interviewee “D”, Profile “agent”
<b>4A_public sector</b>	Case 4 ( <i>VivaCidade</i> ), interviewee “A”, Profile “public sector”
<b>4A_user</b>	Case 4 ( <i>VivaCidade</i> ), interviewee “A”, Profile “user”
<b>4B_user</b>	Case 4 ( <i>VivaCidade</i> ), interviewee “B”, Profile “user”
<b>4C_user</b>	Case 4 ( <i>VivaCidade</i> ), interviewee “C”, Profile “user”
<b>4D_user</b>	Case 4 ( <i>VivaCidade</i> ), interviewee “D”, Profile “user”

## PROLOGUE

Developing a Doctoral research has been a challenging journey for me, which at the same time brought me a great pleasure in discovering something new and a sense of limitation about the complexity in understanding the human being action in the world. This thesis explores Design knowledge as a creative articulator of the learnings acquired from two distinct, but complementary, academic paths and scientific backgrounds that I developed in Brazil before starting this doctoral research, i.e. Social Sciences and Visual Arts. As a junior researcher I have always sought and been motivated to design bridges of communication between the academic and everyday life knowledges.

The skills acquired at home also guided my research and professional choices in the field of design. Thus, I inherited from my parents a political-based formation that emerged from their active participation in the process of democratization of the Brazilian health care and public education institutions in the 1980s, the decade in which I was born. This heritage influenced my involvement with the political students' movement when I joined the university in the year 2000. The degree in Social Sciences gave me support to understand a little bit how the Western world is constructed politically, economically and socially. However, I realized that this macro view have distanced me from the everyday world of small social actions and micro changes that have been happening just next to me. During that period, I decided to do an anthropological study on the creative process of artisanal work in a small rural community located in the northeast region of Brazil, Ceará. Living for while in that place doing ethnographic work, called my attention for the fact that the labour activities of the craftsmen were very connected with their daily life issues. In other words, the processes of creating and producing an handicraft made of clay were interconnected with the natural and collective environment within the community.

Later on, when I was an undergraduate student in Visual Arts, I tried to put into practice what I have learned from that community, relating my artistic vision to the urban environment in which I lived in, Fortaleza, a city with around 2.6 million inhabitants, presenting many social problems. In this context, I developed artistic experiments in public spaces with the objective to rise critical questions about the problems and potential solutions for a better common urban environment. Parallel to this investigation, I worked in a social project of the municipality that has developed activities with teenagers that have lived in favelas (i.e. slums). In that work experience, I explored how the artistic expression could empower those young people to face the financial and social difficulties associated with the environment in which they were living, such as exclusion and prejudgment. After that experience, I started to work as a graphic designer developing editorial projects for Public Health Managers of the Ceará region (Brazil). These work experiences and investigations have led me to question the practice of design as a powerful tool for promoting meaningful social change in relation to the participation and empowerment of urban communities.

Thus, in 2011, in the Master studies conducted at the University of Porto, I developed a design research project about the social challenges faced by the female immigrant community in the Portuguese society. The research methodology was based on artistic experiments (performance, video and photography) in public spaces. The aim of this research was to launch a discussion and collect information about the challenges of integration and empowerment of this specific public in Portugal country. In line with this, since 2013, I have got the opportunity to expand my research in design for social change through a PhD studies at the University of Aveiro. Here, I have been conducting research with the intention to explore areas of intersection between art, activism and design for social innovation in public spaces. I have been led by the desire to better understand how design can go beyond the paradigm of solving a concrete problem through the production of an image, an artefact, or a service. In other words, I have been interested in exploring how design could seek opportunities in processes of social change triggered by activist urban initiatives, with the aim of understanding better ways to co-create sustainable social forms of living together in contemporary cities.

On this background, I hope these initial words may introduce the readers of this thesis to the personal motivations and foundations of this research work.

## INTRODUCTION

This thesis aims to analyse how design knowledge can better understand processes of collaboration for sustainability when working with urban communities. On this background, this work presents three core research questions which drive the elaboration of the present thesis, namely:

1. How does collaborative experience emerge from commoning practices?
2. How can design agency reflect the power dynamics of collaboration?
3. How can design practices articulate collaboration for commoning?

The present introduction provides a careful overview of the framing, methodology, contributions and structure of this thesis in order to guide the reading of this document.

## 1. FRAMING

The term "designing commoning" is related with the verbalization of the theoretical framework of this dissertation, emerging from the articulation of ideas and concepts ranging between relevant literature from the field of design research and the scientific work developed in the field of the transdisciplinary common theory. On this background, this thesis aims to explore the comprehension of power dynamics in collaboration practices towards urban sustainability. In an increasingly interconnected world with intense and fast transformations, the practical skills previously reserved by design areas are increasingly present in all areas of knowledge. Consequently, this thesis starts from the perspective that design processes increasingly need to be rethought in order to better place their roles in the emerging design possibilities, where designers and non-designers combine skills in in order to propose changes through sustainable solutions. In other words, the agency of design requires the involvement with wider perspectives that go beyond the professional design boundaries, where the designers take different roles and positions in projects that move the focus from individual users to community relations.

In this sense, it is important to develop theoretical perspectives that can be used to better characterize the forms of social organization and action at play in communities, and also to better characterize the design agency in relation to these forms. Currently, the global commons movement has been exploring alternative ways of living that seek to reduce the risks associated with the natural environment from a radical social perspective. Scholars and practitioners from various fields of knowledge are joining efforts to understand social ways that suggest other means of transforming economies based on social practices of exchange, collaboration and sharing. In political terms, the common movement offers alternative visions to both left and right-wing ideologies, visualizing the values of decentralized forms of power that interfere in the standardized systems governed by both the government and the free market. Thus, this movement confirms through practice and theory that economic exchanges based on cooperation and collaboration are often more democratic and productive in their essence, challenging the free market narrative about "wealth-creation" through private property rights (Weston & Bollier, 2013).

The common movement gained attention with the work of the Nobel economist, Elionor Ostrom (1990), who demonstrated that it is productive and viable the use of self-sustainable social mechanisms for managing collective resources in a micro scale. This work confirmed the relevance of the global movement of commoners that have been emerging by the use of the internet through

engagement of people from different backgrounds. For instance, common creative projects have been allowing the free sharing of knowledge through open access platforms or digital commons. Some examples of such processes are the creation of open source software programs like Linux, the open Wikipedia dictionary, the Creative Commons platform, the open scholarly journals, which allows researchers to share scientific articles without a strict copyright control, and the growth of the "Maker" movement around the world through "Fablabs" and "Hackerspaces". In line with the digital commons, many other groups of self-organized people have been emerging to better manage natural resources, working on a sustainable use of genetic material of seeds, including those that are at constant risk of disappearing with the "bio-piracy" of multinational biotech companies. Additionally, the urban spaces are also the staging for production of common systems, such as the traditional urban gardens, co-housing experiences or other collaborative projects carried out by city residents (Weston & Bollier, 2013).

Therefore, the three major pillars of the concept of sustainable development, i.e. "environment, society and economy" (Sachs, 2002), can be reinterpreted by the common theory discussion in order to bring collective issues closer to the human experience. In this case, "environment" refers to the material and immaterial resources necessary to build a common life; "society" refers to the communities interested in mechanisms of self-organization for the management of resources; and lastly, "economy" refers to the social interactions that play and create the commons, i.e., "commoning" practices. The latter can be described as social mechanisms or specific social traditions that enable people to discover new ways of doing things collectively (Bollier & Helfrich, 2012; Linebaugh, 2008). Indeed, commoning practices is not something isolated from society, but it occurs at all times in contemporary cities, influencing or infiltrating in the hegemonic social and economic system (DeAngelis, 2017).

### **Urban commons**

The United Nations report "The World's Cities in 2016" estimates that nowadays 54.5 per cent of the world's population lives in urban settlements. By 2030, urban areas are projected to host 60 per cent of total world population, i.e. one in every three people will live in cities with at least half a million inhabitants (United Nations, 2016). Therefore, cities are environments that consume most of the common resources, being territories of strong social dispute. On the one hand, cities are cradles of innovation, diversity, creativity and participation. On the other hand, they also concentrate conflicts, segregation and intolerance (Lefebvre, 2011). Hence, the UN report states that the understanding of the key trends in urbanization likely to unfold over the coming years are crucial to

the implementation of the 2030 Agenda for Sustainable Development and the 17 Sustainable Development Goals (SDGs) (United Nations, 2015). Here, the urban agenda sets global standards towards the achievement of sustainable urban development, rethinking the way we build, manage, and live in cities.

In recent years, the interest of politicians, academics and practitioners in urban commoning practices has been growing, opening up the discussion about collaborative processes of governance of the city, where decisions can be made in a more decentralized and horizontal way. However, it is important to understand that collaboration in common practices is not a utopian egalitarian process, but rather a continuous process of social conflicts, since the use of goods always depends on processes of negotiations between commoners (Euler, 2016). In that way, in the scope of urban commons, collaboration can be understood as a complex collective experiment in the production of a collective life (Stavrides, 2016).

Collaborative practices are constantly emerging in various forms in contemporary urban spaces such as urban gardening and co-housing bottom-up projects. Moreover, at the same time, collaboration is considered to be an innovative tool for facilitating businesses in the development of technological systems and services such as rental platforms for private cars and rooms, or even urban spaces sold for collaborative events and practices. Thus, there are typically different interests and power relations taking place that drive the political dynamics of collaboration in urban spaces (Reimer, 2012).

In this thesis, the discussion about commons and its theory brings novel insights to better understand the meaning of sustainability and collaboration in design interventions in urban contexts. From a design perspective, this work explores urban issues having a close look at the potential of design collaborative processes generated by local initiatives placed in public spaces. Considering the unequal power relations of the contemporary urban contexts, this study can ask: How can collaborative practices (i.e. alternative forms of production, consumption and management of resources) be produced for the emergence of sustainable urban communities?

## **Design and collaboration**

The development of collaboration practices involves challenges that design has attempted to tackle in various ways. On this background, collaboration in design can be associated with co-creation, enabling multiple stakeholders to participate in the design process. Participatory design intended from the beginning to support the social development of political structures and enterprises oriented towards the democratization of design processes. In this sense, participatory design was developed to

enable the increase of the active participation of workers in decision making processes, contributing to their involvement/perception on how work was done (Ehn, 1989). Thus, co-design contests top-down decision-making structures and associated power hierarchies, opening up for mutual learning processes that aim to explore and suggest solutions for societal problems (Fuad-Luke, 2009). Design practices embody a concern for social change by shifting its focus from specific problem-solving artefacts to social forms that sustain processes of societal change. In this environment, technology needs to be fully embodied in particular contexts towards the development of meaningful activities for sustainable changes in community contexts (Karasti, 2014).

Design research strives to develop knowledge to support transformation processes already in progress, strengthening collaborative systems and engaging more people in it. In the construction of collaborative communities, design practices are playing a mediating role among different actors in the development of common visions for local and global changes (Manzini, 2015). Accordingly, design research approaches a shift in the design focus of “solving problems” to “making sense” of situations and looking at ways of intervening in social practices. Design practices such “prototyping” social forms, “articulating issues” through “agonistic experiences” and “infrastructuring” collectives in long-term commitments suggest the construction of collaborative processes fostering or strengthening communities of interest (Björgvinsson, Ehn, & Hillgren, 2012; DiSalvo, 2009; Manzini, 2015).

According to the above emerging design research approaches, the agency of the professional design is engaged to "make things happen" in such a way that designers have the role of transforming grounded ideas to more structured prototypes (Manzini, 2015). Additionally, design practices aim to "make publics" in a way that designers have the role of articulating collectives around relevant issues (DiSalvo, 2012). Finally, design practices have also the goal to "make things public" in a way that designers have the role of developing long-term commitments with groups of people in order to understand together with them situated issues and their procedural and possible solutions (Björgvinsson et al., 2012). Therefore, within design research the intersection between “commoning” and “designing” practices has contributed to a deeper understanding of the societal ground for collaborative processes, suggesting new ways of making a common life through the articulation of open modes of access, production and sharing of information, knowledge, goods and infrastructure (Franz & Elzenbaumer, 2016; Marttila, 2016; Seravalli, 2014b).

## **Power to change through collaboration**

Although these design research approaches integrate efforts that question the relationship between design and politics, there is still a need to further investigate the conditions that create the design agency for change through collaborative practices. The dimension of change in design practices in community contexts should consider the power relations that constitute a social context with which they work, as well as the power structures that sustain the design practice itself when proposing changes through collaboration in these environments (Choi & Majumdar, 2015). Actually, the idea of change in the tradition of industrial design is usually related to the functionality of products that present the Anglo-Saxon aesthetic pattern (Forsey, 2014). However, the process of dematerialization of design discipline in the contemporary society seeks the production of another aesthetic language that facilitates the incorporation of the dynamics of power in design knowledge, specifically when facilitating collaborative processes in community settings (Koskinen, 2016).

This research argues that power and politics are intrinsic to the collaborative process and for this reason they must be considered in the aesthetic of design practices. Collaboration for social change entails challenges with respect to the coordination of decision-making processes when it is done in both a top-down and bottom-up manner. Actually, there are critical concerns about the sustainability of collaboration over time, particularly when trying to maintain a strong collective dynamic towards novel transitions. In order to address these issues, transdisciplinary design efforts should be considered when designing with and for communities (Barbosa et al., 2017). A such, this thesis argues that design practice and research might explore the potentialities of different configurations of emerging design agencies, which are frequently produced through the intersection between designers and non-designers that make up the contemporary urban environment.

In the scope of commoning practices, the social conflicts are essential in the formation of collaboration because they guarantee whether or not all those involved in a urban initiative will be beneficiaries of available common resources (Barbosa, Reimer, & Mota, 2016). In that sense, if collaboration in commoning practices can be understood as a process of continuous negotiations among different interests, the conceptual formulation of “designing commoning” developed by this study asks the following three questions:

1. How can design understand the production of power through collaborative processes?
2. How can designers deal with their own position of power in building collaboration?
3. How can design deal with power dynamics among different agencies that constitute a community?



## 2. OVERALL METHODOLOGY

### Case studies

The overall methodological approach in this research was designed to examine the production of collaboration through the dynamics of building “common urban spaces”. The methodology applied in this thesis was conceived to address negotiation skills that are usually experienced among different agencies that constitute a neighbourhood. On this background, in a first stage (i.e. in the “exploratory” research phase), expressions of design tactics for commoning were analysed through a set of exploratory cases. In a second phase (i.e. in the “structured” research phase), the collaboration for commoning was analysed in detail through four particular case studies located in four different micro urban contexts which determine the social geography of a Brazilian city (São Paulo) and two Portuguese cities (Almada and Aveiro).

Two case studies were conducted in two neighbourhoods of São Paulo, which is the largest financial centre in Latin America. Overall, the city has a high population density and, consequently, strong cultural dynamism for innovative social interaction, which can partly explain the existence of relevant community design projects like the two analysed in this research. Located in the southern and central regions of Portugal, in the cities of Almada and Aveiro, which respectively represent a peripheral urban area of the multicultural capital of Portugal (Lisbon), and a university town located in an industrial area of the country (the district of Aveiro). Therefore, in this research, Portugal presents itself as a geographical space of intersection among different cultures, both European, Latin American and African, being a rich source of urban social innovations.

In short, the four case studies represent four different forms of production of collaboration through co-production of common spaces. In this sense, the case studies were characterized according to different design agency configurations, where designers and non-designers assumed different positions in the collaborative practices. Each of the projects had the objective of establishing links between different stakeholders that make up each neighbourhood where the projects were conducted. Indeed, each project performed design tactics in order to develop sense of community, participatory forms of managing the city spaces, as well as promotion of social inclusion. These objectives were guided by the specific contextual needs of each project, presenting different design tactics and effects. Thus, each context was analysed according to its social and economic contextual particularities, as well as through holistic aspects that helped to suggest conceptual scenarios for design practices with and for communities.

## Research approach

Therefore, the methodological approach adopted in this thesis is located within the field of Design Research, presenting qualitative methods that come from the research field of Social Sciences. The production of knowledge of this study followed a constructivist perspective, developing an interpretative process through an inductive way, which combined data, methods, results and conclusions (Maxwell, 1992). In this sense, the theory was constructed from the process of immersion in the fieldwork and manipulation of the data, seeking to capture the process of change of the observed social dynamics (Corbin & Strauss, 1990). Following some aspects of the ground theory methodology, the conditions, actions and its consequences were analysed within the following holistic categories of collaborative process of the case studies: “engagement, negotiation and empowerment”.

Thus, as a research developed within the field of Design, this thesis can be framed within the classification of Frayling (1993) in the category of "Research for design", instead of "Research into design" or "Research through design". On this background, the “Research for design” category was reinterpreted by this study as “Design research for studies” in order to characterize this research project, which had the aim to develop new knowledge for Design studies in the context of design processes in communities. As a result, in this research work the researcher inquired about design agency in relation to the dynamics of power that sustain and determine the practice of design for collaboration and, consequently, in a designerly way of observing and thinking, this research work intended to better understand the challenges of collaboration in community building projects.

## Data collection and analysis

The empirical information analysed in this research was collected during a period of two years through fieldwork using mainly qualitative interviews, participant observation and field notes in order to understand how participation was activated and sustained in each community project. The main method of data collection was semi-structured interviews with the stakeholders of each project so as to identify inconsistencies in each of the analysed design processes (Bardin, 2007). The information was also collected from local newspapers, as well as documents, videos, images, texts and artefacts produced by the studied projects.

The collected data was interpreted by applying the coding method, which is usually used to interpret social practices without applying specific given formulas, but especially by exploring both the tacit and intuitive senses of the researcher (Saldaña, 2009). Thus, the theory was grounded on the cross analysis of a set of categories developed through a process of aggregating data and information

according to the similarity and regularity of codes (Glaser & Strauss, 1973; Saldaña, 2009). Finally, the set of categories resulted from the analysis of each project generated the conceptual formulation of “designing commoning”, which is introduced in the next section.

### **3. CONTRIBUTIONS**

This thesis provides three main design knowledge contributions: an understanding of the collaboration for sustainability; an understanding of design agency in community contexts; and a theoretical proposition of “designing commoning”, as described below.

#### **1. An understanding of the collaboration for sustainability**

This work generated a new theoretical framework about collaborative experience through the intersection between concepts and ideas from the Design research and Common theory. Nowadays, emerging urban commons configure the city as an arena where diverse micro focuses of social creativity contribute to generate more alternative, resilient and sustainable ways of living. According to the political economic perspective, collaboration in commons can be understood as the process of creating mechanisms of self-management of certain resources by a group of individuals. On this background, the collaborative process requires continuous negotiations between the interests that comprise a collective action or a “commoning” practice. The negotiations usually raise the development of an internal decentralized decision-making system, as well as the ability to create spaces of dialogue with private and public institutions in order to maintain the collaborative dynamic. In this perspective, collaboration can be understood as a complex process related to the dynamics of power that constitutes a collective action.

#### **2. An understanding of design agency in community contexts**

According to the results of the empirical analysis conducted in this thesis, this research argues that design agency involved in the construction of sustainable collaborations requires spaces of negotiation that incorporate the dynamics of power existing in a community dynamic. In order to explore this argument, this research project examined four different configurations of design agency in which designers and non-designers have strived to develop local collaborations through the co-creation and co-production of “common spaces”. The analysis of these case studies resulted in a set of elements which suggested that design agency in communities needs to create conditions of emerging diverse agencies that constitute a certain urban context, allowing ways to rise issues, problems and needs handled by the community itself. Thus, the second contribution of this thesis provides key outcomes

for community design systems to actively involve community members by creating new democratic spaces of participation.

### **3. Designing collaboration for commoning”**

The third contribution of this thesis is the conceptual map of “designing collaboration for commoning”, which expresses the outcomes of this study for Design research. The map provides insights to better understand the notion of collaboration and how design practices can incorporate the dynamics of power in design processes with and for communities. In this sense, this research suggests that collaboration can be questioned and explored by research in design through processes of “performing, disrupting and sustaining” collective actions. Here, design agency is constituted by the interplay between “making, negotiating and belonging” activities in the formation of a sustainable collaborative community. Finally, the map intends to challenge the paradigm of change in design process, inviting design research and design practices to think about the conditions that constitute its agency to make something different in community relations.

## **4. STRUCTURE**

On the background of this introduction, this thesis is structured in four parts: Theory, Methodology, Case Studies and Learnings. These parts describe the scientific research process of this work, as showed below.

### **PART I. Theory**

The first part is constituted by Chapters 1, 2 and 3, which present the foundations of this research work, providing a transdisciplinary background of common and current approaches within design research on strategies and challenges of design agency in building sustainable collaborations in communities.

**Chapter 1 "Common notion"** discusses “common” as an old term that was first used to designate a system of shared ownership. Lately, common or commons has been considered as a transdisciplinary movement of scholars and practitioners that explore social practices that allow users to share ownership and control of material and immaterial resources. On this background, this thesis considers that collaboration for sustainability is a negotiation process among different interests over the resources necessary for a common life.

**Chapter 2 "Urban commons"** presents a discussion about the city as a network of commoning practices that participate in the dynamics of power relations, catalysing creative solutions from a bottom-up perspective in order to improve common life in urban neighbourhoods. This chapter localizes opportunities for further exploration in creative initiatives placed in public spaces that try to build up collaborations through the construction of “common spaces”.

**Chapter 3 "Designing commoning"** discusses concepts within the design research that explore emerging design agencies in the intersection between design and communities. This chapter points out the following conceptual strategies of designing collaboration: “making things happen”; “making publics” and “making things public”. Then, the design agency is problematized in relation to its paradigms of change in community environments, discussing the relation between design and power. Finally, in the last part of the chapter, a conceptual map of “designing collaboration” is suggested through the interplay between “making, revealing, interacting, adapting, negotiating and belonging” in design practices.

## **PART II. Methodology**

The second part of this thesis is constituted by Chapters 4 and 5, which present the methods and methodological approach used to produce the knowledge and outcomes of this thesis.

**Chapter 4 "Transdisciplinary research"** presents the methodological approach adopted in this thesis, which was developed through the interaction between methodological elements from the research fields of design and social sciences. On this background, this work can be characterized within the field of “Design research for studies”, seeking conceptual insights in order to better understand the design processes with communities. Additionally, this work points out spaces of convergence with “Design research for exploration” through experiments that might contribute to the development of new design knowledge by “sketching collaboration, immersing in field experiences and making theory from empirical data”.

**Chapter 5 "Methods"** describes, in detail, the tools used for gathering and analysing the data. First, it describes the methods used to collect data in the empirical field. Second, it describes the entire process of codification by compiling information in two phases of the research journey: “exploratory and structured”. In the exploratory phase, the collected data was analysed by applying the “quick coding” method, which contributed to construct the object of inquiry.

In the structured phase, the material was interpreted by applying the “cyclical coding” method, which extracted the key elements for the strategic interests of this design research.

### **PART III. Case Studies**

The third part of this thesis is constituted by Chapters 6, 7 and 8, which present the analysis of exploratory cases, the analysis of the four case studies of collaborative practices in public spaces, as well as a careful discussion of the results.

**Chapter 6 "Exploratory case studies"** describes the research journey conducted during the elaboration of this thesis. This chapter presents the analysis of a set of exploratory cases that were organized in holistic categories referring to different expressions of commoning practices in the urban environment, namely the “poetic, communicative, activist, collective and strategic”. The exploratory cases analysis resulted in the selection of four specific case studies with the aim of examining the power of change of different configurations of design agency in building local collaborations.

**Chapter 7 “Structured case studies”** presents the four case studies analysed in this thesis by describing the contexts, design tactics and design effects observed in each of the studied projects. Furthermore, this chapter presents the results of the analysis of each project through their specific participatory methodological approach of “engagement, negotiation and empowerment” of their design process. The analysis of the field data had the objective of identifying key collaboration strategies according to “Project” and “Community” design agency orientations.

**Chapter 8 "Discussion"** presents a cross-analysis of the results of the four case studies in dialogue with the conceptual background developed in the first part of this thesis. This chapter points out the major outcomes of the study in the scope of design agency in building collaborations. Moreover, this chapter also discusses the key elements which resulted from the interpretation of the design agency configurations according to the “engagement, negotiation and empowerment” aspects of the design process for collaboration carried out during the development of the projects.

## **PART IV. Learnings**

The fourth part of this thesis is constituted by Chapters 9 and 10, which present the research outcomes of this research for design knowledge and the final remarks regarding the critical challenges and potentialities of this scientific work.

**Chapter 9 "Contributions"** presents the outcomes of this thesis through three core contributions for design research. First, the new theoretical framework for the understanding of collaboration for sustainability in contemporary cities is pointed out. Second, a set of insights for "design agency" in collaborative community building are highlighted. Lastly, the third contribution of this thesis presents the theoretical-practical proposition of "Designing collaboration for commoning".

**Chapter 10 "Conclusion"** presents the relevance of this work in the production of knowledge within Design Research, as well as its limitations and future opportunities for integrating this work into design research and design practice.

## PART I. THEORY

This part of the thesis intends to better understand the collaborative experience based on the relationship between specific concepts and approaches developed by design research and through the transdisciplinary discussion of “common” or “commons”. This first part is divided in three chapters. Chapter 1, “Common notion”, presents a brief review of the notion of common, including the contemporary discussion of "emergent commons", with the aim of identifying elements that characterize “collaborative experience” and contextualize the sustainability perspective of this investigation. Chapter 2, "Urban commons", aims to explain how common practices can be visualized in public spaces through different collaborative experiences. Finally, Chapter 3, "Designing commoning", engages in a dialog with emerging approaches within the Design research field, discussing the challenges of design agency in dealing with power dynamics of collaboration in community projects.



## **Chapter 1. COMMON NOTION**

This chapter provides a brief explanation of the foundations of "common" as a concept, from its original description as a type of property in the context of natural resources, to its more contemporary transdisciplinary use to describe interconnected social practices that influence emerging political, social and economic ways of living together. Thus, three basic elements of the notion of common are explored, i.e. "resources, communities and social interactions", with the objective of better understanding the broad and holistic concepts of "collaboration" and "sustainability".

## 1.1 OVERVIEW OF THE TERM

In English, “common” is usually used as a noun, as something that is produced, shared and used by members of a community; as well as an adjective, as something that belongs to everyone and is managed by everyone, such as a common ground, a common heritage or a common sense (Euler, 2018, p. 10). Recently, “common” also began to be used as a verb “commoning”, corresponding to the practice of producing and using what is produced in common (Linebaugh, 2008, p. 60). Additionally, the word “commons” evolves different types of community systems with social mechanisms that enable the commoners to share things and work in collaboration (Ostrom, 1990, p. 61).

In this context, the 2008 global economic crisis appeared as a source of growing interest in economic alternatives to neoliberal production systems. In 2009, the American political economist Elinor Ostrom won the Nobel Prize in economics for a deep analysis of forms of self-management of common resources in various case studies around the world (Nobel Prize, 2009). This research work has been boosting the scientific concern about social practices that enable people to experiment new ways of living and doing things cooperatively, and how the technology has been integrating these practices in a complex knowledge-commons ecosystem (Hess & Ostrom, 2007, p. 3).

### Common property

The ancient Romans were among the first to establish the legal notion of common, when certain types of property should be reserved for public use, not being owned by a single individual. Roman law distinguished between notions of *res communes* and *res publicae*. The things that were classified as *res communes* were those of common enjoyment, available to all living persons and exempt from private appropriation, such as the forest and the sea. Differently, the things that were classified as *res publicae* were those that people enjoy as inhabitants of a State, such the public roads, bridges, meeting places, theatres, baths and flowing rivers (Steeg, 2000, p. 534)

In medieval English culture, commons were associated with the internal control and regulatory systems of shepherds, where the commoners<sup>1</sup> had regulated rights of grazing and using firewood in order to avoid overexploitation of resources (Hardin, 1968, p. 1243). In that context, King John conceded to “freedom under law”, signing the Magna Carta and laying the foundation for the

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<sup>1</sup> A person who has a right in, or over, common land jointly with another or others is called a commoner (Linebaugh, 2008).

constitutional system. Impeding ongoing processes of enclosure, he also recognized the right of the poor to use the commons (forests, fields, pastures and water) as shared resource and to earn their own living (Linebaugh, 2008, p. 190).

### **Common natural resources**

In the 18th century, the increase of productivity and the intensification of agriculture caused a progressive decrease of common property system and the growth of private property system. Subsequently, the industrial revolution in 19th century saw villages disappear or expand, resulting in the progressive generalized loss of community life and enclosure of commons. Land was instead used to develop the market economy based on the idea that greater enclosure of commons would result in more efficient production of goods and the development of the economy (Linebaugh, 2008, p. 258).

This idea was problematized by Hardin (1968, p. 1245) in his seminal paper "The Tragedy of the Commons", in which he argued that the overexploitation of natural resources by the human being without proper regulation could be the end of the natural environment, threatening the survival of living beings on the planet. The author raised two central factors related to this tragedy, including: population growth and the management system of the resources. According to the author, it is necessary to establish efficient regulation systems in order to avoid the negative environmental and socioeconomic implications of the over exploitation of natural resources. This theory inaugurated the ecological debate about the problematic system of production and consumption of the present society.

### **Common management**

Later, the common theory was taken up by Ostrom (1990), who broadened the understanding of commons beyond a property regime to include social practices based on cooperation that determine forms of management of resources in a sustainable way. The author found that traditional communities were able to establish management mechanisms and cooperative systems that provide equitable access to the necessary resources. In addition, resource use was found to be more efficient when management mechanisms were developed and enforced by communities themselves, and less efficient when these mechanisms were imposed by institutions and external authorities. Therefore, based on extensive exploration of eighty case studies of rural communities around the world the

author identified eight “design principles”<sup>2</sup> for communities to maintain common resources in a sustainable manner, ensuring their survival for the next generations (Ostrom, 1990, pp. 90–102).

Therefore, Ostrom (1990) identified robust and long-enduring institutions of commons, demonstrating a rich variety of specific social behaviours and rules used in existing resource management systems of traditional communities. According to the author, the eight design principles suggest guidelines for practical self-management initiatives, with appropriate adjustments to contextual conditions (Ostrom, 1990, p. 90). In general, this study identified three important aspects in building a strong common social organization: “collective action”, which is a set of voluntary efforts of individuals to bring up some outcome to a community; “self-governance”, which is a set of mechanisms organized by a consistent local and small institutional arrangement; and “social capital”, which refers to the added value of social networks, as well as the activation of new cooperative values (Hess & Ostrom, 2007, p. 5). In addition, this research made important connections to the world of policy making and resource management, influencing many top down efforts to return some control over resources to local users (Agrawal, 2001, p. 1650).

### **Common knowledge**

The economic study of commons, together with the distribution of information through the development of communication technologies, provided a basis for a broad discussion on knowledge as common. Indeed, knowledge refers to “all intelligible ideas, information, and data”, that when interconnected constructs types of understandings grounded from experience or study, such indigenous and academic knowledge (Hess & Ostrom, 2007, p. 7). Currently, this arena integrates different interests, scholarly and non-scholarly, around key issues like intellectual property rights, information technology, traditional and digital libraries, creativity, citizenship and democratic processes among others. In that context, extending the notion of common to knowledge has raised two main challenges, namely the “access and preservation” of the diversity of information produced in global and local levels (Hess & Ostrom, 2007, p. 8).

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<sup>2</sup> The eight design principles established by Ostrom (1990, pp. 90–102) are: 1. Clear demarcation of boundaries of common resources and their users; 2. Definition of rules by the users from the existing conditions; 3. Collective agreements that allow that all affected users by these rules also can modify and adapt them to the proper context; 4. Recognition of the rules established by the authorities and external institutions; 5. Establishment of a system for self-monitoring of its members’ behaviour; 6. Gradual establishment of sanctions for commoners who violate common rules; 7. Establishment of conflict resolution mechanisms that are easy to access and use by all members; 8. Nested enterprises organized in a nested structure with multiple layers of activities.

## 1.2 CONCEPTUAL MAP

Using the theory of commons, this thesis aims to better understand the meaning of collaborative experience for sustainability in urban environment. Therefore, this study explores further the notion of common through three basic elements as described in Figure 1: “resource, community and social interaction”. First, every common involves necessary resources, such as natural supplies, food, mobility, housing, spaces, skills and knowledge, shared among members of the same community. Second, commons are necessarily supported by communities that establish their own rules for their access and use. Third, commons in action, i.e., “commoning”, is a complex social interaction process that creates and plays common. These three elements are described below.

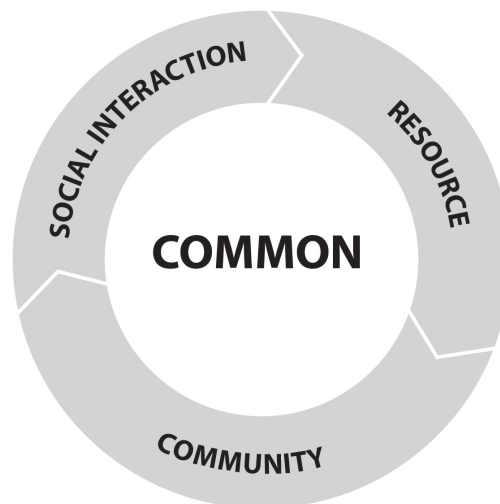


Figure 1: Elements that characterize common (Derived from Barbosa, 2016).

### Resource

In the present conceptual framework, resources are identified as one of the essential elements that constitute a common. According to the economic perspective, common resources are those directly related to goods subtracted from the environment and enjoyed equally in a community. Common resources are governed by an internal system of property, constituted by internal rules that regulate both the production and use of goods, avoiding its overexploitation from the natural environmental (Ostrom, 1990, p. 30). In addition to its material forms, common resources has been discussed as a complex process of social production involving human knowledge, such as languages, social practices, relationships and affectivity (Hardt & Negri, 2009). For instance, the production of knowledge

through internet and new technologies have been providing a wide range of opportunities for the construction of different types of common resources (Hess & Ostrom, 2009, p.9).

In this sense, it is important to consider that the common social configurations produce both tangible and intangible goods, including products and services, as well as the sense of togetherness and affectivity that link the members of a community (Euler, 2018, p. 10). In this perspective, common resources assume their material dimension when commoners interact and organize themselves in specific spaces (e.g. urban gardens, co-housing, open labs and public square) to produce goods (e.g. food, housing, objects, services and spaces). During this process, common resources also assume its immaterial dimension, when individuals produce new social relations, affectivities, skills, feelings, behaviours, habits, postures based on cooperation. Immateriality is also identified in the interaction among different commoners in the virtual space, beyond geographical limits, where are produced social sharing mechanisms of goods, as well as alternative systems of production and distribution of tangible goods (Hardt & Negri, 2009, p. 297).

## **Community**

The meaning of community in the context of commons can be understood at different levels, including small groups of people, such as a family or a neighbourhood, spaces such as sidewalks, playgrounds, libraries, or international and global platforms, such as social networks and scientific knowledge (Hess & Ostrom, 2007, p. 4). Therefore, commons can take a form of traditional communities, where a group of individuals determine boundaries through a system of norms, which define who may or may not participate in the production, distribution and consumption of resources (Ostrom, 1990, p. 58). Furthermore, as emergent commons, communities are not restricted to certain sites, being able to operate in multiple locations (DeAngelis & Stavrides, 2010, p. 2). These communities may present themselves as an "open network of passages", i.e. environments usually open to the constant exchange of knowledge between different capacities (Stavrides, 2016).

Indeed, the virtual network has made the world more interconnected by broadening the public sphere through the interaction of diverse communities of interests. Constantly, connected people located in different socio-cultural contexts create and use open-access platforms that create new communities (Hardt & Negri, 2009, p. 145). From this perspective, actually micro social experiences have been catalysed by the internet facilitating exchanges that resulted in alternative practices based more on cooperation than on competitiveness. In that sense, the idea of community in common brings an understanding of economy beyond the social practices of commodity production and consumption. Instead, economy can be understood as multiple forms of human relationship with the world, which

can be based on collaboration, sharing and cooperation among different capacities that makes up any community (Gibson-Graham & Roelvink, 2011, p. 3).

### **Social interaction**

The third element that compose common articulations are social interactions that support commons and are responsible for fostering "commoning" practices (Linebaugh, 2008). Indeed, for a good to be common, private or public, it is necessary that social practices determine it in that way. Therefore, "the condition of a good being common is totally linked to social factors", for instance the open access of a software does not depend on its public or private nature, but rather depends on the existence of regulations, which are human interferences that define its use and access (Euler, 2018, p. 11). In this perspective, a private or public good can become common by the way in which the individuals relate to it, making common a social construction.

In this perspective, commons are built through commoning practices, which are associated with the process of social interaction that founds a collective action. Furthermore, commoning can be characterized as a creative interaction between individuals, or a continuous and complex process that adjusts over time in a collective action (DeAngelis & Stavrides, 2010, p. 12). Moreover, that process identities worldviews, habits, feelings and intimacies that gain different meanings in the constitution of commons. This intensive process of social interaction will never bring predetermined solutions, but alternative proposals tailored to address previous experiences and problems identified in previous steps of the process. In that sense, the principle of social action on goods allows conflicts to become explicit, since the use of the resources depends on negotiation processes between the individuals that will or will not be included as beneficiaries (Barbosa et al., 2017, p. 7). Thus, commons assume different formats and meanings that highlight the intrinsic complexity of power dynamics of collaborative processes.

In this sense, based on the "radical German commons discourse", it is possible to highlight a set of conceptual aspects that identify commoning practices (Euler, 2016, p. 102):

- **Co-production:** Collective activities of production and its use, in which who produces also uses what is produced. Here, the process of co-production also involves motivations and knowledge exchange, fostering personal and subjective relationships with what is produced and with the collective production process itself;

- **(Re)production:** Collective activities or rituals to keep the elements of production and use integrated, including activities of care on what was produced collectively;
- **Self-organization:** Activities of direct participation of the commoners in decision making processes about their livelihoods and their well-being, breaking dependency, exploitation and domination within a collective space and in relation to centralized decision making systems;
- **Peers:** Processes that require an equal status among the commoners in the formulation and changing of the rules that manage the common resources;
- **Mediation:** Mechanisms of mediating conflicts and avoiding processes of exploration and domination in collective decisions.
- **Needs-satisfaction:** Awareness development of the rational use of collective resources through the consumption of what is really necessary. Moreover, this concept involves the personal satisfaction of being part of a collective, through the integration of different capacities.

### 1.3 COMMON DILEMMAS

Currently, the power dynamics of collaboration in commons have become visible, when the technology has enabled the production of social networks capable of producing value through alternative economies based on cooperative ways of life. Here, commons have gradually been assuming formats integrated in the global market through technology development (Massino DeAngelis, 2017). For instance, currently, there is a vast array of enclosure threats that undermine free public access to common knowledge and information resources, such as scientific intellectual property and government information. Indeed, the great flow of online data has been making imperceptible the boundaries between open (common) and enclosed access (private and public) in the contemporary society (Hess & Ostrom, 2007, p. 13).

Actually, the private sector, unlike the public sector, has been demonstrating great ability to adapt to the commons' capabilities, specifically the collaborative experience. The so-called "sharing economy" can integrate aspects of commons within the logic of the market, when all forms of human experiences, affectivities and feelings, acquire value through commodification of cultural process,



such as home travellers exchanging, family pictures and sharing friend's experiences (Gruber, 2015, p. 66). Currently, elements that identify commoning practices, such as sharing, collaboration and “do it yourself” practices, historically cultivated by grassroots movements, have been transformed into fashions under the same umbrella of the sharing economy. Thus, the mainstream interpretation of the economy usually does not clarify who is involved and under which terms are collaborative practices taking place (e.g. who owns, who manages, who uses the shareable and what their intentions are).

Consequently, it is possible to simultaneously witness the production of commons through the emergent technology and the creation of strong control mechanisms by private enclosure (Hardt & Negri, 2009, p. 114). Indeed, commons face complex social dilemmas that demonstrate both its strengths and its vulnerabilities. The political sense of commons has been subject to constant changes based on different economic interests and dynamics of power that constitute the collective life. Often, both the state and the market conduct the meaning of common, respectively as either a benevolent social practice or a fashionable subculture practice, which has been being instrumental for perpetuating their institutional and neoliberal agendas (Hebdige, 1979, p. 142).

## **1.4 COLLABORATION FOR SUSTAINABILITY**

In this research, the common background has allowed to visualize approximations between small-scale and large-scale views on human experiences, such as possibilities to propose change in a neighbourhood, in a city or in a country. The contemporary world has been configured as a global village managed by an economic model determined by geopolitical forces that have made countries less autonomous and more dependent on each other. This mutual dependence in economic terms links big common problems, such as population growth and environmental pollution. The current political and economic institutions have handled with these broad problems, usually excluding the capacity of each individual to intervene, often depriving them of the power to be transforming agents of their own realities and everyday life.

In this perspective, this study understands “sustainability” as a negotiation process of collective learning, open to deconstructions of established social standards and constant adaptations to the environment and available resources. In this sense, the sustainable development agenda seeks for more balanced and resilient ways of living between artificial and natural environments that surround human beings (United Nations, 2015). This idea can be put into practice for instance through a set

of efforts for the construction of alternative modes of common life based on cooperation and collaboration. Therefore, “collaboration for sustainability” can be understood as collective actions related to long-term negotiation process. In other words, successful collaborations may be directly linked to the ability to negotiate, involving the exchange of both material and immaterial resources in the constitution of a consistent collective action to achieve common goals. Therefore, collaborative experience between different interests is supported by a set of negotiation skills acquired during the social interactive process.

In this perspective, this research project states that the common discussion constitutes a broad field of possibilities to better understand how design can facilitate collaborative practices for sustainability, making visible complex issues related to power, participation and resources. Designing collaboration for sustainability might not be only a way of linking different individuals, but also a way to promote exchanges of interest through multiple negotiations where conflicts and consensus are usually present. Thus, design practices might play an active role on contributing to the production, dissemination and strengthening of ongoing collaborative capacities that can be used to build more sustainable communities. Thus, design knowledge is interpreted in this study as an instrument used to find opportunities for the development of design skills in partnership with local actors and communities.

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The next chapter introduces the notion of “common space” in the urban environment, which appears as a phenomenon that does not necessarily happen outside of the current economic system. Instead, urban commons constitute micro collective practices immersed in the currently society, which are able to promote micro changes towards a more sustainable common life.

## Chapter 2. COMMON SPACES

According to the conceptual frameworks discussed in the previous chapter, it was understood that collaborative experience might be considered as an ongoing negotiation able to sustain commoning practices. However, a major research question concerning this topic is how collaborative experience is reflected in a set of spatial experiences? For a space to be considered a common, it might need collaborative practices towards its construction, organization and sustainability. In this context, it is possible to argue that commoning practices produce common spaces, and vice versa, common spaces reproduce and sustain new commoning practices. In this chapter, spatial practices that constitute the city are discussed with the purpose to better comprehend the collaborative practices for commoning in urban spaces, looking for how these practices can bring opportunities for learning, involvement and intervention within the field of design.

## 2.1 CITY AS COMMONS

Cities are constituted as synthesis organisms of the current society, becoming an integral part of social practices and interactions. However, it seems impossible to find a definition for the city, since it has a highly complex totality character and will never be a plausible real "object" of a rational definition (Lefebvre, 2011, p. 111). Over the last 100 years, the concentration of world's population in urban centres has increased from 10% to 50% (United Nations, 2016), which makes cities the right places to meet differences, as well as the space to build the "right to difference" (Lefebvre, 2011, p. 117). However, this growth has made cities the hubs of consumption of resources and, consequently, territories of strong social dispute. In this way, cities are legitimated spaces of contradictions. On the one hand, their diversity cultivates innovations, creativity and participation. On the other hand, it generates conflicts, segregation and intolerance (Lefebvre, 2011, p. 19).

Despite of these facts, there is a continuous effort to create models of utopian cities orchestrated by the global economy. The post-industrial cities with economies targeted towards the development of technological systems and services, make their best to create an image of socially and culturally dynamic cities with new ways of life and work. Aiming for the development of a "creative economy", these cities present themselves as stimulating environments for the coexistence of different lifestyles, where work and leisure seem to be in complete harmony for all its users (Florida, 2003, p. 4). This perfect city image has been built since the Modernism, when the "right of use" has been constantly diverted by a return to the traditional nostalgic city and the quest for lost nature (Lefebvre, 2011, p. 12). However, this "modern orthodox urban planning" produced the "anti-city", divided into monofunctional spaces and self-centred neighbourhoods (Jacobs, 2009).

Even today these urban centres produce the illusory idea of the city as a creative work place and its intrinsic value of use without restriction for all. This idea of perfect city is reached superficially and temporarily, for example, by the rapid displacements provided by the growth of the tourism industry (Lefebvre, 2011, p. 106). However, this model of contemporary city frequently contributes to build the phenomenon of gentrification, in which cultural planning and artistic practices are used for the overvaluation of zones. This process generates social segregation, concentration of wealth and exclusion of a great part of the local population, which sustains limited relationships based upon enclosure (Deutsche, 1996, p. 13). In New York City, for example, during the boom of the 1990s, the median salary of Manhattan's central district rose to a substantial 12 percent, but in neighbouring neighbourhoods fell from 2 to 4 percent (Harvey, 2012, p. 34).

## Power dynamics

In opposition to this utopian image of the city (Figure 2), where everything is ordered and orchestrated by a central power, Stavrides (2016) offers a view of the contemporary city through its power dynamics, bringing a better understanding of phenomena such as gentrification. According to the author, the contemporary city can be visualized as an archipelago formed by "islands of enclaves and sea that flow between these islands" (Stavrides, 2016, p. 15). As shows the Figure 2, the islands have internal control mechanisms that work in parallel with the central and regulatory power of the state. By suspending the public right of use of certain territories, these islands are demarcated with limits imposed by surveillance and forms of behaviour, which control who is inhabitant and who is not. Islands can be closed neighbourhoods or huge building complexes, which can take the form of gated communities with restricted access to public areas.

Moreover, the users of these islands acquire forms of being through "disciplinary power", which are not imposed, but they acquire the character of natural social forms through constant validations by the inhabitants themselves (Stavrides, 2016, p. 21). In turn, the urban sea runs between the islands, constituting areas of circulation, public spaces theoretically managed by the state, as well as areas that escape the surveillance of the islands, such as its outskirts. The flows and spaces that compose the urban sea are constantly threatened to be transformed into enclaves through the high valuation and investment of certain suburbs of the city.

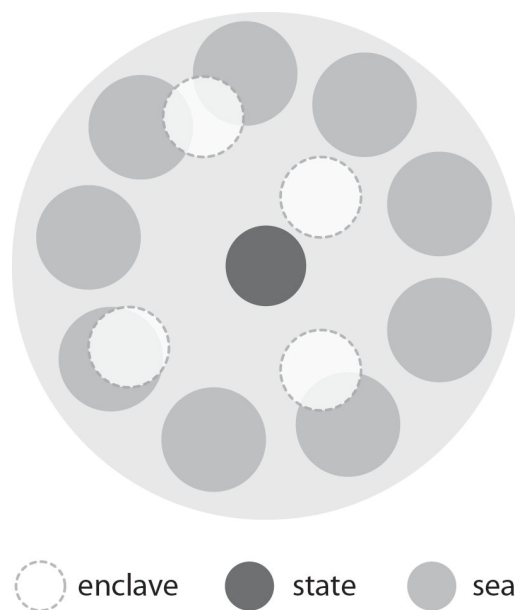


Figure 2: Urban archipelago (Based on Stavrides, 2016).

Considering this metaphorical image, the complex notion of city raises questions such as the territorial dispute of power, the distribution of resources and the access to basic human rights. In terms of spatiality, the city appears as a fragmented body of spaces and borders, articulating their respective behaviours and social relations (Liernur, 1997, p. 197). Moreover, the public space is marked by opposition to private spaces, as the cultural spaces exist in opposition to the useful space, just as the spaces of leisure appear in opposition to the spaces of work (Foucault, 2009, p. 143).

This suggested city's image helps to clarify the gentrification process of many urban spaces, which present themselves as existing and vulnerable commons that are constantly enclosure by urban enclaves. In this scenario, it seems impossible to speak about commons and commoning in contemporary cities or to accept the challenge of understanding the city as a common environment. Actually, cities sustain an unsustainable and exclusionary system of production and consumption of essential resources, such food, housing, water and electricity. Cities shape themselves as complex organisms that easily refer back to the tragedy announced by Hardin (1968) and its analogy with pasture fields devastated by human exploitation<sup>3</sup>. Furthermore, it also seems difficult to relate to the Ostrom's theory (1990), which brings empirical evidence of traditional scenarios far from the complexity of cities. Thus, the power dynamics that create a city constitute a source of critical societal challenges, including those putting commons in practice in a broader and more structural perspective.

However, from a micro perspective, it is possible to visualize the city consisting of many small centres of commoning practices struggling to produce commons or resilient communities. Actually, these collective experiences of sharing and collaboration have always occurred in the dynamics of cities, interacting or even infiltrating in the standardized social and economic system (DeAngelis, 2017). The developing countries present many examples of this. As a response to segregated and unstructured urbanization, the peripheral neighbourhoods of large cities of these countries have developed forms of social management parallel to the central government. For instance, the so-called "favelas" of Brazil are enclaves with their own centralities, which appear as parallels to the official enclaves. Generally, this happens because the official infrastructures do not cover these territories, what makes their inhabitants create survival strategies through cooperation processes. The houses are small and are built very close to each other, situation that shows a mix between the public and the private spaces, constituting a "anti-aesthetic" urban body that approach common spaces (Jacques,

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<sup>3</sup> The analogy of Hardin (1968) refers a common pasture field shared by a group of sheep shepherds, who want to increase the productivity through the number of sheep. The risk of the tragedy occurs because each pastor wants to increase his own profit, disregarding the negative common cost of the disappearance of the natural resource through its overuse.

2011, p. 13). Thus, the spontaneous organization of the territory of a "favela" makes the external spaces very used, with a lot of social interactions and mutual help to solve daily issues.

## 2.2 URBAN COMMONS

Although the common concept emerges more spontaneously from situations of survival, researchers from various fields and practitioner's movements evidence an articulation of "urban commons" that have been defined in the interstices of the urban composition (Susser & Tonnelat, 2013, p. 107). Small-scale experiments multiply in the search for alternatives to the current economic crisis and the progressive reduction of states' social welfare (e.g. public services). In the urban context, many of these experiments have become models that have been replicated around the world, providing basic needs of everyday life, such as food, housing and social relations.

The one of the most successful commons is the urban gardening, also known as urban agriculture, urban farming or community farming. In recent years, there has been an increase in community-based initiatives for the cultivation of food in urban areas. The gardens developed by communities are based on the sharing of experiences, knowledge and resources. In these spaces people with different capacities and different generations meet and develop a strong sense of community within a neighbourhood or a street (Nilsson & Wiman, 2015, p. 2). The cohousing is another social practice that has been applied around the world for several years, in which different families share the same housing and develop ways of managing common resources through decentralized decision processes (Manzini, 2015, p. 57).

Other examples of urban commons are related with collective practices of open production of goods (such as the Fablabs and makerspaces) that occur mainly in physical spaces, where neighbours meet, share tools and capabilities to produce, arrange or reuse products of daily use. Temporary urban commons can also be verified when a group of people occupy a public square to claim rights to local authorities, such as the Occupy Movement that recently had spread around the world, where temporarily a square is self-managed through horizontal decision-making processes (Stavrides, 2016, p. 159). All these examples correspond to authentic social experimentations and collective demonstration (Seravalli, 2014a, p. 109).

In some cities, these examples go beyond the bottom up activist character, integrating collaborations with public or private institutions. One of the largest community gardens is in the Swedish city

Malmö, with approximately 12,000 square meters managed by the local authorities. The space is open to the community and it is based on volunteering work. Malmö, like other cities, has been using these practices with the aim to strengthen community ties, as well as work as a tool for social inclusion through community capacity building activities (Anderson, 2014, p. 16). Furthermore, the cohousing practice in Milano has been developed through a socially oriented enterprise, which has been promoting cohousing initiatives in the city and has been contributing to the implementation of cohousing initiatives in Italy (Manzini, 2015, p. 57).

The opening production of objects takes the form of the so-called Fab Labs (Fabrication Laboratories), which is a concept created by the Massachusetts Institute of Technology and disseminated by private or public initiatives. Currently, these spaces evolve a large global network of laboratories (713 Fab labs in 2016) that provide resources for the collective exploitation of co-creation processes, based on knowledge sharing and capacity building (Seravalli, 2014a, p. 109). Finally, the appropriation of a public square or an abandoned space by the inhabitants of a neighbourhood has been used as a tool in contemporary urban planning projects, contributing to the development of public policies related with participatory urbanism. Two examples are the Pla BUIITS (2013-2016) in Barcelona, and *Redes e Ruas* (2015-2016) in São Paulo, which were initiatives of the City Halls of these cities that proposed the construction of a shared management of the city with its residents (Barbosa & Roda, 2015a, p. 3).

According to this vast literature of commons and commoning, this kind of collaborative practices in small urban spaces contribute to improving the quality of life of citizens by adding social value through the strengthening of community ties. Among several benefits, these practices bring the individual satisfaction of integrating capabilities into a community, producing active participation to solve common problems (Euler, 2016). Furthermore, urban commons are able to create conditions for the exercise of democratic participation in the everyday life creating mechanisms towards a more democratic management of the city (Hardt & Negri, 2009).

## Networks

Thus, when we consider these micro experiences as micro political initiatives with strong potential for change, it seems possible to perceive the contemporary city as a composition of on-going commons. Indeed, these social experiments are linked by virtual networks used to facilitate communication, strengthen and replicate ideas.



In this sense, the city as a whole will never be a utopic common, instead the city is a configuration of micro-spaces with favourable conditions to produce commoning practices, suggesting a different visualization of the urban archipelago proposed by Stavrides (2016, p. 13). As showed in the Figure 3 bellow, the network of commoning practices has the ability to cross the borders of the enclaves that constitute the city. In that way, the city emerges as an articulation among collective actions with its various centralities. Infiltrated in the porosity of the urban flow, these micro spaces present different levels of sustainability and temporalities. In urban settings, they present themselves as disorganized and imperceptible, but they also reveal a strong potential to influence socioeconomic changes in urban contexts (DeAngelis & Stavrides, 2010, p. 9).

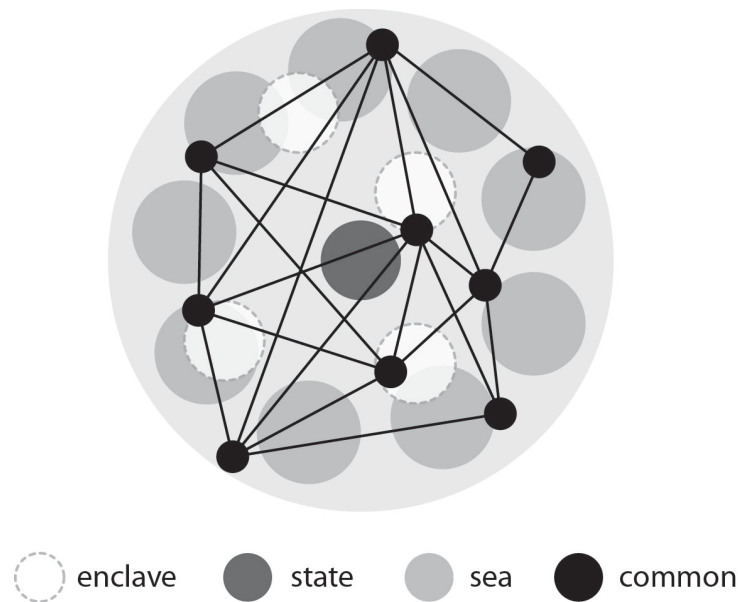


Figure 3: Network of urban commons in the urban archipelago image (Based on Stavrides, 2016).

So far, commons appear in a dispersed way, located inside, outside or at the limit of encloses of the urban system in order to make possible activities with different temporalities. As referred in the previous chapter, negotiation processes occur on two levels, i.e. within the communities, among the commoners; and with the outside world, among existing commons and with the institutions of the city (DeAngelis & Stavrides, 2010, p. 2). This process should be open to conflicts because it involves different capacities and interests in decision making process, what makes possible constantly promoting the production of commoning. In that sense, this new visualization also allows the understanding of commons not as isolated communities with their own systems, separated from the current socio-economic system. Indeed, commons as isolated islands lose their transforming

character. Otherwise, commons must be in constant creative negotiation with standardized and legitimized spaces of the urban system, producing alternatives within the existing social realities.

### **Common spaces**

Among these set of practices, this study focuses on collective experiences that occur in public and urban spaces with the objective of better understanding how collaborative processes occur and is materialized by collective experiments, and how they express project capacities, including their impacts and challenges. Usually, urban commons materialize experiences mainly through their spaces, including those used for food production, living and social interaction. Among the various defined spaces that materialize a city, this study considers that the public space presents opportunities to relate to commoning practices, because it is normally characterized as a space open to human associations and interactions, revealing the city as a place of encounter and diversity (Lefebvre, 2011). However, as mentioned in the first chapter, it is important to point out that a “public good” is different from a “common good”. In the same way, the concept of “public space” is different from “common space”, mainly because these two spaces are conceived and give access to users in different ways (Stavrides, 2015, p. 11). The two spaces differ in the way that they are created, managed and used.

According to the modern urban patterns, a public space is defined as a place administered by a central government, who regulate its use. Therefore, public spaces are not simply open spaces used by everybody. Instead, within urban enclaves, a public space is strongly marked by the selection process, where top-down rules shape behaviours and social relations (Stavrides, 2015, p. 11). In that sense, the current urban planning strategies advocate public spaces for the production of experiences within the limits of “colourful environments” directed towards a “cordial encounter” (Reimer, 2012, p. 120). Differently, the common space is a set of spatial relations produced by commoning practices, which are constantly responsible for creating and changing the rules of its use. Common spaces emerge from their collective use, in which the rules of use do not depend on the vigilance of the authorities (Stavrides, 2016, p. 2). However, it important to consider that common spaces may either be organized as a “closed system” with defined boundaries that corresponds to a specific community of commoners, or they may take the form of an “open network of passages through which open communities of commoners communicate and share goods and ideas” (Stavrides, 2016, p. 3).

Thus, in this investigation, public spaces are not considered as a product created and produced by a designer, where efficiency parameters are analysed in their use. Rather than that, this research considers the public spaces as potential places for establishing and expanding commoning practices

and social capabilities for sharing things (Stavrides, 2016, p. 6). Literally, these spaces can present themselves as material results of collective constructions within participatory urban strategies; but metaphorically, these spaces can be considered tools to produce new social relations based on sharing and cooperation to solve every day common problems. This thesis focuses on the metaphorical value of public spaces, since they are considered means to provide social experiences of collaboration and sharing. Therefore, public spaces as common spaces can be presented as a product of collective inventiveness, "triggered by everyday urgent needs or unleashed in the effervescence of collective experiments" (Stavrides, 2016, 6).

In this sense, in this research public spaces are considered tools for the production of commoning experiences in urban life. This proposition is in line with the notion of "threshold spatiality", which refers to the experience to across, more specifically, the "spatiality of passages which connect while separating and separate while connecting" (Stavrides, 2016, 5). The notion of threshold spatiality is linked to the experience of rituals of passage in various societies that define and control the transition from an old to a new situation. In the case of commoning practices, these experiences of passage may be reflected in the creation of new social relationships, identities and common goals within the city.

### **Challenges of urban commons**

On this background, three main challenges of ongoing urban commons were highlighted by this research work: accessibility, legitimacy and sustainability (Bingham-Hall, 2016; Massimo DeAngelis & Stavrides, 2010; Hernberg & Mazé, 2017; Hess & Ostrom, 2007).

- **"Accessibility"** refers to the limits of the access of each common. All common configurations run the risk of building barriers for new participants, preventing the ability of a group to adapt to new situations and ideas. Additionally, the limits of access can be identified within the same common, when few visions overlap on others in internal decision-making processes. Moreover, the limits of access can be identified inside of each participant of a common, i.e. the limits related to subjective aspects that determine the personal availability of each commoner for the collective experience, implying changes of habits, identities, lifestyles, perspectives and affectivities.
- **"Legitimacy"** refers to the process of incorporation commons by traditional structures of democratic governance. Here, new urban policies with adequate regulation that allow the widespread implementation and the sustainability of ongoing urban commons are demanded. However, there is a risk for commoning practices to be used as a tool for

maintaining the centralized power, instead of being applied as a tool for building mechanisms towards a shared city governance.

- “**Sustainability**” refers to the challenges of urban commons in continuing promoting local changes, when they present the constant risk of disappearing, due to the lack of social capital, time and resources for its self-sustainability, i.e. due to the lack of strong institutions of commons that may support common practices and their effects at the micro and macro scales.

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Based on these general challenges of urban commons and the conceptual discussion of commons, this research work identifies potential opportunities for design practices to handle collaborative practices in communities. Therefore, this thesis argues that the design work can create the necessary conditions for the development of commoning practices in urban spaces, catalysing the emergence of social innovations adapted to specific socio-economic contexts with capabilities to sustain continuously local changes. In order to explore more these opportunities, the next chapter presents and discusses a set of design research approaches that support a better visualization of these opportunities.

## Chapter 3. DESIGNING COMMONING

Design research has been exploring the inspiring background of commons in order to bring new insights to the design process in developing more inclusive methods towards more fluid co-creation processes in community environments. This chapter discusses three conceptual approaches within the design research related with “making” collaboration for the formation of communities, namely: "making things happen", "making publics" and "making things public". These approaches are localized in the emerging field of design that thinks in new ways of engaging with communities, namely on the domain of Design for Social Innovation, Adversarial Design and Participatory Design. On this background, this thesis discusses the challenges of the “design agency” on making collaboration in community’s dynamics. Then, it is suggested the notion of “designing commoning” to think about how design practices can acknowledge the implications of power dynamics in the production of collaboration.

### 3.1 DESIGN AND COMMUNITY

The interaction between design and community integrates the paradigm of social change in the design discipline related with socio-economic challenges facing in today's world. Increasingly, the production of design knowledge branches out in "new ways of interpreting design and designing that are not yet mainstream and started to take shape through a rapid growth in connectivity" (Manzini, 2015, p. 43). This new field of design interpretations is marked by the change in the design process, which "shifts from traditional product-oriented design processes to a process for designing complex and often intractable social, environmental and even practical problems" (Manzini, 2015, p. 53; DiSalvo, 2009). In this process of change, it is observed a shift in design attention from users represented by single individuals to communities with capacities to design lives for addressing changes collectively.

The field of Participatory Design in northern European countries inaugurated this scenario of change through the broader development of the notion of "infrastructure information systems", which joined design efforts to bring together the broad social and political issues of technological apparatus that currently crosses society (Karasti, 2014, p. 141). In this environment of intense transformations, design process seeks to follow the principle of "generativity", in which efforts are taken to create means that allow people who were not involved in the creation of an information system to have possibilities to create new contents and applications independently of the designers (Karasti, 2014, p. 141). Moreover, this discussion grounded the notion of "infrastructuring", where there is a particular concern to enter more deeply into the socio-technical nature of design practices. Thus, design practices as infrastructuring practices differ from the focus on the issues that involve an isolated object and work spaces to practices in which design takes position in the mediation, interpretation and articulation of processes of social change. In this sense, there is an attention to explore the technology totally incorporated in contexts and practices, opening up a field of action with meaningful activities for furthering community interests (Karasti, 2014, p. 146).

Within the broad field of design, this study focuses on a set of approaches of design practices in the context of communities. Design "with" communities is the set of practices that strive to develop, together with the actors involved, the necessary conditions to produce collective actions capable to innovate through existing local resources (Manzini, 2014, p. 62). In the context of design with communities, the designers participate as peers with other actors in "creative communities", which are groups of "people who cooperate in inventing, enhancing, and managing viable solutions for new

(and sustainable) ways of living" (Meroni & Bala, 2007). In this scenario, the role of designers is to facilitate co-creation processes and to promote collaborations among diverse social actors (local communities, companies, institutions and research centres). Thus, designers participate in the construction of shared visions and scenarios; combining existing products and services in order to support the creative community members with whom they collaborate (Manzini, 2014, p. 62).

### 3.2 DESIGN AGENCY

In order to better understand the challenges of the interaction between design and communities related with the production of collaboration, this work explores the idea of "design agency" more deeply. Thus, this study considers design agency not as a design company, but as actions, performances, operations and activities that constitute the process of design. Moreover, the notion of design agency can be understood as an energy of acting together, being activated by designers and non-designers, who use design skills to make things happen through collaborative processes. As a collective energy, design agency strives to distribute and replicate this energy by the different participants involved in collaborative projects. Rather than a static thing, design agency is something that flows and contaminates others, generating micro ruptures in consolidated power structures that guide ways of thinking, doing and living together (Barbosa et al., 2017, p. 2).

Actually, this holistic idea of design agency is increasingly being expanded beyond the boundaries of professional design expertise, operating as a form of doing and thinking in the various fields of knowledge. Design agency appears as "design mode" presenting the outcome of combining three human gifts: "critical sense (the ability to look at the state of things and recognize what cannot, or should not be acceptable, creativity (the ability to imagine something that does not yet exist), and practical sense (the ability to collect feasible ways of getting things to happen)" (Manzini, 2015, p. 31). The combination of these three elements has been becoming increasingly adopted in many areas of knowledge through the fast and deep-reaching transformation of social and technical systems. In this sense, the statement "we are all designers" reflects a reality in which people are increasingly being called to use their natural designing abilities (Manzini, 2015).

In that context, the professional design agency, where a design culture is produced by the Design discipline evolves efforts to find new ways to design in association with non-designers. Thus, designers and non-designers have been composing the "emerging design agencies", in which it is possible to visualize different design agency configurations in action. The Figure 4 provides a map

that aims to better understand how the professional design agency has been setting within the creative mix of agencies in the contemporary world. The map suggests a conceptual view of the various possibilities of design agency that have been being produced. In this sense, as showed in the Figure 4, the field of the emerging design agency is located in a space that intersects two dimensions: actors and competence, which moves between “diffuse design” and “expert design”; as well as motivations and expectations, which move between “problem solving” and “sense making” (Manzini, 2015, p. 44). In this space of intersection, several types of design agency are possible to be produced, among community, activism, technology and communication agencies.



Figure 4: Design agency map (Adapted from Manzini, 2015, p. 44).

According to the map of the Figure 4, the quadrant 1 "community agency" corresponds to the design agency used by groups of people who design initiatives that aim to deal with local common problems, such as the access to high quality food or the lack of public and green spaces. The quadrant 2 "activism agency" corresponds to the design agency used by people who are interested in cultural activities to promote specific issues, create situations and catalyse debates. The quadrant 3 "communication agency" corresponds to the design agency of professionals who use their specific knowledge and tools to conceive and develop original products, services and communicative artefacts. Finally, the



quadrant 4 "technology agency" corresponds to the design agency of experts with high technical background, who aim to solve complex problems by bridging technical and social issues.

In the first two quadrants (1 and 2), design agencies have been generating new ideas that propose new meanings about time, place, relationships and work, fostering common forces to produce more sustainable lifestyles. In the two other quadrants (3 and 4), design agencies have been proposing communication and technological propositions (Manzini, 2015, p. 41). At the crossroads of these different agencies a variety of emerging configurations of design agency are located, where innovative ways of doing and thinking are constantly being created. Thus, in the centre of the map, the skills coming from the four quadrants blend into each new design agency in formation, where designers and non-designers work together in a hybrid space of social interconnections.

## **Designers**

In the scope of emerging design propositions, the designers become agents involved in discovering situated and relevant issues, rather than agents specifically addressed to solve problems (DiSalvo, 2009, p. 53). In this sense, designers work as "place makers" for local communities, cities, and regions, as well as "activists" in facilitating social changes in cultural attitudes and behaviours. Designers can also be considered as "entrepreneurs" operating in open networks through distributed systems, as well as "socio-technical experts" working in interdisciplinary teams with the role "to trigger and support large design processes by building the necessary coalitions among different partners" (Manzini, 2015, p. 43).

In Chapter 1, it was argued that for a good to become common, it is necessary that social practices of commoning legitimize it as a common, i.e. when the participants understand why and how a good is accessed by all involved people. From the perspective of design, if every problem and every solution depends on the social dimension to understand this problem and its solution, the designer can assume the role of facilitating this awareness, creating conditions for arising procedural solutions, which might present themselves as likely solutions instead of final ones. In this context, designers actively collaborate with other agencies, using specific skills from professional design culture, contributing to the construction of new meanings and understandings of shared realities.

### 3.3 DESIGNING COLLABORATION

The knowledge exchange with other agencies in the new ways of designing arises visibility to the complex issues that surround the agency of design, namely the paradigm of changing in design practices. Increasingly, it seems that the idea of change requires to be redesigned by design knowledge in the attempt to shift design skills from the role of being a central activator to be a peripheral articulator of change. In that way, design process in the context of building and supporting communities entails many challenges on the sustainability of collaboration over time, such the creation of socio-material structures able to promote continuous local change. In this section, “designing collaboration” for local change is discussed in the scope of three critical approaches selected within design research. According to the literature review, designing collaboration can be discussed in "making things happen" through prototypes of social change; "making publics" through articulating issues for social change; and "making things public" through infrastructuring for social change.

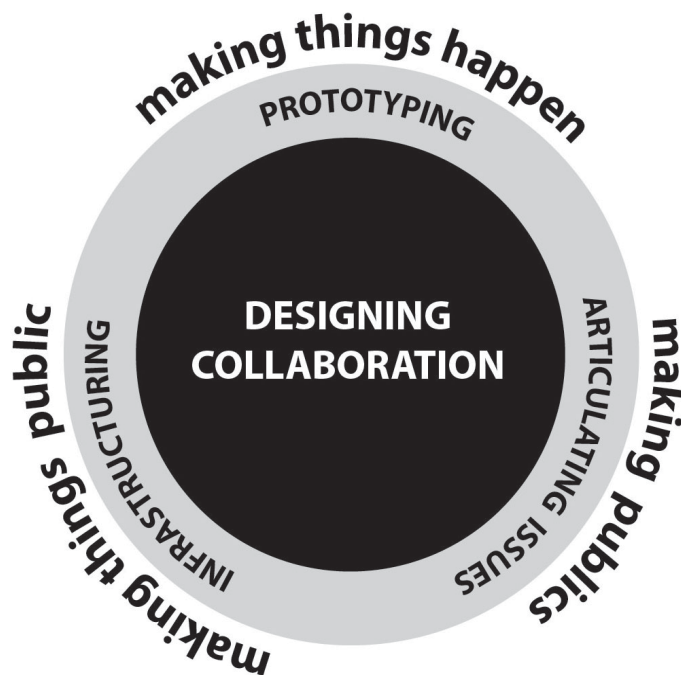


Figure 5: Conceptual map of Designing collaboration.

### 3.3.1 Making things happen

The field of “Design for Social Innovation” explores the role of design practices in triggering and supporting social change. According to Manzini (2015, p. 62), the professional design agency presents "special capacities to relate people directly concerned with social matters, giving them a voice and creating conditions to tap the social energy available". In this context, designers are committed to "think and act by projects that break the continuity of events and imagine the change in the state of things and how to bring it about" (Manzini, 2015, p. 68). In other words, designers act for social innovation in recognizing existing social inventions and transforming them into more effective, attractive, lasting, and potentially replicable solutions.

In this sense, design for social innovation underlines the strategic dimension of design in identifying the problems in both its local (bottom-up) and its general dimensions (top-down), interacting with institutional systems and public policy. Design agency enables solutions that can not only sustain a single action, but also creates an effect of scaling up interventions opening up new ways for replications in other contexts. According to this perspective, this strategic dimension of design can be achieved and supported by "coalitions" that can bring actors with different capacities to build a set of shared values and convergent interests in specific programs. These coalitions can provide the necessary conditions for the development of a program that may have various coordinated initiatives, including a coherent succession of stages in a general co-design process (Manzini, 2015, pp. 49–69). Thus, the construction of these coalitions presents itself as a strategic design activity in which visionary capacity must be combined with a dialogic ability to do things.

In this perspective, Manzini (2015, 62) defines the field of Design for Social Innovation as "everything that expert design can do to activate, sustain, and orient processes of social change towards sustainability". In this environment, the author states that the role of design expert's goes beyond of being facilitators, by exercising administrative roles that hide their particular design skills. The design experts strive to bring to collective action their particular culture based on the creativity, in order to transform visions and proposals (Manzini, 2015, p. 62). In other words, the agency of designers presents special skills of transforming grounded ideas to "more structured prototypes" that must be integrated into networks. This perspective states that the designer must work on structuring and strengthening networks in order to make possible more effective changes in both local and global scales. This effort must happen through the integration of complex systems, involving individuals, enterprises, non-profit organizations, as well as local and global organizations (Jégou, Bala, & Manzini, 2008, p. 40).

However, Manzini (2015) points out the risk of the designers to put into practice their skills by imposing particular visions and ideas as if they were the only possible ways to solve a particular problem or a set of problems. In response to this risk, the author suggests that design experts bring their skills and culture in a "dialogic" way, in which they must produce feedback in a process of conversation with the various agencies involved, and in which then they can "introduce new and more mature proposals into the conversation" (Manzini, 2015, p. 67). In that sense, the professional designers are in a position to become effective agents of change and able to "make things happen" when, in the co-designing process, they are able to "listen to the feedback and reorient the action" for social change (Manzini, 2015, p. 68). The author verifies that there are still many challenges in developing this designer role in a more effective way because there is a lack of debate on the emerging design agency culture, which prevents the designers to become an effective agent of social change.

### **3.3.2 Making publics**

The perspective of "Adversarial Design" brings new insights to understand the factors that surround the agency of design when it deals with communities. According to this approach, design agency strives to generate insights and awareness about relevant issues in order to articulate audiences around these issues. In this perspective, the political agency of design is explored in the efforts to understand how "publics" or communities can be produced by "things" or relevant issues (DiSalvo, 2009, p. 49). This perspective assumes the political role of design in the diversification of the public sphere by striving to produce various publics of interest around different issues, such as the relation between human beings and technology (DiSalvo, 2009, p. 49).

According to Habermas (1989), the public sphere is the space where public opinion is constructed through the critical debate between diverse private positions, which are organized in communities, collectives or publics. In this sense, the public sphere is located between the private and the political spheres (e.g. the state), being produced through the public discussion between different positions that constitute a democratic society. Thus, when a society has a more diverse public sphere, it tends to be more democratic, preventing the centralization of the political power. But how does a community emerge from the public sphere?

According to Dewey's pragmatic thinking (2008, p. 51), a public can be constituted when it acquires a collective force to participate and have a voice in the public sphere. The author builds this argument

from the understanding about the concrete action of human association. If an individual is the result of the relationship with the other, a public appears as the result of the association between some individuals. Thus, a collective action acquires the condition of "public" when its consequences reach other individuals beyond the agents involved in the association (Dewey, 2008, p. 53). In that sense, the complexity of the public sphere is configured when an issue can generate multiple audiences. This is revealed, for example, on the broad discussion of climate change issues, which raise different interpretations, representations and political interests.

Indeed, the existence of an authentic public sphere depends of a process of constant social experimentation and it is best understood as a dynamic field of battle among different forces that compose a society and constantly fight for their particular interests. In this sense, Habermas (1989) denies the existence of an authentic public sphere when the political arena is dominated by the media, which creates a camouflage for the political discussions by the spectacle and the scarcity of argumentative political criticism. However, in contemporary society, with the access and development of new information technologies, the public sphere can be enlarged with the emergence of several publics of interest that act directly or indirectly in the public discussions.

In this way, according to Dewey (1926, p. 55), an audience is developed when the consequences of their associated actions are known, stimulated and sought through efficient communication processes. These mechanisms are responsible for sharing the consequences of public action with all involved actors through the production of common signs, symbols and meanings, which facilitate the formulation of a new action in order to achieve certain collective outcomes. Thus, the access to information and the development of critical capabilities around issues are essential conditions for the formation of an organized and articulated public or community.

Considering the contemporary scenario, where there is a strong influence of information technology on the formation of publics, DiSalvo (2009, p.48) points out the implications of the practice of design in the field of production of meaning around issues and the consequent construction of different publics. According to the author, design practices can participate in negotiating "within this contemporary socio-technical mess of people, technologies, and objects" in the process of building publics (DiSalvo, 2009, p.51). In this perspective, the author identifies two "design tactics" that provide the necessary conditions to communicate the consequences of issues for the formation of publics and their strengthening: "projecting and tracing". Design practices can project relevant issues by communicating future scenarios and their implications; as well as design practices that can trace

certain issues, by facilitating the disclosure of the origins of issues, their hidden structures that become difficult to be understood and criticized by the common sense (DiSalvo, 2009, p.55).

This perspective is deepened by DiSalvo (2012) through the Mouffe's (2013) concept of "agonistic spaces", in which computational systems and artefacts participate in the production of "agonistic" instead of "antagonistic" socio-material relations. According to Mouffe (2007, p. 3), the public sphere is configured as an agonistic space, which is occupied by different political forces that negotiate among themselves for their interests, which are irreconcilable because they depart from different positions and social classes. Nevertheless, these different groups need to live together in the context of the democratic political system, which places them as opponents and not as enemies. In this "radical democracy" scenario, the consensus built through antagonism for the harmonization of positions gives place to agonism, in which consensus is built through conflicts of positions (Mouffe, 2013). The agonistic dimension of democracy comprises the decision-making process not as a harmonious process, but as a political process open to constant negotiations with ruptures and conflicts.

In this perspective, design practices participate in the construction of the public sphere, bringing awareness and making apparent and known certain common issues to be considered in the public sphere. This perspective interprets the agency of design in its political action to generate mechanisms capable of producing new meanings on relevant issues to the common good, and consequently indicating ways of building publics that deal actively with these issues. Therefore, DiSalvo (2012, p. 115) states that "adversarial design" practices assume its political role by creating agonistic situations, which can reveal and challenge power structures that constitute a society. In this perspective, the design agency has the objective to provide opportunities for active participation by "revealing, reconfiguring and articulating" issues for the formation of publics or communities (DiSalvo, 2012, p. 5).

### **3.3.3 Making things public**

Here, the term "thing" was recovered from the ancestral culture of the Nordic and Germanic societies. In this period, "thing" meant assemblies, rituals, and places where disputes were solved, and political decisions were made, responding to a need for neutral places, where conflicts, concerns and interests could be negotiated through a diversity of perspectives (Binder, Brandt, Ehn, & Halse, 2015, p. 1). The meaning of this old term led researchers to think about the "object-oriented politics",

in which objects are acknowledged playing a relevant role in the politics of the formation of publics (Latour, 2005, p. 4). Thus, "things" in design or "design things" are not just about artefacts designed for particular users, but also about the effects of interaction between the users and the artefacts when they become public. In this way, "things" only arise when a design object is made public and given to its users, arising visibility to matters of concern that should be able to open up new possibilities of interaction and use (Binder et al., 2011, p. 6).

This philosophical understanding led design perspectives in the field of "Participatory Design" to think about design as a process of "infrastructuring" instead of "prototyping", with the role to make things public through ways of framing controversies that open up new ways of thinking and behaving. This perspective suggests that the design overcomes the obsession with objects and technology and moves researchers to think more about the consequences of these products in the environment (Binder et al., 2011, p. 2). In dialogue with Latour (2005), this perspective proposes an expansion of the understanding of the factors that involve the agency of design, moving the focus out from forms and functions to matters of concern related to objects, artefacts, images and services created and made public by design (Bruno Latour, 2005, p. 4). In this sense, this approach challenges the design to make public the object of design, the act of designing and the own positioning of the professional designer in the contemporary world, including issues like politics and power as intrinsic factors of the practice of design.

Instead of "prototyping", the design things suggests "infrastructuring" processes, where participation arises as the appropriation of applied practices and processes. In this environment, participation is understood as an active and delicate matter of proposing alternative possibilities to prompt curiosity and ambiguity, in order to activate the participant desire for interference (Binder et al., 2015, p. 162). Thus, infrastructuring design things constitutes the activation and reorganization of socio-material assemblies that appear among various stakeholders, resulting from relevant issues located in a certain timeframe and place (Björgvinsson et al., 2012, p. 102). Therefore, the agency of design invites different capacities for appropriation of processes that make things public through democratic experiments, where designers present themselves as potential mediators between the different involved capacities (Björgvinsson, Ehn, & Hillgren, 2010, p. 41).

This approach differs from the more traditional project-based approach, in which designers listen, interact and then present prototypes for potential changes. Instead, design as infrastructuring process occurs through a long-term commitment between designers and stakeholders, working through a more flexible and organic process without predetermined goals or fixed timelines (Hillgren, Seravalli,

& Emilson, 2011, p. 179). According to this approach, the issues have time to be produced according to situated problems that can be understood and solved by the involved stakeholders. In this context, design agency strives to create conditions for the interaction between the participants and the available resources, allowing processes of adaptation and appropriation that can change the initial scope of the design program (Björgvinsson et al., 2010, p. 43).

Actually, designing infrastructuring processes brings temporal challenges to design practices by proposing the need for an extended dimension of time. Infrastructuring processes require a longer time of feedback that depends on several contextual factors. Different from the evaluation of a product, design infrastructuring accompanies appropriation processes by creating opportunities for future design-in-use and extending design towards more open-ended long-term processes (Karasti, 2014, p. 143). In this sense, infrastructuring design projects can present different temporal dimensions able to deal with the challenges related to the context and the conditions in which the study of infrastructuring is applied. For instance, this approach can present a "longitudinal future-orientation" when a new process is initiated in the formation of communities and publics, or even when infrastructuring organizations or communities that already have systems that need to be renovated (Karasti, 2014, p. 147).

### **Infrastructuring common**

The intersection between common theory and design infrastructuring approach opened up the field of design to explore the notion of "infrastructuring common", which is the development of thinking and doing design process to open modes of access, collaborating and sharing production in building new ways of living in common (Marttila, 2016; Seravalli, 2014b). In the previous chapters, it was discussed that common is supported by commoning practices, which can be presented as an ongoing process of negotiation among the participants, in which rules are redefined according to emerging contingencies. In this sense, the intersection between design and commons requires attention beyond the material and technological issues, including the social practices that give sustainability to commons. This approach draws attention for which practices and behaviours can support commons and what are the challenges for this to happen. This process requires a deviation of understanding from what "resources" are common, to "when" and "how" a particular resources become common (Seravalli, 2014a, p. 111).

Thus, the infrastructuring common approach can be related to the intangible production of common goods through tools and practices for free knowledge and information sharing, exploring broad concepts such as "digital commons" and "common culture" (Marttila, 2016, p. 3). Moreover, this



approach also explores design practices for common production of objects and artefacts, participating in physical spaces such as fablabs, hackerspaces or makerspaces (Seravalli, 2014a). Other perspectives explore the role of design in making visible existing commons and inviting them for experimentation, exploration and interconnection (Franz & Elzenbaumer, 2016). Finally, in line with the empirical field of this thesis, another approach deals with infrastructuring urban commons, exploring the challenges of collaboration in creating more inclusive city planning processes, such as the development of more user-centred services in urban environments (Seravalli; Hillgren & Agger-Eriksen, 2015).

According to these approaches, design as infrastructuring commons arise the intrinsic challenges of collaboration, asking: how and what behaviours can emerge from this process; how power relations are worked out; how the negotiation process is built; how mediations and rules are built; how a collective understanding is constructed; beyond the awareness of the risks of this process to become an enclosure or private (Franz & Elzenbaumer, 2016, p. 5). Moreover, in infrastructuring commoning practices the use, management, ownership and maintenance of shared resources should be considered (Seravalli, 2014b, p. 20), as well as the creation of conditions to build common principles, vocabularies and ideals that actors can use to define their community identities (Marttila, 2016, p. 15).

### **3.4 DESIGNING COMMONING**

The approaches mentioned above take up social issues in a radical way in the design process, where innovation is dependent on the social aspects incorporated by given contexts. Indeed, innovation is something that emerges from social inventions and social interactions rather than from technocratic processes (Dantec & DiSalvo, 2013, p. 247). In this sense, all these approaches are concerned with how design can bring conditions to emerge social inventions that can be strengthened and supported by communities. In previous chapters, it was discussed that a common is produced by negotiating mechanisms that give the basis for commoning practices. In this sense, this research argues that the formation of a community is capable of creating and sustaining social innovations and social change depending on conditions to build collaboration through continuous negotiations.

In the first design approach "Making things happen" (Design for Social Innovation perspective), collaboration is described as something built by the professional design agency through a dialogic process in order to interconnect potential actors and then present more structured prototypes to enhance social changes. In the second design approach "Making publics" (Adversarial Design

perspective), collaboration is built by the professional design agency through the articulation of issues in agonistic spaces with the objective of projecting, tracing, revealing and reconfiguring communities. Finally, according to the "Making things public" (Participatory Design perspective) approach, collaboration is built by the professional design agency by infrastructuring existing socio-material assemblages and by proposing democratic experiments through long-term commitments. According to these critical perspectives, the designer assumes the role of "sense maker", "political actor" and "mediator", respectively, when working in the construction of collaborative communities.

However, according to the common discussion, the collaborative action can acquire different political meanings in the formation of communities, depending on how it relates to the power structures that intend to build up a collaborative process. Although, the development of information technology opens up possibilities for producing diverse communities of interest. At the same time, the boundaries that define openness and closeness become increasingly imperceptible in all spheres of everyday life. In this way, the formation of a community carries complex social dilemmas that must be explored in the production of collaborative practices carried out by design practices. In this sense, it is possible to state that questions about power and politics are intrinsic to the collaborative process and they should be considered in the design practices.

Thus, this research work explores the notion of "designing commoning" as the efforts to understand the dynamics of power that create the various agencies involved in the collaborative process, as well as the agency of the designer itself. Discussions about design and community are rarely explicitly linked to power structures that shape and determine peoples' lives (Agid, 2011). While the approaches discussed above suggest inspiring and promising paths for designers to play their role in building a more democratic world, discussions about design and community need to question and understand the structures that support the professional design agency and determine its consequences in social dynamics.

For instance, the approach of "Making things happen" focuses in the promotion of social changes in the hands of expert designers, who seem to continue with the role of understanding problems in order to present solutions to address social problems. In this perspective, it is reserved to other agencies the role of providing information, which then will be translated by expert designers in prototypes that should be capable to involve everybody towards the achievement of better sustainability practices. Although this approach suggests that designers develop dialogic capabilities, it does not question in depth the power structures that support the agency of design and consequently define interpretations about "social change" and "sustainability".

From a sociological point of view, social inventions become social innovations only when it effectively changes routines and practices, as well as social structures such as power relations that define regulative, normative, and cultural structures. The dimension of changing processes points out not only sustainable and long-lasting systemic changes induced by social innovations, but also contexts, settings, and their specific structures in which social innovations are embedded (Choi & Majumdar, 2015, p. 30). In this sense, the dimension of change in design practices for social innovation must also consider the changes in the dynamics of power relations that shape the community context, as well as the changes that consider the power structures that sustain design practices and influence certain forms of change in social structures.

The "Making publics" approach suggests that by acting politically through experiences of agonism, the design agency assumes a position of political neutrality. However, the notion of "agonistic spaces" does not assume specific positions in the game of forces that compose a collective and does not present a rational model of democracy in which parties position themselves in trivial antagonism (Mouffe, 2013). Instead, the notion of agonistic space assumes that the democratic practice is an agonistic construction carried out by the interaction of various forces that make up the public sphere. Therefore, it is necessary to acknowledge that before mediating agonistic interactions, the design agency is something that exists based on a particular political position (Kiem, 2011, p. 35).

In this sense, this study argues that when design engages with communities, it is fundamental to perceive which structures of power sustain it, how they are applied, and for whom and for what purpose. Design efforts to develop collaborative practices in the scope of commons can change realities in different ways, depending on how collaboration is understood by the designers and the involved stakeholders. Indeed, the meaning of collaboration can be associated with different understandings and political directions. The position of design can be directly related to the partners and financiers of the project, being these essential factors that determine the forms of changes activated by design. This argument arises the following questions:

1. How can design understand the production of power in building collaboration?
2. How can designers deal with their own position of power in collaborative projects?
3. How can design deal with power dynamics among different agencies that constitute a community?

## The power to change

Indeed, the meaning of the word “agency” is directly related to the power to do something. In the English language “Agency” refers to an “action or intervention producing a particular effect” or “a thing or person that acts to produce a particular result” (“Agency,” 2016). In that sense, this meaning establishes strong links between three elements: “action, thing and person”. These elements can be related with three particular dimensions of design agency: “process, product and designer”. Therefore, the design agency can be considered an intentional action with determined purposes to change something. Like the famous Simon's (1996) assumption: “everyone designs who devises courses of action aimed at changing existing situations into preferred ones”. In this way, it is important to verify that agency is directly related to power, i.e., the power to act and to catalyse changes.

However, instead of being something static located in a certain place, institution, individual or object, power is something dynamic that is constructed through social interactions (Foucault, 2013). Therefore, if agency presents itself as the power to act, the design agency is a social and historical construction that is also dynamic and changeable. The dematerialisation of design through the diffusion of post-industrial technologies, led to the reaffirmation of “temporary rhetoric’s of change, transformation, innovation and the new” in design practice (Mazé, 2016, p. 39). For instance, the power to predict the new in “conceptual, critical and persuasive” design approaches are “explicit towards the future or, rather possible and preferred futures” (Mazé, 2016, p. 50). However, the act of projecting futures carries political assumptions that determine certain dimensions of future rather than others. In that sense, the agency of design seems to carry an obsession for change through projected futures, frequently placing design in a position of power (Mazé, 2016).

In a comprehensive analysis of the complex environment around the design materiality’s, Keshavarz (2016) demonstrated the close relation between power, politics and design. According to the author, “there is neither external force nor distinction between design and politics in terms of one being only material and not political, and the other being only social and not material” (Keshavarz, 2016, p. 17). The author explores the passport, as an artefact that is designed by specific politics that symbolize pre-established attributes and identities, which are legitimized by the current form of governance over mobility regimes, making many people invisible and criminalized across borders and territories. Recently, the author directed the discussion in a lecture by questioning the tenuous line between “care” and “control”, when designers engage with “vulnerable groups,” in which generally designing forces are directed towards the empowerment or the inclusion of the “other” (Keshavarz, 2017).

The Design Nordes Conference in June 2017 in Oslo city catalysed discussions around the power of design agency to facilitate changes on the domains of current societal challenges, such as increasing social inequality and the power of the global finance system on democracy and technological determinism. The call for participation in this design conference stated: "we are able to do so, and need to do so, precisely because design and design research are co-creative, productive and forward looking in character and actions" (Nordes, 2017). Paradoxically, this discussion was carried out in the richest country of the "Global north", showing democratic conditions by including "other" voices from the "Global South". This ironic statement invites designers to think about the context of production of design knowledge, questioning what are the conditions that create the power to act and change things through design.

Indeed, the conditions are also related to how a community understands and formulates its problems and needs (Agid, 2011, p. 201). In this sense, the process of understanding the needs of a social group is directly linked to the conditions that create the group's understanding of their own needs, rather than a preconceived idea by designers about these needs and their changes. Thus, it seems to be necessary to acknowledge that often the ideas for achieving a certain community objective and how the needs of this community might be met are defined through structures and relations of power, in addition through designers' assumptions, which may converge or diverge with dominant ideas (Agid, 2011).

Therefore, in the context of urban communities these discussions recognize the challenges of design in the activation of various agencies in sustainable collaborative processes. In fact, the power that is performed by the designer runs the risk of assuming a leading role within a planned action for a certain purpose. This situation involves risks of centralising capacities around designers and the non-inclusion of different voices that could potentially continue to run the collaborative initiatives without the designers. Therefore, when problems or needs start from the critical designers with the intention of proposing "dialogic collaboration, agonistic and democratic experiments", the design action runs the risk of assuming certain positions that exclude other forms of understandings, rather than allowing a diversity of views in the construction of localized forms of change. In that way, it seems necessary to understand how design in community contexts becomes a political project proposing fundamental shifts in systems of power.

## **The production of power**

The discussion about power and design challenges the positionality of professional designers when designing collaboration for commoning. Indeed, the power of the designers within community dynamics will never disappear if every agency is a power performed by certain conditions. Thus, it is necessary to acknowledge that in addition to designers, other agencies also use their power in any collaborative process. According to Foucault (1984, p. 183) power can be activated by anyone on any scale of social interaction, e.g. micro or macro. According to the philosopher, it is fundamental not to take power as a phenomenon of massive and homogenous domination of one individual over another, regarding one group over others, or concerning one class over others. It is necessary to be aware that power is not something that can be divided between those who hold it exclusively and those who are submissive to it. Power must be analysed as something that circulates, which is performed in network. In the flow of power relations, individuals do not only circulate, but they are also always in a position to exercise power, because they are always centres of power transmission.

In this perspective, all those involved in a collaborative action present agency to act, as they are potential transmitters of power through their bodies, actions and behaviours. However, often this power to act is historically shaped by disciplinary mechanisms, which cause people to exercise their power in accordance with certain norms and standards that govern a society and legitimize what is right and wrong, normal and abnormal, inclusion and exclusion (Foucault, 2013). In that sense, it seems to be that from the individual sphere that it is possible to understand the social mechanisms that are favourable or not to a collaborative culture. The philosopher Guattari (2000, p. 15) defines the notion of "production of subjectivity" as a set of conditions that defines ways of being, thinking and acting in society. Thus, the subjectivity can be presented itself in an individual dimension, in which a person is product of its familiar relations, as well as in a collective dimension, in which a person acts according to social norms. According to the author, the subjectivity is historically and socially produced. Each historical time engendered the mechanisms of subjectivation, which produce contextual and localized subjects (Guattari & Rolnik, 2000, p. 16). In this sense, subjectivity is not a universal concept about the subject, but a process that is constituted from the practical experiences of the daily life. In that way, all the modes of existence that constitute ways of relating to affections, desires and artefacts, as well as ways of seeing with oneself, with the others and the world, establishes diverse types of subjectivities.

However, the mechanisms of production of subjectivity have been developed in contemporary society by the technical-scientific development, in which design presents itself as one of the main operators of this kind processes. According to Guattari (2001, p. 12), there has never been such a great investment in human history in the imagistic production of meanings directly interfering with the formation of subjectivities than nowadays. The globalized economic system has developed innovative processes that combine spaces, cultures, religions, political systems and temporalities through structures of producing meanings. In this way, a strong global subjective market operates in the production of ways of being, feelings and doing socially. Thus, the author states that this process is responsible for nourishing “repetition, exclusion and disinterest”. In this sense, individuals are guided by a functional and instrumental reason of the system, which makes them lose consciousness of their place in the world, as well as the consequences of their own acts for themselves, for the others and for the nature.

According to this philosophical perspective, the mechanisms of production of subjectivities are presented as instruments of power in the constitution of a society, allowing some voices and identities to overlap others and reproducing a chain of domination. However, considering that power is not located in any specific subjectivity, but it pervades all individuals in a dynamic process, it is possible to say that a collaborative action can be made up by several agencies. If in a collaborative process there are more domineering agencies than others, it is also considered that there are other agencies that can emerge. Thus, if the way of exercising power is directly linked to the conditions on how an agency is produced, the production of collaboration is directly linked to the favourable conditions for the activation of different dormant agencies in a community.

In this sense, Guattari (2001, p. 8) suggests the production of other systems of valorisation through integrated practices in an “ecosophy”, which aim the rearticulation among the “socius, psyche and nature” ecologies of human existence and subjectivities. “Social ecology” consists in developing specific practices that tends to modify and reinvent ways of being within the love, family, urban, and work relationship. “Mental ecology” consists in the reinvention of the relation of the subject with the body, with the unconscious and with the time. “Environmental ecology” consists in finding ways of linking social struggles to ecological issues to catalyse deeper political transformations. Thus, if this philosophical thought suggests that the subjectivity is collectively operationalized, consequently any subjectivity is open to changes collectively. Inspired by this idea, this study states that design practices might incorporate dynamics of power with the creation of mechanisms able to generate spaces of negotiation within the field of the subjective sphere, trying to integrate these three ecologies in the

construction of collaboration with communities. In this sense, it would be possible to think about an "ecosophy of design agency" (Figure 6), committed to the reintegration of the social, mental and environmental ecologies in the performance of design.

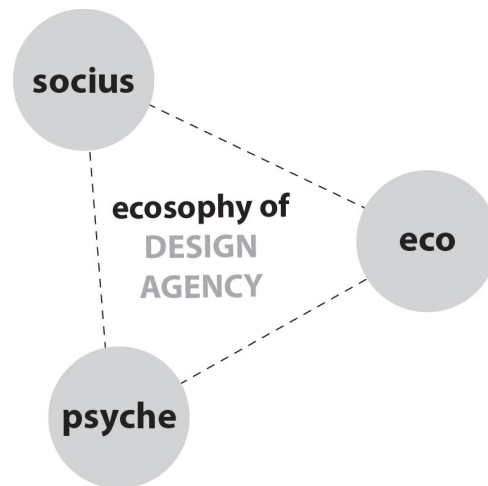


Figure 6: Ecosophy of design agency.

### 3.5 COLLABORATIVE AESTHETIC EXPERIENCE

The aesthetics philosophical discourse from the Western world has been operating mechanisms of subjectivity that define certain perceptions and forms of feelings and understandings of the world (Saito, 2015). Often, aesthetics in design is linked to the properties of the object, which needs to present a set of characteristics, such as proportions, colours and measures, suitable for certain forms of production and that give functional pleasure to the user (Forsey, 2014, p. 68). This understanding might have contributed to the development of the dominant idea of change through design, in which specific problems must be solved by design artefacts. However, this idea does not fit in the context of designing with communities, where designers have to deal with the immateriality and complexity of social relations. Thus, this study argues that the discussion about aesthetics and the aesthetic experience through design practices can provide a better understanding on how it is possible to move from the idea of “power to change things” to “power to distribute power” for social changes in design processes with communities.



Actually, the aesthetic experience in design reinforces the role of design restricted in giving form to the industrial, consumer and information economies. This idea emphasizes that a good design must be functional and aesthetically attractive (Carlsson, 2010, p. 3). However, the functional aesthetics strives to give forms linked to a hegemonic notion of beauty that follows economic interests, excluding other notions of beauty, as well as hiding important issues concerning content, such as the ecological and social cost of this market beauty (Fuad-Luke, 2009, p. 42). In this scenario, the form is constantly at risk of being separated from the content, and the user is viewed as a mere consumer of functional objects (Carlsson, 2010, p. 2). Aesthetic pleasure is then acquired by the consumption of goods.

Moreover, the traditional aesthetics discourse establishes that the aesthetic experience is something individual and subjective, reserved for the private sphere and related to the judgment of each observer, user or consumer. However, according to previous discussion, any judgment or opinion is produced socially. The interaction between different subjectivities in the anthropological experience of otherness results in something that surpasses each individual and interconnects all of them. The experience of the encounter causes a sense of discomfort, which raises the understanding that knowledge is not possessed by a single individual, but it is produced by collectives. When the individual becomes aware of this limitation, the indifference over the other disappears and is cultivated by the responsibility over the other (Deutsche, 2007, p. 8).

It is in this space of intersection that this research suggests thinking the aesthetic experience in complete relation with the collaborative experience through design practices. In that space might emerge opportunities for fusion between the individual and collective dimensions in the formation of emerging design agencies. Thus, on the theoretical background developed in this chapter, this study suggests a conceptual map of “designing collaborative aesthetic experience”, as showed in the Figure 7. The map characterizes the collaborative aesthetic experience as “disruptive, total and relational”. This perspective might allow designers to think about designing commoning through an active interplay among collective processes of “revealing and negotiating; making and adapting; interacting and belonging”.

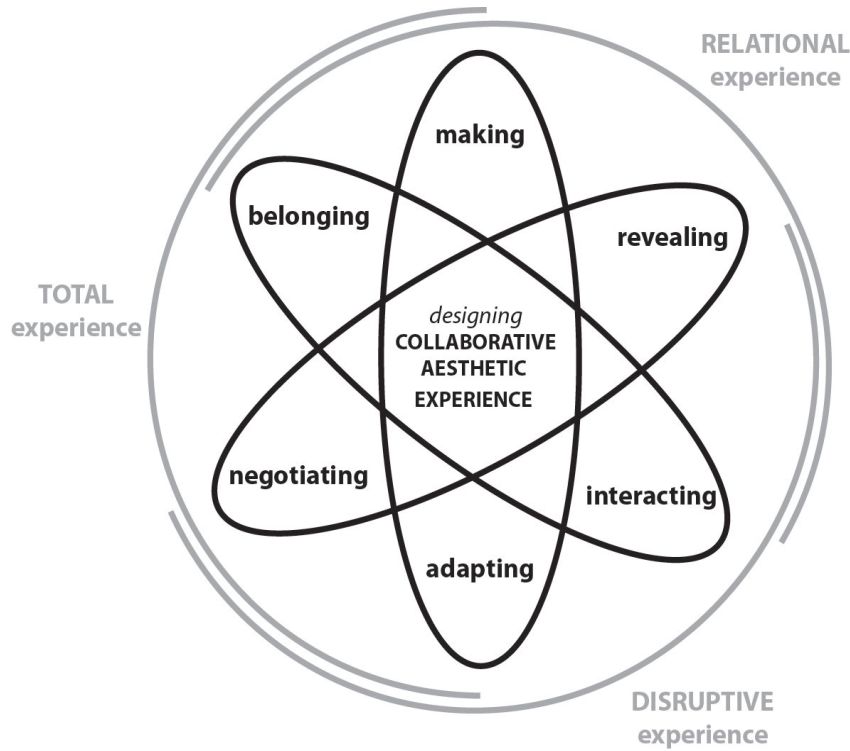


Figure 7: Conceptual map of “designing collaborative aesthetic experience” for commoning.

This conceptual map (Figure 7) aims to contribute with the development of new aesthetic languages for the development of the notion of “designing commoning”, looking for how design practices can incorporate power dynamics in building sustainable collaborations in community contexts. According to the model, this study suggests that design agency can forge the “disruptive experience” (1) by catalysing the active participation of the publics through revealing and negotiating issues. In that way, the construction of collaboration might involve “total experience” (2) situations through making things together and opening for adapting common practices and identities. Finally, the map suggests that design agency can facilitate “relational experience” (3) by building new meanings through interacting situations that might create spaces of belonging to collaborative practices and being able to sustain them over time.

Moreover, the conceptual map suggests designing collaborative experience for designing commoning as an on-going process built collectively from local resources that are available in particular forms of community existence. These three collaborative aesthetic experiences (disruptive, total and relational), and their respective design processes (revealing and negotiating, making and adapting, interacting and belonging) are better explored in the following sub items.

### **Disruptive experience: revealing and negotiating**

The means to achieve social change may be similar in different forms of activism. However, according to Markussen (2013, p. 39), design practices include a concern about the effects of changes in the application of activist projects. The author presents the notion of "disruptive aesthetics" to define designedly ways of intervening in people's lives by exploring the interference of material objects and artefacts in the public sphere of urban environments. Instead of entirely breaking with paradigms of traditional power, activist design projects create "contest, revelation and dissensus" from within the social order. For instance, the urban design activism might cause disruption on the perception of the people inviting them for active engagement and interaction, opening up possibilities of new forms of inhabiting urban spaces by altering the conditions for urban experiences.

Thus, it is in the intersection between the political and aesthetic experiences that it is possible to understand the effects of design practices in the daily life. According to Jacques Rancière, the effect of "dissensus" occurs when there is a disruption in a consensus order (Markussen, 2013, p. 44). This process opens up fields of conflict by revealing elements of ways of doing, as well as the effects of these actions on people's day to day life. For instance, by placing objects and artefacts in the public sphere, design practices present aesthetic dimensions along with its political dimension (Markussen, 2013, p. 45). In this context, form and content are presented in an integrated way opening for the formulation of new meanings about the performance of people's experience in daily life (Carlsson, 2010, p. 451). The notion of disruptive aesthetics in design practices replaces the notion of beauty linked to the consumerism of products to be grounded in ways of causing ruptures and reconfigurations of existing social structures. According to Markussen (2013, p. 50), this can occur for example through practices that interfere in ordinary urban experiences, like "walking, dwelling, playing, gardening and recycling".

### **Total experience: making and adapting**

The aesthetic experience in Heidegger (1977) takes place as a "poietic" experience of the existence in the world. According to the philosopher, the origin of things lies in the moment in which they gain meanings of use, in relation to other things and social interactions. Thus, the work of art reveals itself like other ordinary things because it is originated from the experiences of the artist and the public. Therefore, the aesthetic experience is configured in the dynamic process of apprehending meanings in everyday life. Design practices can perform as "poetic activities", in which the processes of idealization and production of the form involve the active participation of individuals in the generation of new meanings (Carlsson, 2010, p. 450).

The idea of "total experience" brings some way on how the poetic activity of design practices can occur in practical terms in everyday life experiences. The aesthetic experience in Dewey's view is related to a "total or complete experience", which occurs when any action undergoes a process of adaptation of its consequences, producing a perception of the world (Dewey, 2010, p. 110). Within this idea, the author draws attention to the inexistence of a word that designates the two inseparable processes, i.e. artistic production and aesthetic experience. The aesthetic experience in "Art" seems to be linked only to the reception of the subject through appreciation, putting aside the production of the object itself. However, the author states that the aesthetic experience is constituted by the inseparable link between artistic production and the perception of the art work (Dewey, 2010, p. 126). Therefore, the aesthetic experience is not only something that comes up from outside, but also something that is related to the development of a journey composed of several experiences.

According to Dewey (2010, p. 100), all experience is born from the interaction between a living creature and some aspect of the world in which it lives. According to this logic, the aesthetic experience is born through the action on things and the consequences of these actions in the space between doing and being subject to something. It is in this interactive process that the perception about things in the world is built and qualified. According to Dewey (2010, p. 122), when an action occurs without any response, the experience is vulnerable and fragile. Instead, the aesthetic experience occurs when the action and adaptation of its consequence are linked, emerging a singular experience responsible for the creation of new meanings. Taking into account this perspective, the aesthetic experience forged by design practice might be a total experience when it presents the experience of making towards the process of adaptation, i.e. when it presents affective, practical and intellectual aspects in a balanced way, which gives it quality and energy to move by its own impulse.

### **Relational experience: interacting and belonging**

The "relational aesthetics" takes place in the sphere of human interactions and their social context (Bourriaud, 2009, p. 21). In this sense, the relational aesthetic experience can be collectively produced in ordinary and casual micro-spaces, where it is possible to invent the everyday life through "bricolage and recycling" practices using resources that already exist (Certeau, 1984). According to Bourriaud (2009, p. 30), any form arises from collisions of atoms in a void space, which become enduring when connecting to each other. Therefore, the form is not reduced to the material effect of objects and artefacts that are placed in the public sphere. Here, forms are the active principle of a trajectory that unfolds through interaction among signs, objects and actions. This idea of form suggests producing the conditions to happen encounters in order to produce dialogic and shareable spaces.

Moreover, the relational aesthetics is co-created with other experiences during the conviviality, and it allows to cultivate the sense of community, belonging and self-esteem. Thus, the aesthetic experience is explored more deeply as an on-going process, and something unfinished and under construction (Koskinen, 2016, p. 25). The aesthetic experience is built collectively during the process of knowing the other, knowledge exchange, confronting ways of living together and defining common problems of a community, which later will define the scope of a project that will be carried out by all those involved. Thus, the experience is completed in its various spheres, crossing the dimensions of co-creation, co-production and co-use. In this sense, aesthetic experience is not only linked to a final product, but also to a process of collective construction, where individual experience is not built alone, but with others, because it depends on others to exist.

Moreover, the relational aesthetics can be conceived in design practices with communities through the conviviality in ways of bringing people together with the goal of opening up opportunities to improve their lives together (Koskinen, 2016, p. 18). Furthermore, it is intended that these experiences provide support for communities to produce their own aesthetics, which will meet their own needs and ways of exchange and cooperation. In this perspective, the role of design practices is to create new forms of community interaction that facilitate people to cope and discover common issues as well as available resources to deal with them (Koskinen, 2016).

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On the development of this theoretical background, which was based on the discussion among design, power, community and aesthetics, the next part of this thesis aims to explain the methodology developed and applied by this research project in order to contribute with new scientific knowledge in the field of design research.

## **PART II. METHODOLOGY**

The methodology is a creative process that leads to a particular way of structuring the scientific thinking, involving a mode of discovery that is determined by decisions made throughout the process (Gray & Malins, 2004, p. 11). This part describes the methodological procedures used in this thesis to produce knowledge, being divided into two chapters. Chapter 4, "Transdisciplinary research", presents the methodological approach adopted by this study, which was based on the interaction between methods from the fields of Design and Social Sciences. Chapter 5, "Methods", presents the procedures and strategies used for gathering and analysing the information that was collected in the field work, intending to explain the integration of a set of decisions used to produce the knowledge outcomes of this thesis.

## **Chapter 4. TRANSDISCIPLINARY RESEARCH**

Design is considered a transdisciplinary practice acting in multidisciplinary and interdisciplinary environments (Erlhoff & Marshall, 2008). This chapter presents the transdisciplinary approach adopted in this thesis in the production of new design knowledge. From the point of view of a constructivist paradigm, this research is characterized within the field of “Design research for studies”, using research methods from the fields of Design and Social Sciences. Then, in the second part of the chapter, this research work is localized in a space “in between”, where specific procedures are used to produce scientific knowledge that can be considered “design experiments”, crossing or intersecting the field of “Design research for exploration”.

## 4.1 TRANSDISCIPLINARY VIEW

The knowledge boundaries of the disciplinary methodologies has been criticizing by emergent approaches within the design research by questioning their capacities to respond to complex issues brought by the globalized world, such as the emancipatory movements, ecological crises and new media technologies (Erlhoff & Marshall, 2008). In general, the production of scientific knowledge gains space in zones of convergence that allow disciplines to work increasingly in collaboration with other fields of knowledge. Therefore, design finds opportunities in spaces “between” disciplines, in its ability to operate across them, accessing their methods and adapting them for the tasks being conducted.

Therefore, design research and practices deal with "situations" that require the support and integration of various disciplines. Instead of methods to achieve certain scientific purposes, design research works with “placements”, establishing the methodological limits to understand how it can act in a given situation (Buchanan, 1992, p. 17). In this sense, the scientific argumentation of design research involves a wide range of possibilities, tools and methods borrowed and adapted from other disciplines, with the intention of organizing and understanding the human experience. Instead of finding scientific evidences, the production of knowledge in design is best understood in locating, organizing, and integrating the required information to suggest how a particular intervention can be more effective. Ultimately, design is not about the study of existing phenomena, rather it is aiming to propose, intervene, change and restructure the future of the designed world (Erlhoff & Marshall, 2008, p. 135).

However, at the same time that there has been an increased awareness of the design to “act” on the world, there is the need of modes of thinking to better understand the implications and impacts of the design interventions in the world. Despite of the transdisciplinary capacity of design, there still a little effort to understand complex social processes in formulating more procedural solutions that embrace this complexity. Within this challenge, this research has a transdisciplinary character because it has the intention of understanding how communities are designing in order to design with them. This objective requires a shift in attention from "design for change" to "understanding change before design for change", which involves complex networks of relationships and circumstances of design works in communities. Moreover, this study has a transdisciplinary character because it establishes a dialogue with concepts from the fields of political sciences, economy and urban planning. Additionally, this research used



traditional scientific procedures in a "designerly" (Cross, 2001, p. 49) way of observing and thinking, in order to articulate design issues when engaging with collectivities.

## 4.2 SOCIAL SCIENCE RESEARCH

The methodology of this research was constructed from an interpretive perspective of social relations following the constructivist paradigm in scientific construction of knowledge. In this sense, the interpretation and review of the scientific literature was based on an extensive compilation of a constellations of references, which gave support to the construction of a particular mode of understanding (Gray & Malins, 2004, p. 76). According Denzin (2002, p. 352), the interpretative process requires the creation of a body of materials that form the foundations of the process of understanding a phenomenon. In this way, the scientific validity of an interpretative research is not a property of a particular method, but a clear and transparent combination of data, methods, results and conclusions (Maxwell, 1992, p. 284). Thus, the scientific validation of this study occurred during all stages of this research development, from the research project plan, through methods used to collect and analyse empirical data, to peer reviewed work within the research community of design. In that sense, the interpretation developed by this scientific work was constantly adjusted along the adaptation of new information and concepts (Cho & Trent, 2006, p. 321).

In this sense, the understanding of the construction of this research was conducted from both an inductive and comprehensive perspective, which allowed inferences from the researcher at each stage of the study. This paradigm differs from the hypothetical-deductive model, where the interpretation is constructed from pre-established conceptual frameworks (Strauss & Corbin, 1994). Additionally, the inductive process conducted in this thesis involved the logical interpretation of this research through moments of confrontation between the theoretical references and the collected empirical material. In that way, the development of the inductive logic in this study was based on the desire to embrace the gap between theory and empirical research, being inspired in some elements of the classic studies of the "grounded theory". In that perspective, new concepts and ideas emerged from the systematic gathering and analysing of data, taking efforts to develop a logical system of understanding the links between practice and theory (Strauss & Corbin, 1994, p. 273).

According to the grounded theory methodology, every phenomenon is constantly changing, and the decisions of the actors determine this change and its consequent adaptations. Thus, the grounded theory methodology basically strives to capture this change considering three basic elements:

conditions, actions and their consequences (Corbin & Strauss, 1990, p. 5). From a design perspective, when a design object is placed in the users' world, the planned actions on this object can undergo re-readings, adaptations and adjustments of contextual experiences (Redström, 2017, p. 79). In this sense, all the actors involved in using the design object present means of controlling their destiny in response to contextual circumstances. This research project considers the importance of the understanding of this process of adaptation in relation to the effects of design actions under certain social conditions, aiming to understand how design can incorporate aesthetic forms that allow processes of adaptation.

### 4.3 DESIGN RESEARCH

The efforts to consider specific elements that characterize design research differing from traditional sciences, began with approaches that explore more in depth the cognitive aspects of design, looking for the special knowledge of the practitioner when thinking and doing things (Cross, 2001, p. 53). Donald Schön's (1983) classic theory of "reflective practitioner" explored how professionals of design disciplines set problems and solve them in real world professional contexts. The author defines two ways of generating reflection through professional practice: the "reflection in action", which is the process of reflection while practice takes place; and the "reflection on action", which is the process of evaluation, analysis and review of the practice after it occurs.

This theory places the "tacit knowledge" as a central element in the production of design knowledge. Instead of a set of procedures that "a priori" guide the comprehensive process, it is considered that theories, concepts and design meanings are produced through the practice of design in situations of uncertainty, instability, uniqueness, and conflict (Schön, 1983, p. 308). Therefore, the activity of research-oriented design can be defined as a "reflective practice" because it consists in a process of understanding professional practice through the researcher's own experience "in" or "on" action. In that way, this theory had contributed to allow design professionals to adopt research process as an essential field within the creative process, establishing stronger ties between research and practice in the design disciplines (Erlhoff & Marshall, 2008).

Therefore, the design research has been branching out into various forms of knowledge construction through efforts to understand the cognitive elements of design. Indeed, the design research has been constituting through confrontations and convergences with patterns established by the traditional sciences. In order to better place the methodological approach of this research work, this study

articulated a set of definitions that point out three research positions within the design research. The characterization bellow was established in dialog with existing understandings within the design research theory (Fallman, 2008; Frayling, 1993; Horvath, 2007; Krogh et al., 2015; Mullaney, 2016).

- **Design research for practice** characterizes methodologies in which the object of study is a design artefact, using specific methods within the field of design in order to produce more efficient material results. The researcher is very close in designing activities, working as a designer and taking part of a design team, involving his tacit knowledge and competence in practice and reflection that lead up to the final artefact. In this sense, the production of knowledge is embodied in the artefact.
- **Design research for exploration** characterizes methodologies in which the object of study is the critical formulation of problems within the design process through the construction of objects and artefacts. The research is produced through means of the skilful practice of design activity in order to reveal research insights. This kind of research can occur when design skills are used to explore the subject of inquiry, or design methods are used to provoke state of affairs and glimpse possible futures. Thus, they use methods from other disciplines to explore new possibilities and raise questions related to design practices. The researcher is located in spaces in between disciplines, trying to absorb complex issues to be explored in design thinking. In this sense, the production of knowledge is procedural, not presenting closed conclusions but leaving insights and open questions for future studies.
- **Design research for studies** characterizes methodologies in which the object of study is the construction of concepts and theories that contribute to a better understanding of practices and design processes. This kind of research also uses theoretical methods and approaches from other disciplines linked to different perspectives, such as social, political, cultural, technical or material. The researcher is an observer of design practices with little or no degree of involvement. Finally, the production of knowledge of this kind of research generally strives to form a cumulative body of knowledge, seeking the general rather than the particular, with the aim to describe and understand rather than create and change.

The methodological approach of this research fits the third category, when the researcher is an observer of design practices and builds theoretical results for design processes. In this category, the design researcher is involved in analytical work using methods and techniques from other disciplines such as participatory observation, case study, expert interviews and grounded theory construction

(Fallman, 2008). The object of research is to understand the context of the artefact or system before and after they are designed, investigating issues invoked by the design process and/or the designed artefact (Horváth, 2007, p. 9). In this case, the research intends to investigate design-related configurations in macros and micro dimensions, such as issues of power, control, and authority (Fallman, 2008, p. 9). The contribution of this kind of research is to give critical/key insights to ongoing discussions about design theory, design methodology, design history, and design philosophy (Mullaney, 2016, p. 71).

However, according to the literature review this classification doesn't intend to place methodological barriers in design research, instead they aim to locate essential positions in the construction of knowledge in design. Framing a research in one of these categories runs the risk of hindering possible cross-disciplinary connections and exchanges with other forms of research, setting aside the creative aspect of the discovery process in design research. Therefore, these categories may overlap each other, depending on the conditions of each investigation (Mullaney, 2016, p. 71). Based on that, this present study identified connections between these presented categories, allowing the production of reflections from the free flow of information between different positions (Fallman, 2008, p. 10).

## 4.4 SPACES “IN BETWEEN”

On this methodological perspective, the notion of "design experiments" opens the possibility to find spaces of convergence between the "design research for exploration" and the "design research for studies" in this research work. Design experiments are prototypes, events or sketches created in the process of both the understanding and producing of ways of thinking. The combination of many experiments in design research facilitates the processing of developing new design knowledge, through several moments of examination of the research questions, the hypothesis and the evaluation of design processes (Bang, Krogh, Ludvigsen, & Markussen, 2012, p. 6; Krogh et al., 2015, p. 3).

Thus, the methodological course of this investigation was constructed through an experimental, intuitive and inductive mode of discovery. Although this research did not construct an artefact as a way to clarify the outputs that was extracted from the field work, design experiments were developed to understand the collected information. In this way, three activities are considered "design experiments" on building knowledge in this investigation: "sketching, immersing in the field, and making theory from data". These experiments are described in more detail below.

- **“Sketching”** experiments were used in all stages of this investigation, in the construction and adaptation of the research questions, in the collection and analysis of the data, and in the writing process. Sketches are materializations of ideas of parts of a whole (Krogh et al., 2015, p. 5). The main experiment in design research and practice is the "sketching", which is not only the quickest, but also the simplest form of visual expression in design (Erlhoff & Marshall, 2008, p. 360). Its purpose is to give an idea of something or to illustrate a process in design process, in which ideas are described, evaluated and constructed in order to propose answers to design challenges. In this way, sketches in form of drawings, visual maps and diagrams were extensively produced in this research with the purpose of clarifying ideas or stages of the process of comprehension, as well as to validate these ideas and steps within the design research community.
- **“Immersing in the field”** is considered another design experiment in this research, referring to the path traced in the field work by observing, questioning and interacting with on-going practices in different urban and social contexts. The design of the project started from immersion in the empirical field, which was explored in an open and flexible way, emerging and testing ideas, questions and hypotheses. The immersion in the field allowed the author of this investigation to perform different roles according to the circumstances of each context, where the researcher acted as a participant, user, activist and as a designer. In this way, the social sciences methodologies and procedures used to collect data were adapted in a more “designerly ways of knowing”, where tacit knowledge and intuition were essential elements in building knowledge (Cross, 2001).
- **“Making theory from data”** is considered as a design experiment by referring to how information was collected and manipulated in this research project, which followed some basic elements of grounded theory methodology. The collected empirical data functioned as the starting point for this work and as a raw material for developing the conceptual framework of the project. Thus, the concepts were produced with the constant interplay between empirical data and the literature review, which guided the development of new insights and concepts gradually. In that way, the theory produced in this project is considered a statement of plausible relationships of things, rather than a final answer of an analysed subject (Strauss & Corbin, 1994). If in design the knowledge is produced through practice, at the same way in this study the theory was grounded from the observation of practice. Therefore, the theory emerged from the empirical data through coding operations by

selecting, integrating and relating relevant elements. This process established sensible links between what was specific and what was general, as well as between what was practical and what was conceptual (Saldaña, 2009).

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On this background, the next chapter presents in more detail the methods developed to collect and analyse the empirical information of the field work conducted during the development of the present research project.

## Chapter 5. METHODS

This chapter describes in detail the methods developed to collect and analyse the field data in relation to the background theory used in this research. The description of the methods used in this research aims to clarify the role of the empirical material to further develop new knowledge in the scope of designing commoning in urban communities. Thus, this chapter is divided in three main parts. In the first part, it is described how the design of this research work was developed through two phases, i.e. “exploratory” and “structured”. In the second part are described the methods used to collect the empirical data through field work, highlighting the use of qualitative interview methods as the main technique applied in this study. Finally, in the third part, the entire analysis process of the information is exemplified, resulting the development of the “cyclical coding model”. Beyond that, the weaknesses, challenges and opportunities opened by these procedures are pointed out.

## 5.1 EXPLORATORY AND STRUCTURED PHASES

The gathering and analysing of the field information of this research project was carried out through two phases, i.e. “exploratory” and “structured”, for two years, according to the timeline illustrated in the Figure 8. The exploratory phase of the study occurred between July 2014 and July 2015, when qualitative data was collected and analysed in projects located in Brazil, Denmark and Portugal. The structured phase of the study occurred between July 2015 and July 2016, when four particular case studies were explored in more detail in projects located in Brazil and Portugal.

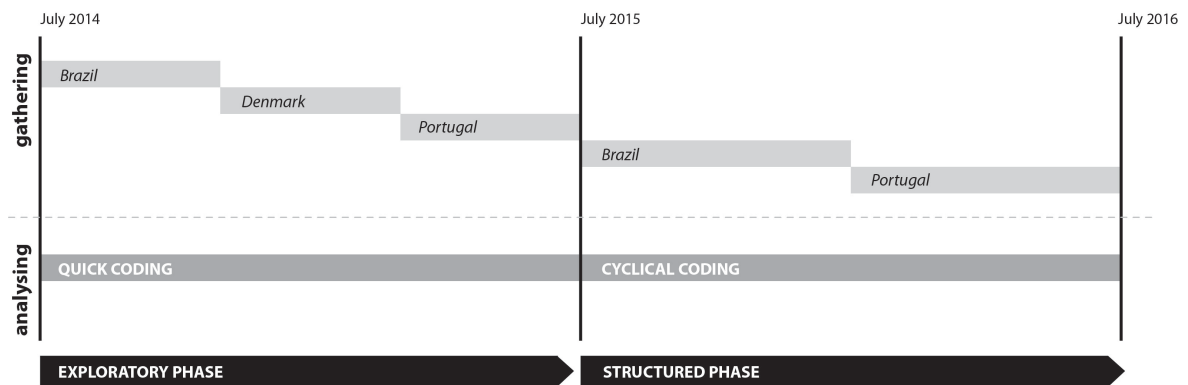


Figure 8: Timeline of the gathering and analysing of this research project.

The Figure 9 presents a visual description on how this research project was conducted in the elaboration of this thesis, according to different moments of immersion in the empirical and theoretical fields, which included the interplay between the “gathering” and “analysing” processes. In the exploratory phase, the initial questions were explored through many moments of immersion in the empirical field, resulting in a set of conceptual categories that characterized different design tactics of building collaboration for sustainability in public spaces. In the structured phase, four case studies were selected for further interpretation, resulting in a set of relevant aspects related to the process of building community collaborations thought design tactics. Finally, these two research phases generated a set of theoretical-practical propositions elaborated to address research questions made in this thesis.



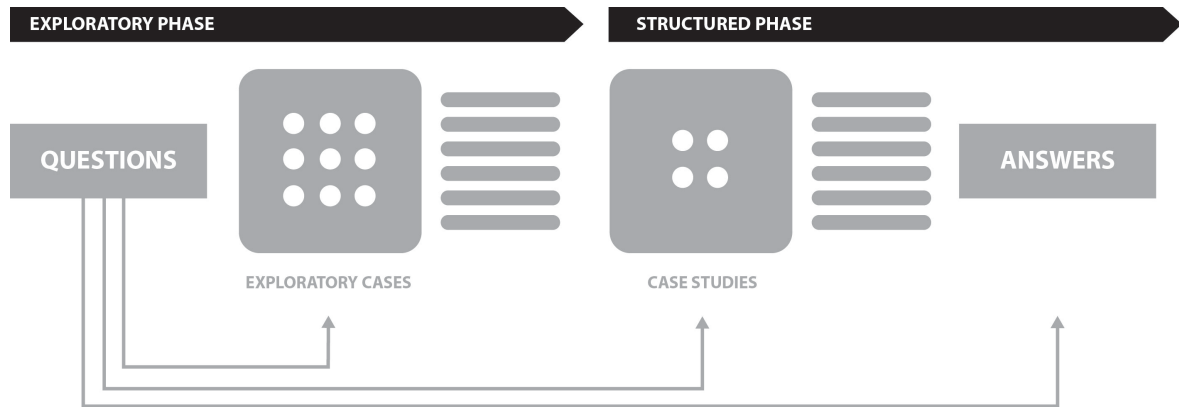


Figure 9: Design of this research project.

Moreover, these two research phases presented two different processes of gathering data (i.e. "unstructured" and "semi-structured" interviews), and two different processes of analysing data (i.e. "quick coding" and "cyclical coding" methods), which are explained in detail in the next two sections.

## 5.2 GATHERING

### Qualitative interviews

Considering that the main focus of this thesis was to find the social relations that produced local collaboration through design tactics, qualitative interviews were applied for data collection. This method is usually used in qualitative social science research, tending to assume that societal actions are best understood in terms of the opinions of individual persons (Have, 2004, p. 85). Thus, the use of the interview method in this research aimed to understand how collaborative practices occurred through the perception of the people who participated in each design project. In that way, the application of this method was essential to achieve a better interaction with the participants, to organize each collective experience, as well as to better understand the complex system of relationships that constituted each community project.

However, the application of the interview method demanded a certain caution in the interaction between the researcher and the interviewees. It was observed that the request for privileged information always demanded a proper management of the expectations for outputs from the both parts, i.e. the interviewee and the interviewer. In this sense, in several moments of the application of the qualitative interviews, the researcher felt the pressure of the participants to contribute with some more practical and immediate design outputs, which sometimes was not possible to address. Thus,

it was detected the importance of informing the interviewees about the research objectives and how it could contribute to improve the dynamics of the studied practices in a long term. This process was very important in order to establish a relation of trust with the interviewees, who were motivated to participate in the research as co-creators and not only as informants.

Indeed, the timing for each interview was not restricted to a single event but instead a combination of several interactions in which relevant information from the interview (e.g. responses, gestures and feelings) was collected. In that sense, this study characterizes the interview event as a “performance”, where the interviewer and the interviewees are participants of an event and incorporate different roles. In that way, during the performances carried out through the application of this research method, two critical challenges were observed. First regarding the quality of the data collected and second regarding the way the interview applications addressed the power relationships between the researcher and the participants.

Regarding the quality of the data collected, the “factist” perspective tends to treat the interviewees' information as facts about the situation and the conditions of the experiences studied, being one of the main concerns of this perspective the veracity of information (Have, 2004). However, the researchers in qualitative research are not in a position to judge the veracity of answers, but only in a position where they are able to evaluate the plausibility of the collected information (Have, 2004, p. 73). Considering this, the objective of this study was to obtain plausible information within the social system in which each interviewee was integrated. In this sense, the interview method was used as a way to understand the interviewees' expression about their own experiences integrated on the facts, rather than as a way to find the “true” about facts.

Regarding the power relation issues, the traditional format of the one-to-one interview is criticized by contemporary scholars because most of the time the application of the interview is based on the asymmetrical task distribution (Have, 2004, p. 84). According to qualitative researchers, this basic format expresses a power relation, in which is the interviewer “who leads, who sets the agenda, and who acts as the ultimate judge of an answer's acceptability” (Have, 2004, p. 74). However, it was observed in this study that the interviewee and the interviewer were in constant negotiation exchanging control of the situation in different moments. For instance, the performance of the interviews opened up for the interviewees a space for reflection that did not exist before. Thus, the interviewees had the opportunity to express themselves, opening up a more critical view of their own actions in the collaborative practices in which they were involved in.

## Format

In this work, two main interview formats were applied by this research project, i.e. the “unstructured” and the “semi-structured”, as are described in more detail in the next two paragraphs.

First, the unstructured interviews (see Annex 2) were applied in the exploratory phase (Figure 9) of the field work with the aim to begin the construction of the research object from different perspectives of building collaboration in public spaces. This method allowed the interviewees to talk about their own perspective using their own references about their participation in the projects. Thus, the unstructured interviews were applied almost in the form of informal conversations, not being pre-adjusted to pre-conceived theories. In this sense, the researcher needed to have flexibility and sensitivity with the meanings evoked by each interviewee in order to adjust the emphasis of the research to any new issues that emerged from the data collection (Edwards & Holland, 2013, p. 30).

Second, the semi-structured interviews (see Annex 2) were applied in the structured phase (Figure 9) of the field work of this research with four specific case studies. The objective at this stage was to develop the hypotheses directly interconnected with the main research questions through a number of specific topics, such as conflict issues in the collaborative process and the conditions in which each case study took place. Thus, it was applied a list of research questions that worked as flexible guides that could be open for new questions and different ways to answer these questions. Here, the interviewer was open to improvisation based on the interviewee's answers, which could raise new issues that could be explored during the interview (Edwards & Holland, 2013, p. 29). Therefore, this format was applied equally in the four case studies, according to the three different profiles of participants involved in each project, i.e. design agents, public sector representatives, and users or residents of the neighbourhoods.

## Application

The qualitative interviews were conducted through “face-to-face” and “e-interview” formats. While the traditional face-to-face interview format allowed non-verbal information to be collected through personal contact, the e-interview allowed the interviewer to contact people in other geographic spaces in a time efficient and financially affordable manner. In the exploratory phase of the field work, 100% of the interviews were carried out through the face-to-face on-site format, and in the structured phase, both interview formats were applied. Each interview was recorded (voice and video) and took around one hour and half. These two interview formats are described in more detail below.

Face-to-face interview format is the most traditional way of collecting data, being considered a technique that presents greater possibilities to collect high quality in the data. However, this model raises a series of privacy issues in the development of trust between the interviewee and interviewer, in addition to the fact that it requires more time and higher costs for its accomplishment (Lavrakas, 2011, p. 259). Therefore, in order to seek trust, the choice of the interview sites was made by the interviewees, being conducted in several places, such as workplaces, public squares or at the interviewee's house. These choices revealed also to be an important and valuable information about the perceptions of respondents.

E-interview interview format is increasingly present in qualitative studies, contributing to a diversification of the possibilities of application and interaction. In this study, the e-interviews were carried out using the software Skype, which is an "internet-based method" of communication (Iacono, Symonds, & Brown, 2016, p. 1). The online interview was used in this study considering the availability of digital resources, and the fact that both the researcher and the interviewees were used to use these tools. The use of the video helped the researcher to make a closer interaction with the interviewees, including a more focused attention on each other, as well as this format allowed the collection of important non-verbal information.

### **Transcription**

The interviews of the exploratory phase were transcribed in a form of "manual maps", i.e. notes of parts considered relevant for the qualitative code analysis, along with a quick interpretation of each interview. Differently, the interviews of the structured phase were full transcribed and then organized into cells in a Microsoft Excel spreadsheet according to the themes of the interview guide. The use of this software facilitated the construction of flexible datasets, including the division of the data structures into numbered cells. Additionally, column filters were applied to address the coding process.

### **Validation**

The validation of the information collected in the field studies was conducted through the review of the data by the informants. This review had the purpose of verifying the validity of the information, as well as of integrating the interviewees as co-creators of the study interpretation (Cho & Trent, 2006, p. 321). Since the interviews were transcribed, organized and interpreted, the material was sent to the corresponding informants through e-mail, when a final confirmation from each interviewee was requested, confirming the interpretation process. Thus, from the 36 interviews conducted, 21 of these were returned, guaranteeing the authorization of the majority of the informants to use the

information anonymously in this research. The return of each informant was registered via e-mail, being also considered as a relevant source of information for the analysis. For instance, these returns revealed additional attitudes, points of view, beliefs or feelings regarding each project analysed.

### **Additional methods**

In addition to the qualitative interviews, other methods of data collection were used in this research, such as the “field notes”, “participant observation” and “online information”.

Field notes can be defined as concrete descriptions of what has been observed during field work (Marshall & Rossman, 2010, p. 98). Generally, interviews and field notes take part of the participant observation method, which is the method that has the ability to connect the researcher to the human experiences, allowing the understanding on how and why human behaviours occur in certain contexts (Guest et al., 2013, p. 75). Therefore, participant observations were applied in this study during the immersion of the researcher in the urban contexts of each case study, through techniques such noting, recording voices and images, and by asking questions mostly in informal mode of conversation. Furthermore, the application of this method required a great ability of the researcher in building trust with the participants, as well as the management of the amount of materials necessary for the analysis (Marshall & Rossman, 2010, p. 99).

Finally, the online information produced by the projects was also used as a source of information in this thesis. This technique consisted in following the flows of publications and news in the official blogs and social networks of the projects analysed during the process of data collection. Since the online tools were very present in the observed social interactions, this technique had the objective of complementing information collected through other methods. Online news produced by the local media was also used as a source of information in order to verify the consequences and possible impacts of each of the analysed projects within each micro urban context.

## **5.3 ANALYSING**

This research used as the main method of analysis the “coding method” in order to better understand what lies behind the meanings of the respondent's words and the other information collected in the field work. The coding method is considered a transitional process between data collection and more extensive data analysis towards an integrated qualitative interpretation (Saldaña, 2009, p. 4). Indeed, the act of coding depends on a particular analytical view, which determines what

it is intended to be analysed, considering the subjectivity, predispositions and misconceptions of the researcher. In this way, the coding method is not a precise science, being primarily an interpretative act (Saldaña, 2009). The application of this method is a process of transition from practice to theory, evolving various stages of refinement of the material, creating new theory in dialogues with the literature review (Saldaña, 2009).

However, the coding procedures performed in this research was not literally followed according to the area of Social Sciences, since these procedures were adapted towards the development of a qualitative research for the production of knowledge in the Design field. In this sense, the traditional coding method helped the researcher to create a particular form of organization and analysis of the empirical information. Hence, the coding process of this research project was performed in two different ways according to each phase of the field work (exploratory and structured), as showed in the Figure 10 below. In the exploratory phase the material was organized through the "quick coding" process, while in the structured phase the collected data was analysed through the "cyclical coding" process. These two methods of analysis are described in the next sections.



Figure 10: Two methods of analysis applied in the two phases of this investigation.

### 5.3.1 QUICK CODING

“Quick coding” is a term created by this research project in order to name a method used to organize the material collected in the exploratory phase of the field work, when unstructured interviews were carried out with at least one participant from each exploratory case. In addition to the application of this method in the exploratory phase, the quick coding was also applied in field notes, online documents, photographs and videos of the structured phase of this research.

Thus, the quick coding method corresponded to a process guided by the intuitions of the researcher in order to systematize the initial ideas that could guide the construction of a flexible scheme of operations of successive analysis (Bardin, 2007, p. 95). The objective of this method was to involve the researcher intuitively with the material collected in the field work, adapting theories and

techniques for dismemberment of the primary collected material (Bardin, 2007, p. 96). In this way, this method consisted basically of circling, highlighting, bolding and colouring rich or significant passages of the material (Saldaña, 2009, p. 16). Moreover, the method was based on the listening of the recorded interviews, by taking notes on key words, handling materials produced by the projects, and by designing visual diagrams and mental maps through collages and post-it's on the wall. Finally, this method also consisted in writing a brief summary of each interview and each project analysed.

The application of the quick coding method provided indicators for the systematization of the ideas, being very useful to understand the possibilities that the empirical field could offer for the development of the research process. Moreover, this process guaranteed more ownership over the study, generating maturity of its primary research questions (Saldaña, 2009, p. 22).

### **5.3.2 CYCLICAL CODING**

“Cyclical coding” is a term created in this research in order to name the successive coding steps of the interview analysis conducted in the structured phase of this thesis, when four case studies were selected to explore the hypotheses that emerged through the application of the quick coding method. The cyclical coding process developed by this research was inspired by the “The Coding Manual for Qualitative Researchers”, authored by Johnny Saldaña (2009), who describes a series of methods applied in analytic of qualitative data. This reference helped the author of this thesis to understand the implementation of the method by creating a particular action plan. However, the coding path described here has been adapted to the way of doing and understanding within the Design field through the tacit use of comprehensive diagrams, which facilitated the intuitive connection between codes, meanings and concepts.

Therefore, as the Figure 11 shows the application of the coding method occurred through a cyclic process that allowed the researcher to move forward and rewind steps when it was necessary, progressively increasing the dialogue between real and abstract dimensions, as well as between particular and general aspects of the design intervention projects. Hence, the cyclical coding aimed to condense the social realities and to construct a comprehensive discourse of their social relations. This process allowed to build new bridges of understanding the studied phenomenon beyond the contextual limits of each empirical reality (Bardin, 2007; Saldaña, 2009).

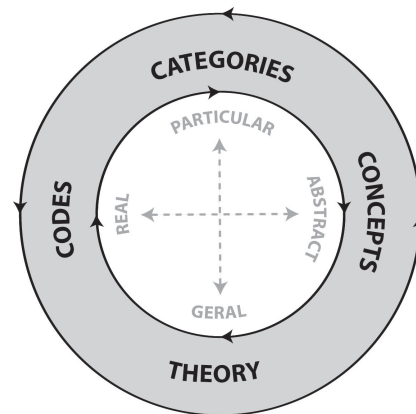


Figure 11: Coding model applied for conducting the qualitative interviews (Adapted from Saldaña, 2009, 12).

Based on this background, the Figure 12 illustrates the cyclical coding model produced in this research project. The model is divided into three major cycles, from which resulted a set of codes, categories and core categories. The three coding cycles are described in more detail in the next paragraphs.

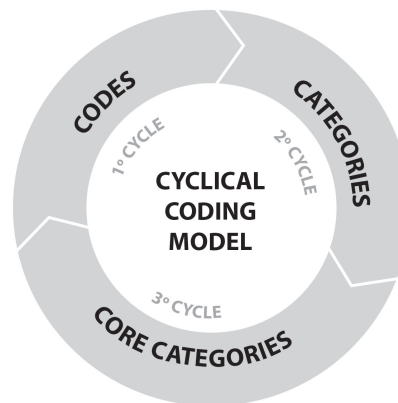


Figure 12: Cyclical coding model carried out by this research project.

- **First cycle** consisted in desegregating the data in a large number of codes, in order to identify the essential elements evoked by the collected material;
- **Second cycle** consisted of successive operations in which the codes were clustered together according to similarity and regularity, allowing the definition of a set of categories;
- **Third cycle** consisted of crossing the categories resulting in a set of core categories or major categories of the study.



### First coding cycle

This cycle consisted fundamentally in dividing the data into initial codes. First, it was done a preliminary treatment of the data resulting in a set of “holistic codes”. Second, it was applied a set of specific coding methods by using the software Microsoft Excel.

In the first moment of this cycle, the interviews was transcribed, printed and manually organized. The data was desegregated into a large number of codes, and then successively aggregated into groups of secondary codes, which were finally organized into the following holistic codes: “team profile”, “intervention profile”, “engagement”, “negotiation” and “empowerment”. The “holistic codes” identified themes in extensive portions of the sample, preparing the material to be coded in detail in the next steps (Saldaña, 2009, p. 118). Here, the interviews were divided into parts in order to allow a better control over the relatively large initial volume of codes. Thus, the holistic codes functioned as indicators of the major issues of this research project related with the process of building local collaboration for commoning in urban spaces. Furthermore, the holistic codes helped the researcher to link the codes, categories and concepts, throughout the all coding process.

In the second moment of this cycle, a set of coding methods was selected to be applied in the organization of the interviews, in order to evoke the complexity of the material meanings (Saldaña, 2009). This operation was performed by using the Microsoft Excel software, in which the interviews were organized and divided into numbered cells, as shown in the Annex 2. Thus, this software was used for the construction of flexible tables which allowed the use of spreadsheet cell selection filters. The following coding methods (Saldaña, 2009, pp. 70-94) were used in the second moment of the codification process developed by this study:

- **In vivo coding:** This method identified words or phrases exactly how were pronounced by the interviewees, being used for the purpose of identifying and collecting key statements related to the participants' voices;
- **Values coding:** This method was adopted to identify the main values, attitudes and beliefs, which represented the worldview of the interviewees, being used with the objective of exploring personal cultural values;
- **Versus coding:** This method was used to identify critical conflicts in the discourses of the participants in binary terms between individuals, groups, social systems, organizations,

phenomenon, processes or concepts. This type of code was also used to identify conflicts between the stakeholders and the existing power dynamics of each project;

- **Add coding:** This method was created by this research in order to identify opposite things that coexist at the same time in the studied social dynamics;
- **Process coding:** This method was applied to identify important individual or collective actions, such as individual tactics, strategies, and routines that make up either large collective actions or more general conceptual actions. This type of code was used to identify actions that took place in response to problems.
- **Descriptive coding:** This method was applied to summarize a passage of the text with a single noun, identifying the relevant topics discussed by the participants in the studied urban initiatives (i.e. what was mostly spoken) and not the meanings of the message (i.e. content). This type of code was used to identify subthemes in relation to the general themes evoked by the field data.

## Second coding cycle

This coding cycle consisted in the reorganization of the codes through a systematic categorization of the data with the objective of developing a coherent synthesis of the information corpus of each case study. Thus, successive grouping operations were performed through the "pattern coding" method (Saldaña, 2009, p. 152), which allowed to identify patterns between the participants of each case study.

In the first moment of this cycle, the codes were filtered and then were transferred from the Microsoft Excel tables to files of large format created through Adobe Illustrator software. The use of the Adobe Illustrator tool allowed the manipulation of the codes in a flexible and dynamic way. The zoom mode of this software allowed to visualize the interaction between the micro and macro dimensions of the large set of codes found in the data. The manipulation of a relatively large number of codes using this software tool resulted in the creation of a table model, where the codes were sequentially organized to form the first sets of categories. In this study, this process was named "table coding" method, which allowed to condense the data and extract the essential information from it.

Figure 13 shows the "table model" (Annex 3) produced in this coding phase, including the following four columns: (1) "Holistic codes", including team profile, intervention profile, engagement, negotiation and empowerment, and other sources; (2) "Initial codes", including groupings of codes

extracted from each interview; (3) “Writing analytic memos”<sup>4</sup>, including a description of the most relevant codes; and (4) “Final categories”, including a characterization of the most relevant codes.

<b>CASE STUDY: case 1, case 2, case 3 or case 4</b>			
<b>INTERVIEWEE PROFILE: agent, public sector or user</b>			
<b>HOLISTIC CODES (1)</b>	<b>INITIAL CODES (2)</b>	<b>ANALYTICAL MEMOS (3)</b>	<b>FINAL CATEGORIES (4)</b>
Team profile			
Intervention profile			
Engagement			
Negotiation			
Empowerment			
Other sources			
<b>TRANSITION CODING MODEL (5)</b>			

Figure 13: Table coding model produced in the Adobe Illustrator software (Annex 3).

The codification process was developed through a successive organization of the codes related with the design process of each interview conducted, i.e. team/intervention profile, engagement, negotiation and empowerment. Thus, the initial codes were organized and classified according the following steps (Figure 13). First (1), the codes resulted from the first cycle were divided according the holistic codes. Second (2), the codes were grouped taking into account the similarities between the codes in relation to the key characteristics of the studied collaboration activities. Third (3), each set of codes allowed the production of an analytical memo writings. Fourth (4), the resulting codes were reorganized into groups, which generated a set of categories. Lastly (5), the set of resulting categories were mapped and classified according to the “transition coding model” (5), which is showed in the figure below.

<sup>4</sup> The "writing analytic memo" technique consists in notes with reflections about the data in order to document each coding choice and the process of analysis towards the production of new theory (Saldaña, 2009, p. 32).

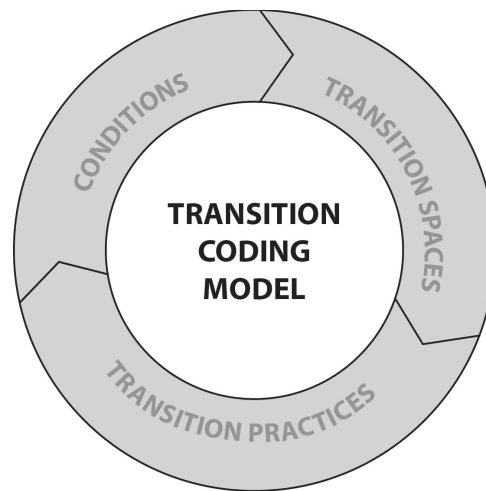


Figure 14: Transition coding model.

The transition coding model emerged from the codification process of this study. The model was inspired by the grounded theory methodology, which assumes that categories have a role of linking more specific information to a more abstract level, seeking the construction of new concepts (Corbin & Strauss, 1990, p. 9). Thus, the organization of the categories in the model had the function to transform the information from an empirical to an analytical form. The model also intended to be cyclic because it allowed the researcher to go and back and forth along the process of codification. The model is based on three parts:

- **"Conditions"**, which identified the categories related with the problems, objectives and motivations that integrated each case study;
- **"Transition space"**, which identified categories associated with the processes of social interaction observed in the projects;
- **"Transition practice"**, which identified the categories that described the consequences of each case study.

Therefore, the transition coding model generated a set of relevant categories, which evoked meanings related to the discourse of each interviewee profile involved in the collaborative projects. Finally, the resulted categories of the profiles were crossed ("cross coding" method) in order to identify inconsistencies and conflicts between different discourses that compounded each practice studied, as

showed the Figure 15 below. This process resulted in the formulation of 35 categories that characterised the specificities of each project in building local collaborations.

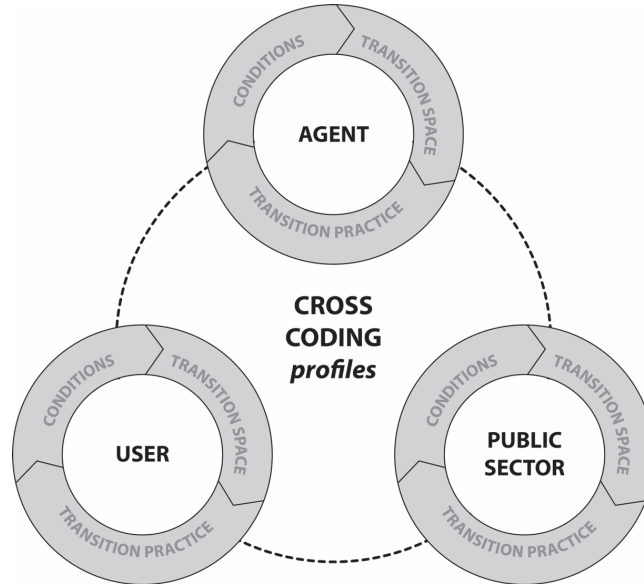


Figure 15: Cross coding method scheme of the three interviewed profiles of the case studies.

### Third coding cycle

The third and final coding cycle consisted in the use of the “cross coding” method applied to produce the final categories of this study related to the process of building collaboration through different configurations of design agency. As the Figure 16 shows, the coding operations among the four case studies categories followed the same logic of the other cycles, i.e. successive aggregation of categories by similarity and regularity, accompanied by writing analytic memos. This cycle required a capacity of abstraction in the manipulation of categories, which gradually acquired a more conceptual character. Thus, this coding cycle resulted in a set of “core categories”, which covered all other codes and categories formulated during previous steps, expressing the key and relevant points of this research (Corbin & Strauss, 1990; Saldaña, 2009, p. 163).

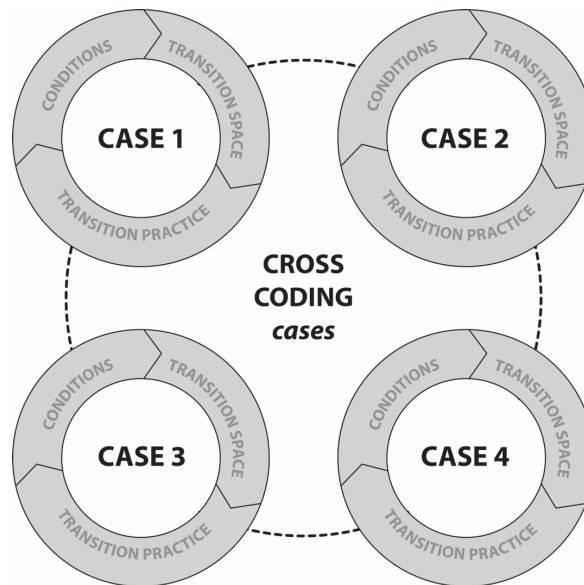


Figure 16: Cross coding method scheme of the case studies.

The set of final categories resulting from the first and second coding cycles was organized according to the “transitional coding model” (Figure 14). The analysis of these final categories suggested the classification of the four projects into two types of design agency orientation, namely “community” and “project”, which will be explained in more detailed in the next part of this thesis. This typology revealed a more conceptual level of understanding the challenges of participatory design in commoning practice context, initiating a process of distancing the researcher’s view from the specificities of each socio-economic context where the case studies were located. In methodological terms, this coding cycle demonstrated a maturation of data manipulation, allowing a constructive dialogue between concepts and data, towards the case study analysis in connection of the design theory.

The core categories resulted also from the application of the "post-it coding" method (Figure 17), which consisted basically on the manual manipulation of the codes throughout the cyclical coding process. The purpose of this method was to identify the key issues that each case study evoked, as well as to find patterns across the four case studies that allowed to make comparisons and establish classifications.



Figure 17: Transfer of codes from digital to manual through post-it coding method.

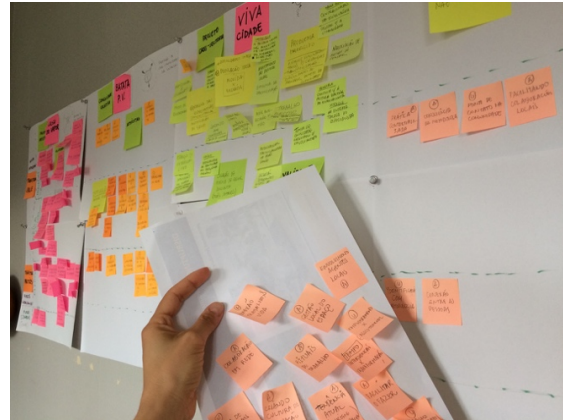


Figure 18: Manual organization of codes on the wall through post-it coding method.

In this way, the information was organized through coloured post-its fixed in large format of posters in a wall (Figure 18). The white posters were divided into four parts, which progressively were used to fix post-it with information on codes, categories, observations and insights related to the analysis of each case study. This method allowed the manipulation of the information in a more flexible way, as well as it helped to have a better management of the large amount of information.

Finally, the set of categories resulting from the two methods, i.e. digital (using the Adobe Illustrator software) and manual (post-it in the wall), were manually grouped through a collage, resulting in an overall map of the final categories of this research analysis (Annex 3). This process allowed the author of this thesis to visualize a set of 10 final core categories that intersected all the analysed case studies and revealed the key points of this investigation. These final core categories highlighted opportunities for the production of new scientific knowledge in the scope of designing commoning, being explained in detail in the Chapter 8 and 9.

## 5.4 CYCLICAL CODING MODEL

Figure 19 illustrates the overall scheme of the methodological approach with an integrated visualization of the codification process carried out in structured phase of this research project, namely the “cyclical coding model”. The model was developed in three main cycles through successive coding operations, in order to allow a better systematization and integrated analysis of the empirical data. In other words, this process resulted in the transformation of the large number of initial codes into core categories, which revealed the central meanings of the studied practices and consequently the definition of the object of inquiry of this thesis.

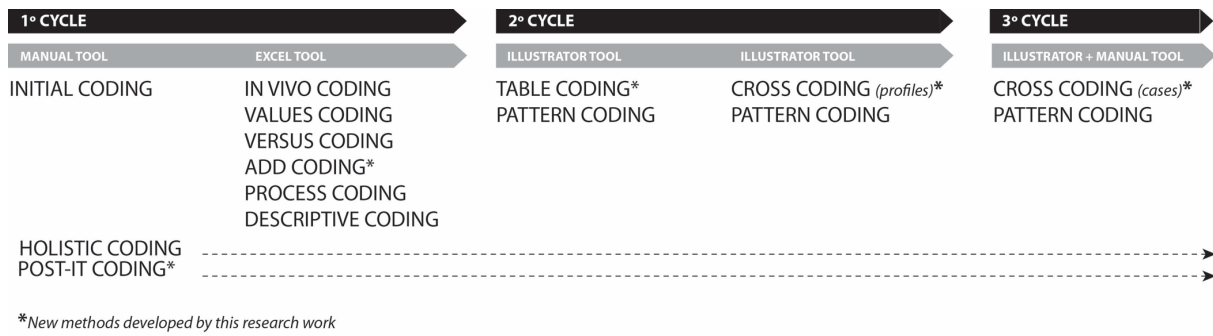


Figure 19: Overview of the Cyclical coding model developed in this thesis.

The translation of the coding process into the textual language resulted in a linear view of the model. However, as already mentioned, the overall model is not linear but cyclical. In that way, the model allowed the manipulation of the information in a relatively flexible and inductive way, being possible to back and forth during each of the analysis cycle. The application of the specific coding methods "holistic" and "post-it" during the three cycles of codification guaranteed the circularity of the model, because they followed the characterization of all coding process. Furthermore, these two methods worked as a bridge between the specific and the general aspects concern the design process of constructing local collaboration.

The "cyclical coding model" presented a diversity of modes of manipulation of the information collected in the field work through the use of both manual and digital tools, including the systematization of the data in diagrams through the extensive use of forms and colours. Despite of being inspired by methodological theories of qualitative studies conducted in the field of Social Sciences, the model allowed the researcher to construct a designerly way of coding, being a process based on successive experiments and attempts of the failures and adjustments. In that way, the model allowed the creation of new methods such as the "add", "table", "cross", and "post-it" coding methods (Figure 19), which were based on the needs that were evoked by the process of analysis.

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Finally, the methodological process presented here aimed at contributing to the production of novel design knowledge towards the development of new methodologies for the further elaboration of qualitative analysis approaches. Moreover, this study suggests a coding model that can be adapted to other qualitative studies within the field of Design Research. Based on this methodological approach, the next part of this thesis presents the description and interpretation of a set of case studies of collective participatory initiatives conducted in urban spaces, followed by an overall analysis and discussion of the results achieved by these initiatives.



## **PART III. CASE STUDIES**

This part of the thesis is divided into three chapters. Chapter 6, "Exploratory case studies", describes the exploratory field research conducted during the first part of this investigation, including a set of holistic categories that revealed five creative design tactics for building collaboration in public spaces. Chapter 7, "Case Studies", presents the analysis of four case studies of collaborative projects in public spaces, according "engagement, negotiation and empowerment" aspects of their design process. Lastly, the Chapter 8, "Discussion", presents the intersection between the analysis results and the theoretical background developed in this research project.

## **Chapter 6. EXPLORATORY CASE STUDIES**

This chapter introduces the exploration of the case studies selected during the field work of this research project, including the key steps taken prior for the selection of the four principal case studies, which were object of a more detailed analysis. The aim of this phase was to develop the research process of this thesis grounded in the creative initiatives related with the topic of design for collaboration in urban spaces. The chapter is divided in three parts. First, it presents the reflections about the context of the research journey conducted, including the development of this thesis. Second, it presents the analysis of a set of exploratory cases conducted in the research project. Third, it discusses ideas and insights suggested by the analysis of the exploratory case studies, establishing a ground for the structured phase of the field work, which is presented in the next chapter.

## 6.1 FIELD WORK EXPLORATION

The research journey of this thesis was compounded by the collection of exploratory field data in micro urban contexts of three different socio-economic contexts and geographical regions in the following countries: Brazil in Latin-America, Denmark and Sweden in Northern Europe and Portugal in Southern Europe (Figure 20). The exploratory work allowed an overall understanding of the phenomenon of collaboration on the domain of urban practices in a more holistic and global perspective, both in a practical sense through the interaction with different agents, and in a conceptual sense by questioning about the production of design knowledge at the international level.

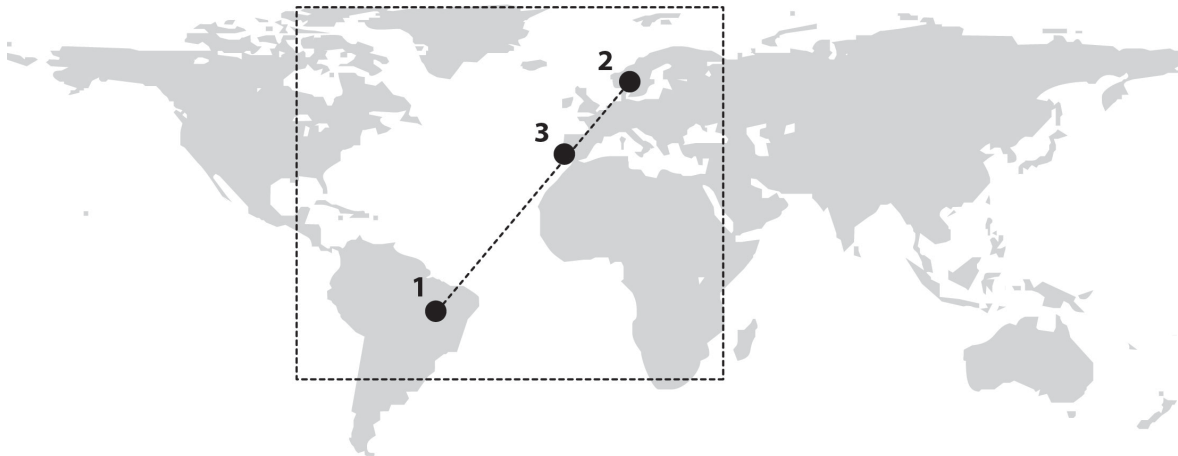


Figure 20: Geographical journey of this research project.

In this research exploration, a significant number of ongoing design projects in Brazil were selected for analysis by identifying a particular way of practicing and researching in design. This research context stimulated the beginning of the exploratory field work by bringing up new questions about the practice of design and its interaction with the various socioeconomic and structural challenges of Brazilian cities. The first objective here was to find spaces of intersection between design and informal social dynamics of participation that characterize the studied context. In that way, this exploration intended to challenge the understanding of design linked to the form and the beauty directed primarily for the consumer market (Bonsiepe, 2011). Based on the industrial design theory, this type of understanding of design practice is dominant in the Brazilian context, contributing to legitimize individualized urban lives faced to consumerism. In this context, most of the creative

design processes seem to turn away from local potentialities that could generate not only economic benefits, but also social and environmental value in order to improve people's ways of living.

This exploratory research journey continued in Denmark and Sweden, where the author of this thesis was involved in scientific community and design forums of discussion having access to key references regarding the involvement of design in relevant participatory processes<sup>5</sup>. In these European Nordic countries, important participatory design practices have been developed and improved since the 1960s and incorporated at both the organizational and institutional level in order to build collaborative working environments through more decentralized decision-making processes. Participatory design was from the beginning a highly political enterprise oriented toward democratizing the design process in order to enable worker participation in decisions about how work was done (Ehn, 1989).

However, this context raised questions about the position of Scandinavian design as a protagonist in proposing the inclusion of "others" coming from other socio-economic contexts (such as excluded and vulnerable populations) in "their designers" programs (Salazar & Borrero, 2017, p. 3). The immersion in such different urban contexts (from "global south" to "global north") raised reflections on the forces that legitimize this way of doing and thinking design. Recent approaches within design research bring substantial criticism to a mainstream design discourse based on the Anglo and Euro centric perspectives, which play a centralized power in the production of design knowledge (Ansari et al., 2016).

According to these critical approaches, this discourse gives little attention to alternative narratives from peripheral axes of the world and is supported by academic and professional institutions that host design practices (Ansari et al., 2016). This invisible barrier hides a variety of "other" aesthetics and design perspectives, which can produce more tailored and flexible solutions to specific contexts. Often, this discourse presents little effort to think about more conscious and critical design processes that face systemic challenges that affect everyone, such as environmental disasters, totalitarian states, mass migrations, and oil-based energy production (Ansari et al., 2016). In this sense, there are still several communication barriers between global "north" and "south" that prevent the establishment

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<sup>5</sup> The researcher have been involved in the research activities through the participation in the Erasmus+ program in the activities conducted at the Research Lab for Collaborative Media, Design and Public Engagement (MEDEA), a transdisciplinary research group at the Malmö University (Sweden). Thus, the researcher had access to relevant references in the field of Participatory Design, such the research work of Pelle Ehn, Erling Björgvinsson, Per-Anders Hillgren, Maria Hellström Reimer, Thomas Binder and Anna Seravalli.

of solutions that lead to more systemic transformations and a production of design knowledge in a more plural and heterogeneous design.

In Brazil, these barriers are strongly perceptible in the way its society is socially structured. The large social gap is sustained by a form of knowledge production that is strongly impregnated by colonial perspectives, which are legitimized by local professionals and academic institutions. In that sense, the Brazilian context presents several alternative forms of knowledge production based on spontaneity and informality that are not absorbed by academic and professional design practices for the development of innovative and transformative local solutions.

Hence, in an attempt to overcome these two dichotomic poles, the exploratory field study moves its attention to Portugal, a Southern European country. First, this doctoral thesis was produced at the University of Aveiro as a strategical place to bridge design studies in the community of Portuguese Speaking Countries (CPLP). Second, Portugal presents important socio-cultural ties with Brazil expressed in common ways of living and doing. Thus, in this investigation, the Portuguese territory is conceptually visualized as a transition zone between the “south” and the “north” of this research journey, which can be viewed at both the entrance and exit of both hegemonic and peripheral production boundaries of design knowledge. On this background, this exploratory research intends to contribute to develop alternative ways of thinking design knowledge through the development of possible scenarios of dialogue between the “north” and the “south”, in the construction of more procedural solutions based on the diversity of understanding design practices and ways of designing contemporary issues.

## 6.2 EXPLORATORY CASES

The exploratory cases originated new qualitative data sources, namely the participatory dynamics that articulated commoning practices through different configurations of design agency. In that sense, the cases articulated the critical, creativity and practical sense in order to both imagine and create the city as common. In the scope of this research, these projects presented insights to design practices for the creation of more horizontal and collaborative participatory systems. It is considered that these micronarratives differed from the hegemonic narratives based on vertical and centralized participatory processes. Additionally, these projects offered alternative participatory narratives based on collaboration, contributing to build more sustainable urban environments by creating changes in people's daily lives.

The information originated from the field studies was collected through unstructured qualitative interviews, which allowed the compilation of a set of information about different expressions of commoning carried out by different urban tactics. The analysis of the information collected in the exploratory field work was carried out by applying the quick coding method resulting in the following five expressions of design agency for commoning in public spaces: poetic, communicative, activist, collective and strategic. These categories have identified different ways of activating collaborative processes in urban spaces, and have been established according to the following indicators:

- “User” (vertical axis of the Figure 21), which can play a strategic role between both the micro- and macro-politics aspects of collective participation;
- “Form” (horizontal axis of the Figure 21), which can result in both immaterial and material forms of participation.

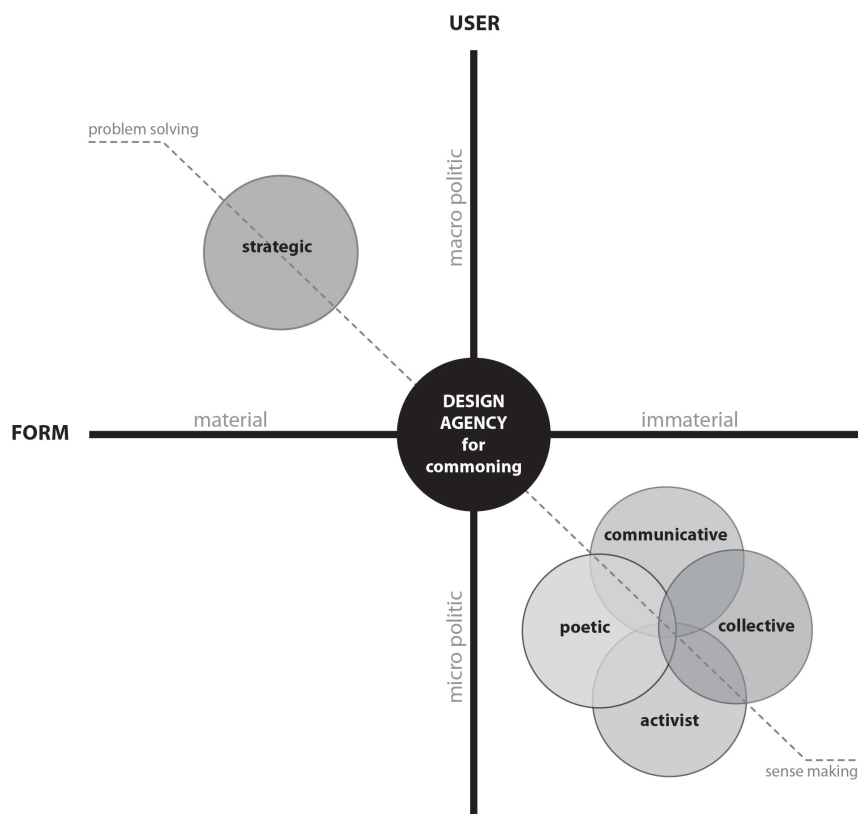


Figure 21: Map of five expressions of design agency for commoning.

Figure 21 map the five aspects of design agency for commoning in public spaces identified in the exploratory phase of this research project. The field of “design agency for commoning” is located in a zone of mediation between macro and micro level of participatory practices, involving users (vertical axis). Moreover, design agency for commoning is located between immaterial and material dimensions that characterize the forms resulted from these practices (horizontal axis). In this way, the vertical axis identifies the “user” (who participate) according to the characterization of participatory practices, which vary between micro and macro politics. The horizontal axis identifies the “form” of what the projects produced, which may be identified between material or immaterial production.

This interpretative map (Figure 21) was created in dialogue with the design agency map (Figure 4) suggested in the Chapter 3, where most of the aspects identified in the exploratory cases were located in the "diffuse design" and "sense making" quadrant, while only the last one (the strategic aspect) was located in the "expert design" and "problem solving" quadrant. The interpretive map intends to allow the visualization of critical links between the different design agency approaches and the basic concepts (i.e. user and form) of design theory, bringing new insights towards the development of emerging design cultures needed for collaborative community.

Hence, this interpretative diagram (Figure 21) does not intend to measure objectively the cited parameters (i.e. user and form), but to provide a better visualization of the linkages between the aspects of urban commoning identified in the exploratory phase of this thesis. The five aspects highlighted in the diagram cross through each other, overlapping transparent planes and identifying relevant aspects in the set of analysed projects. For example, the “poetic” aspect characterized one exploratory case because it presented poetic elements as central in its proposal. However, poetic aspects were also identified in all other practices in a less strong way. Therefore, the exploratory case studies had multiple dimensions organized in this study through the five most evident aspects of design interventions, resulting in a holistic understanding of commoning design tactics in urban spaces.

Figure 22 presented below identifies the cases analysed in both the exploratory and structured phase of this research journey, which gave the foundations for the construction of the object of inquiry of this research. Therefore, the exploratory cases pointed out five expressions of design agency for commoning, which characterize ten exploratory cases (i.e. seven urban design projects developed in Brazil, two cases in Portugal and one case in Denmark). In the last part of this section are presented the discussion of the analysis of the scientific results, which guided the structured phase of the present

research journey. As highlighted (with \*) in the figure below, four exploratory cases conducted in Brazil and Portugal (i.e. two cases in each country) were selected in order to analyse the five key aspects of design interventions in building local collaboration. These last four case studies are described and analysed in detail in the next chapter.

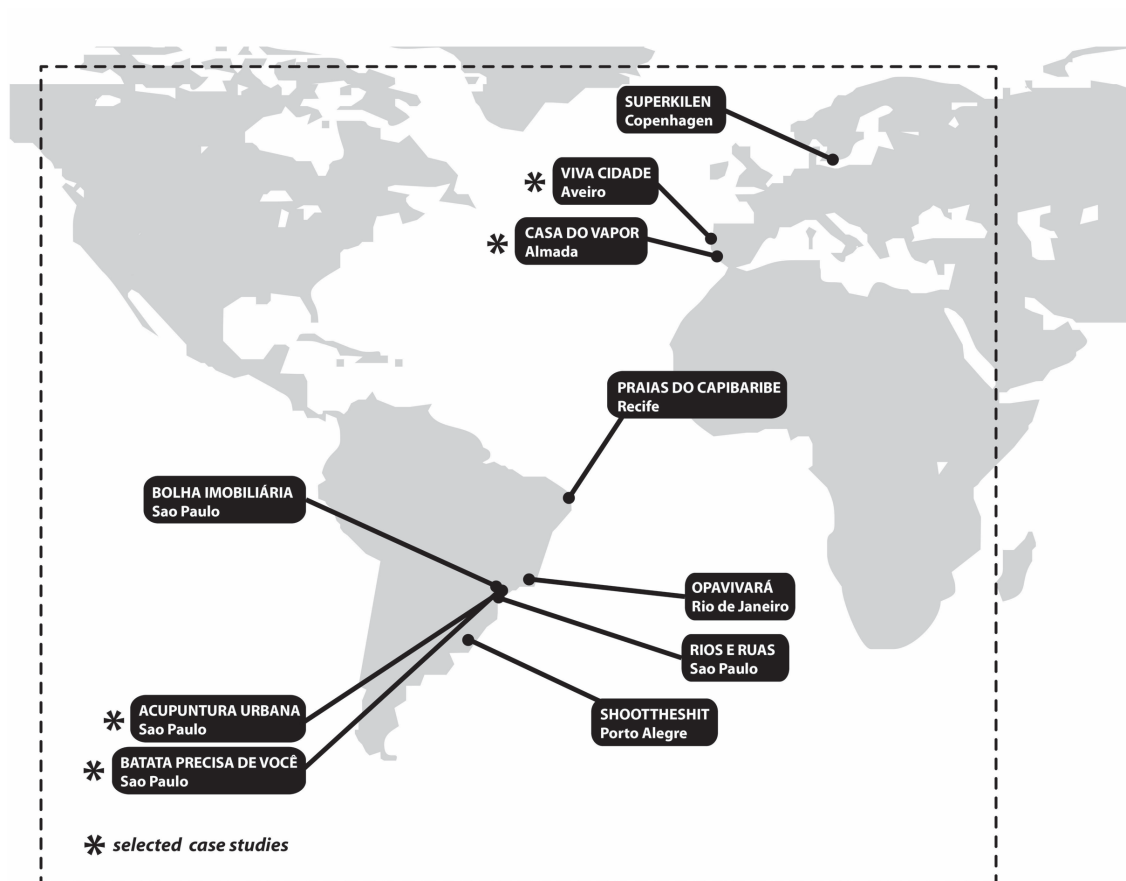


Figure 22: Case studies of this research journey.

### 6.2.1 Poetic

This aspect was identified in propositions within the field of contemporary art, which propose subjective disruptions through collective experiences in public spaces. This approach intended to interfere in the collective and individual subjectivities through activities of being and doing together. The analysed propositions generated intense moments of togetherness, prototyping other ways of living and acting in urbanity. In these moments the participants felt free to offer their technical and creative capacities to the collective, being invited to leave the social patterns that share their bodies



in their daily life. Thus, the artists were catalysts of temporary collective situations, transforming themselves into users, who became creators and also catalysts of the collective processes in public spaces. The propositions were based on appropriation of everyday objects and symbols, which were moved from private life to the public sphere.



Figure 23: Appropriation of private objects installed in public space. Proposition “*Carrocel*”, 2015. (Image by *Opavivará* artistic group).



Figure 24: Appropriation of private objects installed in public space. Proposition “*Paladar público*”, 2015 (Image by *Opavivará* artistic group).

This aspect was identified more strongly in Brazilian artistic collectives that questioned the institutionalized spaces of contemporary art through the use of public spaces for creative experimentations. Their practices raised questions about the authorial artistic productions, proposing new possibilities based on group work, exchange, sharing, collaboration and replication of artistic works by social networks (Campbell, 2015).

The figures above show the intervention of *Opavivará* group (Rio de Janeiro) through the performative appropriation of objects from the private sphere. For instance, office chairs were transformed in a public carousel (Figure 23) and domestic desks (Figure 24) were transformed into a collective clothe that moved through the streets and interacted with the public. In these urban performances, the standard functions of everyday objects were reversed, suggesting thinking about the objects beyond its three-dimensional shape and functionality as a way to create different narratives through each collective experimentation.

Another proposal of this same artistic group consisted in transforming a public square into a collective kitchen during the period of one month. Additionally, a kitchen was made up using household

objects with some adaptations for collective use, such as common drinking and washing fountains. Temporarily, the group placed elements from the private environment out on a public square. While preparing food or organizing the common place in the kitchen, people shared their stories and life experiences (Barbosa & Roda, 2015b).

### 6.2.2 Communicative

This aspect refers to participatory processes that used informal education methods and alternative means of communication, such as collective walks through the streets, game playing, community workshops, urban interventions and the use of new social media. The communicative practices intended to interfere in the public opinion opening spaces of discussion for the production of new views and perceptions on ways to build the common urban environment. In this sense, the aim of these projects was to bring the participants closer to the problems and possible solutions that affect the urban collective life, inviting them to recognize themselves as actors of change in the urban environment.

An example of communicative intervention analysed in the exploratory part of this research was the project *Rios e Ruas*. This is an on-going project has been developed since 2010 in the city of São Paulo. The initiative promotes urban collective immersions mainly thought walking and cycling, aiming to explore the paths of invisible rivers passing through the city (Figure 25). Each proposition happens on average every week and brings together around 25 participants, reaching people from all ages and education profiles. According to the coordinators of the project, the main goal of this initiative is "awakening an emotional understanding between the residents and the river flows in the city which are invisible". The project created collaborative tools for mapping more than 300 "invisible" river flows existing in the city, which are buried and polluted through the accelerated urbanization process of the city (Barbosa & Roda, 2015a).



Figure 25: Discovering "invisible" urban rivers. *Rios e Ruas* proposition, 2014.

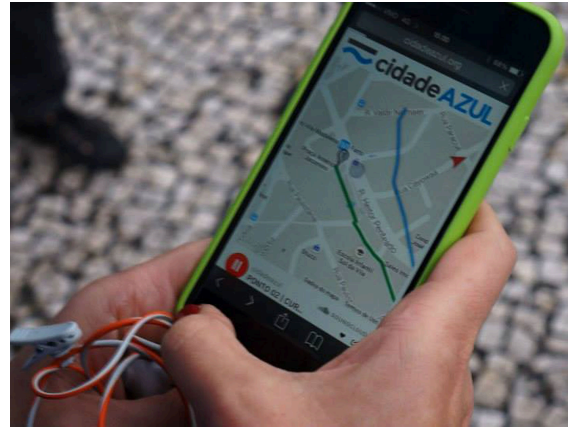


Figure 26: Discovering the urban rivers through the application "*Cidade Azul*". *Rios e Ruas* proposition, 2015 (Image by Cidade Azul project).

In 2015, this project was expanded through technological tools within the Cidade Azul initiative (Figure 26), which was conducted in collaboration with a local consulting company. In this project, it was created a prototype that had three main elements: a virtual platform, an audio guide and artistic interventions on the streets, all used to indicate the trajectories of the “invisible” rivers of São Paulo. In this way, it was observed that the project influenced the public opinion opening new spaces of discussion about the connection between residents and nature in the urban environment (Barbosa & Roda, 2015a).

### 6.2.3 Activist

This aspect was identified in projects that prototyped collective experiences through the installation of objects in areas of social claim. Activist practices invited people to temporarily inhabit collective objects that were installed in public spaces, allowing to share their experiences and inform the social claims in a playful way. The co-creation and co-production of the objects emerged from existing resources and was carried out in collaboration with local organizations. In this way, the activist propositions consisted of a whole process that involved the collaborative production of the objects, the performative common use and the aesthetic interferences in the imaginary of the city (Barbosa & Roda, 2015a).



Figure 27: Critical occupation of the public space through the proposition *Bolha Imobiliara*, 2012 (Image by collective *Muda*).



Figure 28: Playful space co-produced with plastic bags. Proposition *Bolha Imobiliara*, 2012 (Image by collective *Muda*).

The project *Bolha imobiliária* was created in 2013 by the collective *Muda* (Figure 27). The project was developed in a very spontaneous and intuitive way and conducted over two days through an informal workshop. In this project, all infrastructure and initiatives were constructed and performed voluntarily in collaboration with a local association of recyclable collectors and with an informal boxing academy in the periphery of São Paulo city. The object of the images above was made with recyclable plastic bags and had turned into a giant plastic bubble. When installed in public spaces, the ephemeral object became a small and cosy space open to social interactions and creative performances (Figure 28). The object was installed in several spaces in the city, allowing experimentations of new forms of socialization, as well as creating future scenarios for the production of more creative and interactive urban spaces (Barbosa & Roda, 2015b).

#### 6.2.4 Collective

This aspect was identified in propositions that suggest the strengthening of community ties through a collective production of temporary spaces. The projects integrated in this category presented particularities according to different urban contexts, proposing to the creation, strengthening or activation of community configurations. These actions strived to collaborate with private and public organizations by involving a local network of stakeholders composed through formal and informal contacts. Their tactics invited residents to create and to build spaces and objects together through collaborations by using local and recycled resources. These actions resulted in cultural events, gardening activities, collective paintings and on the intensive co-production of spaces and objects (Barbosa et al., 2017).



The project *Praias do Capibaribe* had been taking place from 2010 to 2015 in the city of Recife located in northeast Brazil. The project consisted in weekly performative temporary interventions on the margins of the large urban river that flows across the city that is subject of environmental and social concerns, remaining unusable. The project had two important moments that involved the organization of intensive workshops in order to co-produce a possible scenario that would facilitate futures changes in the city river.



Figure 29: Giant plastic bubble acquired through crowdfunding (Image by *Praias do Capibaribe*).



Figure 30: Floating pool co-produced by project participants (Image by *Praias do Capibaribe*).

As a result of the first stage of this initiative, it was possible for the participants to jump into the polluted river through a giant plastic bubble (Figure 29) which was purchased through collaborative funding. The symbolic object that initially had only a consumption value gained an activist value through a community-building activity. In the second stage, a floating pool was built collectively during another workshop with around 15 participants (Figure 30). Beyond the impact on the local media, the project was later integrated in a top-down urban project, where co-creation methods were used to integrate the residents in the rehabilitation of the urban river (Barbosa & Roda, 2015a).

### 6.2.5 Strategic

This aspect was identified in top-down projects within the field of urbanism, which propose the involvement of users through the incorporation of informal expressions of participation. This category emerged from observations on the “Superkilen” urban planning project that took place in the city of Copenhagen. The project resulted in a permanent public space existing throughout one of the most ethnically diverse and socially challenged neighbourhoods of the Danish capital, i.e.

Nørrebro. The concept of this project had the objective to create an urban public space designed to address social inclusion through the sharing of cultural diversity. In this project, urban tactics of "extreme participation"<sup>6</sup> were used by the Danish group of artists Superflex. Thus, a group of residents from different nationalities were involved in collecting and installing objects from their respective countries of origin in a planned public space. Nowadays, the space is composed by 108 different objects from 50 countries that remain installed in the Superkilen city park, being directly associated with the over 80 countries from which the neighbourhood residents are coming from (Steiner, 2013).



Figure 31: Ring box from Thailand installed in the public square Superkilen, Copenhagen.



Figure 32: Graphite with the political leader Salvador Allende in the public square Superkilen.

The project officially incorporated elements that are used informally to demarcate urban spaces in the city. For instance, a ring box from Thailand (Figure 31), a sound system from a suburban neighbourhood of Jamaica, and a graphite with a Chilean leader (Figure 32) were installed in the public space, winning a formal order through a planned interpretation. The ordering of informal and multicultural elements raised questions regarding the effects of the design practice in the social integration of immigrants. Could the project really succeed in integrating the residents in the Danish society or it just served to create a top-down image of an inclusive city? (Samson & Abasolo, 2013). The challenges of incorporating spontaneous social dynamics into design practice became visible in this project when some parts of the square were spontaneously appropriated by local groups of

<sup>6</sup> Extreme participation was a strategy used to engage residents of the neighbourhood in the building of the Superkilen public park. Superflex artistic group asked local residents to nominate specific urban objects encountered in either their country of national origin or in their travels abroad, including benches, bins, trees, playgrounds, manhole covers and signage. The nominated objects were either produced as a 1:1 scale copy or purchased and transported to the Superkilen. Superflex artistic group travelled with five groups to Palestine, Spain, Thailand, Texas and Jamaica in order to acquire their nominated objects and install them in the park (Fenger, Christiansen, & Nielsen, 2011).

residents through the aesthetic representation of different cultures and ways of living. However, these informal interventions were quickly changed by the local authorities according to the urban planning design project (Samson & Abasolo, 2013). Despite of the innovative efforts to integrate meaningful user narratives into object-space, informal conversations with two residents of the neighbourhood and a representative of the public sector revealed an unbalanced power relation between the funding institution and the residents. According to them the public sector organized participatory sections with the residents in order to choose the better proposal to be implemented in the neighbourhood. However, the final decision was strong influenced by the view of the private institution which funded the project. This revealed a fragile space of participation of the residents in the decision-making processes in this specific urban planning project.

## 6.3 DISCUSSION

The analysis of the exploratory cases resulted in important insights about the meaning of “tactic” and “strategy” concepts in design practices; as well as about the basic concepts of “user” and “form” in design theory. Last, but not the least, the exploratory studies led to the next phase of this research journey through the selection of four specific case studies. Figure 33 summarizes these five expressions identified in a set of different projects. The diverse critical aspects of design agency were organized according to the aim, proposition and effect of design interventions.

DESIGN AGENCY	AIM	PROPOSITION	EFFECT
<b>POETIC</b>	Catalysing common aesthetic experience	Manipulation and intervention of private objects in public spaces	Exchange of experiences, stories and memories
<b>COMMUNICATIVE</b>	Giving visibility to common urban issues	Creative intervention in urban spaces through collective walks	Public visibility to urban problems
<b>ACTIVIST</b>	Catalysing common consciousness	Installation of playful objects in public spaces of social claim	Public visibility to social movements
<b>COLLECTIVE</b>	Channelling common actions	Collective production of spaces and objects in public spaces	Strengthening of community ties
<b>STRATEGIC</b>	User involvement in urban planning	Incorporation of informal and multicultural elements in urban planning project	Representation of multiple users of a neighbourhood

Figure 33: Table with categories of design agency for commoning established in the exploratory phase.

## Design tactics and design strategies

In the dictionary the meaning of the noun “strategy” refers to “the art of planning and directing overall military operations and movements in a war or battle” (“Strategy,” 2017), being a military concept that defines certain ways to eliminate the enemy (Krogh, 2014). In a discussion among PhD students that took place in the DRS2014 Conference (Umeå-Sweden), Krogh (2014) stated that when design is characterized as strategic it seems to legitimize a “design imperialism” because it presents a certain vision of change looking for specific results. This can happen even when design practices present an “activist” character following a certain direction to change a social context. In the essence of a strategic action, when a specific strategy takes place, the action runs the risk of leaving some important issues left out of it by setting blindness on the induction of certain possibilities for change (Krogh, 2014). Thus, instead of strategy, design research and design practices should seek to visualize “opportunities” that the intention of change is understood in parallel with the follow up of on-going changes through design tactics (Krogh, 2014).

In this perspective, in this study, design activities are considered tactics rather than strategies for the development of community projects and common initiatives. Although, the “strategies” used by designers in general are traditionally more related to design methods, “tactics” are also identified in design practices as ways of opening to adjustments, manipulation and appropriation (DiSalvo, 2009). According to Certeau (1984) tactics are related to games that are created from the need and pleasure of practices that make up the everyday life, and in contrast, the strategies hide the dynamics of power structures in order to achieve specific ends.

In this way, the “poetic, communicative, activist and collective” aspects of urban initiatives reveal commoning design tactics when they explore different dimensions and potentialities of social interaction in order to shift a process of creating solutions. It was observed that this set of design tactics proposed situations of social interaction as a way to raise relevant local issues, which were catalysts of collective actions capable of involving the residents as co-creators of solutions and not just as spectators of solutions. Differently, the “strategic” aspect of design agency expresses commoning design tactics aggregated to a top-down design perspective, presenting a more strategic design orientation. For instance, it was observed that the strategic incorporation of commoning tactics in the urban planning project of Superkilen excluded means of making the residents co-creators of the urban space with forms of self-representation within the Danish society. In fact, the intention to promote social integration was used in a strategic way to meet financial interests and to



transform this specific urban area into an attractive place for future investments, opening up a process of urban gentrification.

### **User and form**

Participation in design is traditionally understood as co-creation methodologies, when pre-determined users are involved in optimizing the form of artefacts, services, and systems. From the interaction with the drivers of these set of emerging practices in public spaces, it was possible to understand the notion of participation as a complex process of negotiation between macro and micro dynamics of power. In this scenario, users seem more than users designed by design products. Instead users can be characterized as complex human beings continually built by power relations.

For instance, the characterization of user concept suits more in the strategic category through the top down urban planning project Superkilen, where the residents were invited to fit in a certain form planned by the designers of the project. Thus, instead of co-creators, the users remained as spectators of an integration process already planned by the designers. In contrast, the bottom-up projects that pointed out poetic, communicative, activist, and collective aspects invited the users to co-create social forms through design tactics that facilitated the exchange between different skills, experiences, perceptions, ideals, memories and stories.

Therefore, the concepts of user and form are very present in the design theory and need to be questioned when design practices are intended to develop either collaborative communities or commoning practices. Traditionally, the concept of "form" in design is associated with semiotic signs, such colour and sound. However, Redström (2017, p. 68) argues that the understanding of form is not limited only to the properties of the object. Additionally, the author draws attention to understand how a form meets the user in the form of experience. In this way, he suggests the definition of form as "associated acts of perception", when the form incorporates the object (what is) and the act (what became) together (Redström, 2017, p. 69). This definition asks how design process can think about a form able to incorporate the process of appropriation and transformation carried out by users.

Likewise, the notion of user in design is associated with a universal user that fits perfectly in the form projected by the design. However, the designers cannot impose forms on users because they are part of a complex system of relationships. According to Redström (2017, p. 70), since the user is only understood in terms of "intended use", it is neither possible to include in the design process the significant processes of change during the object's life span, nor to think about use falling outside of

the design intention. The result of this is that most of the design products are never really prepared for any other kind of "appropriation or recycling than more basic forms of material separation or emerge production such as burning" (Redström, 2017, p. 70).

The forms resulted from the bottom-up projects revealed ways of prototyping solutions through processes of making together in public social experimentations. The analysis of the exploratory cases through the expressions of design agency for commoning (poetic, communicative, activist and collective) suggests the development of open, procedural and social forms, which allow processes of appropriation and displacement, opening up to spontaneous performances that can be adjustable to each specific social-material assemblage. In that way, it is possible to think in a kind of form that could mix to other on-going social forms, where skills of designers and users could intersect and create procedural solutions.

Therefore, this discussion locates potential spaces of discussion in this research project asking:

1. How can design deal with the complexity of social relations that constitute the users involved in collaboration for commoning?
2. How can design develop open, procedural and social forms to sustain collaboration for commoning?

### **Case studies selection**

In this sense, the exploratory phase of this study brought the need to focus on specific elements of the design agency in order to explore the complexity of the collaborative process when designing commoning. Thus, a restricted number of projects were selected for detailed analysis, namely those integrating the five expressions of commoning that involve negotiation processes between micro and macro dynamics of power in the participatory process.

This study considers that these different aspects can identify emerging design agencies discussed in the Chapter 3, where designers and non-designers work together. Therefore, four exploratory cases were selected for a more integrated analysis, including two projects conducted in Brazil (*A Batata Precisa de Você* and *Acupuntura Urbana*) and other two developed in Portugal (*Casa do Vapor* and *VivaCidade*). In addition to integrating the five expressions of design agency, these projects were selected because they integrate at least one professional designer and they articulated forms of "making experience" through the co-production of temporary artefacts, spaces and events as means

of developing local collaborations. Other factors such as the access to information and available research resources led to the choice of these four specific case studies.

In that way, these cases offered conceptual possibilities to explore designing commoning through different configurations of design agency, identifying two different dynamics: two initiatives with a more bottom-up approach and two initiatives with a more top-down approach. Although designers took part in the selected projects, the exploration of these cases was concerned with a better understanding of the collective way of doing the collaborations from both design project orientations (Barbosa et al., 2017). Concerning a more bottom-up design approach, this study asks: How to address power dynamics and social changes when communities act in a designerly way? This is an issue of particular importance, especially when looking at projects oriented in a more top-down design approach. In this case, this study asks: What are the implications in terms of certain power dynamics in decision making processes when design practices try to build up communities?

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Taking into account these insights and ideas, the next chapter presents the interpretation of these four specific case studies with the aim to open up new opportunities in which both design agency orientations (bottom-up and top-down) could work together in order to produce and sustain collaboration for commoning practices.

## Chapter 7. STRUCTURED CASE STUDIES

This chapter presents the four case studies selected in the structured phase of this research project with the objective of identifying how collaboration was built by different configurations of emerging design agency, from both a bottom-up and top-down orientation, respectively characterized as “community design agency” and “project design agency”.

The four case studies analysed were located in Brazil and Portugal. The two Brazilian case studies were situated in the city of São Paulo, which is considered the main financial centre of South America with approximately 12 million inhabitants (IBGE, 2010). In recent years, São Paulo have presented a growing discussion about its sustainable urban development, involving a wide range of practitioners, scholars and politicians. In that sense, this megalopolis presents a great cultural dynamism able to emerge spontaneous forms of social innovation (Barbosa & Roda, 2014). The two Portuguese case studies are located in the cities of Almada and Aveiro. Almada is a city in the region of Lisbon, and it has been built and developed around several regional industries (EU, 2014). This city has approximately 95 thousand inhabitants, being an important working class of the region of Lisbon. The other Portuguese city, Aveiro, is a middle-scale town where tourism is a relevant economic activity. Located in the centre of Portugal, Aveiro has approximately 78 thousand inhabitants, having one of the largest universities in the country (EU, 2014).

The next sections present an analysis of each case study according to the two main topics, i.e. "Design tactics", which point out how collaboration was built through the construction of common spaces; and "Design effects", which point out how transition practices for commoning were created through these practices. The first two sections present the Case 1 (*A Batata Precisa de Você*) and the Case 2 (*Casa do Vapor*), which are characterized as “community design agency”. The last two sections present the Case 3 (*Acupuntura Urbana*) and the Case 4 (*VivaCidade*), which are characterized as “project design agency”. Lastly, the final section of this chapter presents the results of the analysis through the following categories of the participatory design process observed in the case studies: engagement, negotiation and empowerment.

## 7.1 CASE STUDY 1:

### A Batata Precisa de Você (São Paulo- Brazil)

The first case study is an on-going initiative that started in 2014 in a central public space of São Paulo named *Largo da Batata*. The initiative is considered by the participants as a “movement” of a group of residents who wish to transform this public space into a “space of coexistence” where social innovations for social change could emerge (1A\_agent+user). The initiative started when around ten residents met through an online event that invited the neighbours to bring home furniture to a collective reading activity improvised in the public square (1B\_agent+user). Thus, slowly and progressively the meetings started to happen in a weekly basis increasing the number of participants. For instance, in each session, it was “discussed specific themes linked to participation in public spaces through activities such as artistic performances, community gardening, furniture construction, and tactical urbanism<sup>7</sup> workshops” (1A\_agent+user).

The public space where the group have operated its activities was a part of the city that was undergoing significant gentrification<sup>8</sup> processes, causing local market withdrawals, displacements of people and strong real estate speculation (Montuori, Sobral, Vicini, Gorecki, & Karpischek, 2015). In response to this top-down approach of building the city, the neighbours initiative was intended to raise public discussions on “other ways to build the city, i.e. from the value of community use rather than only from its market value” (Montuori et al., 2015). In that way, for 18 months the group of residents transformed the public space *Largo do Batata* into an “open laboratory”, where civil society, companies, public sector stakeholders and city residents were invited to discuss and operate the social construction of this space (1A\_agent+user). The report developed by the activist group revealed that during this time, the initiative managed to mobilize more than 13 thousand people with different levels of participation through approximately 300 activities carried out by the participants (Montuori et al., 2015).

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<sup>7</sup> Tactical urbanism is a term used to describe a set of low-cost, temporary changes to the built environment, usually happening in cities, intended to improve local neighbourhoods and city gathering places. Tactical Urbanism is also commonly referred as guerrilla urbanism, pop-up urbanism, city repair, or D.I.Y. urbanism (Reval416, 2014).

<sup>8</sup> Gentrification is a urban phenomenon related to the process of buying and renovating houses and stores in deteriorated urban neighbourhoods by upper or middle-income families or individuals, raising property values. The process usually ends with displacing low-income families and small businesses from city centre (“Gentrification,” 2017).

The *A Batata Precisa de Você* initiative was selected as a case study in this thesis because it can characterize a possible configuration of “designing commoning” from the perspective of a “community design agency”, in which the design practice emerged from the needs identified during the social interaction process between the users of public spaces. The following paragraphs describe the design practice of this case study according to its "Design tactics" and its "Design effects".

### 7.1.1 Design tactics

In this project, the initiative developed collaborative practices based on *gambiarra*<sup>9</sup> making process, in which the participants were motivated by the desire to construct alternative forms of participation from the quick articulation of solutions with the use of local resources (Montuori et al., 2015). Thus, the design tactics used in this case study took efforts to improve the quality of life of the neighbourhood mainly through cultural events, co-production of temporary objects and urban gardening activities. Here, the processes of “engaging, designing and making” things together were blended organically through the material and immaterial production of common goods.

The cultural events organized by the participants were intended to "change the culture of use of space through efforts to make public (i.e. visible) what is already public (i.e. for all)" (1A\_agent+user). Thus, the activities emerged from the lack of people's understanding about what is a public space and how it can be used daily for the common good of the neighbourhood. In order to address this issue, the group acted through regular activities in the public space, such as traditional street games made for children; yoga sessions; seed bomb<sup>10</sup> workshops, crochet and reading sections; as well as karaoke, open cinema (Figure 34), artistic performances (Figure 35) and debates around sustainability issues in urban environments (Montuori, Sobral, Vicini, Gorecki, & Karpischek, 2014). The activities were always organized previously through discussions in social online networks and through an open online calendar, where the participants could post previously the planned activities planned. Despite of having many virtual followers in the online networks, the “collective engagement occurred mainly through face-to-face meetings” (1A\_agent+user).

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<sup>9</sup> *Gambiarra* is a Brazilian term in Portuguese that is associated to the construction of artefacts through forms of improvisation conducted by the subversion of industrialized artefacts (Bouffleur, 2013).

<sup>10</sup> “Seed bomb” is a ball of compost, humus and seeds of different native plants used in guerrilla gardening activities (Friedjof, 2011).



Figure 34: Open cinema exhibition in the public space (Image by *A Batata Precisa de Você*).



Figure 35: Collective artistic performance (Image by *A Batata Precisa de Você*).

The activities of construction of temporary objects emerged from the need “to make the space cosy and comfortable for the weekly community meetings”, since the public space *Largo do Batata* was refurbished by the public sector without furniture and green areas (1B\_agent+user). In this sense, the initiative addressed efforts to solve this problem by creating prototypes of urban furniture with available materials that could be reused, such as wood pallets and advertising posters (1A\_agent+user). The construction of the objects occurred in a collaborative way through open workshops that temporarily transformed the public space into a public laboratory for experimentation. The urban furniture was immediately used to address the needs of city users in the public square (Figure 36). In other words, the objects were built and installed in the space, being used until their deterioration. This strategy gave visibility to the potential of common use of space and tested the usability of objects for future and more permanent installations. The observations carried out in the field work of this case study revealed that the recycled furniture also developed a relationship of affection and care between the participants and the space (Barbosa et al., 2016).



Figure 36: Temporary urban furniture made with reused pallets, 2016.



Figure 37: Urban garden in the public spaces, 2016.

In addition to this, the activities of urban gardening emerged from the demand for green spaces in the public space, reason why “the square was transformed by the participants as an opportunity to develop permaculture methods” in public workshops (1C\_agent+user) (Figure 37). The activities had the objective to raise the ecological awareness and to offer future scenarios for the production of food in public spaces of the city (Marchesi, 2017).

### 7.1.2 Design effects

The information collected of this case study revealed that the practices developed by the community initiative *A Batata Precisa de Você* were able to change the social dynamics of the public place, inducing structural changes that were lately proposed by the public sector. According to the interviews, “the public square became a new territory, passing from a mere walking area to become a place of affection, being transformed in a site of encountering of different urban tribes of São Paulo city” (1C\_agent+user).

Furthermore, the design agency observed in this case study was built through long period in the different project activities (i.e. around 18 months), which allowed the gradual formation of a more organic organization with the development of a higher degree of autonomy of the participants to make things together. It was also observed the development of the collective sense of belonging, including a sense of ownership among the participants through the maintenance activities conducted in the public space. The use of an open and online calendar tool helped the group to get a self-organization, promoting a collective use of the space by a diversity of audiences though small cultural events (Barbosa et al., 2016). It was also noted that the initiative brought a sense of security among



the residents, as one of them mentioned when referring to the public square: "I feel protected there because it seems to be a place that I belong to, a place that people are taking care of, as I am also taking care of it" (1B\_agent+user).

The activist group used some strategies to integrate different publics of users, such as a group of homeless people and small merchants, with whom they established a system of exchanges of services, including cleaning and electricity supply to support the activities (1B\_agent+user and 1C\_agent+user). However, informal conversations with these merchants around the public space denounced social barriers that prevented collaborative processes between different social classes and publics. Despite the fact that most workers were aware of the initiative in the public square and showed respect for initiative members, most of them could not participate in the activities. According to informal conversations with them, they did not know how to participate and collaborate properly. Additionally, they mentioned that they did not have any invitation from the activists or organizing group to participate in the activities (1A\_users).

For instance, one of the participant interviewees reported the failed attempt to approach members of the organization *Movimento dos Trabalhadores Sem Teto (MTST)*<sup>11</sup> that lived next to the public square. The interviewee explained that it was difficult to collaborate with them because of the unrepresentative participation format that the activist initiative presented (1A\_agent+user). In this sense, the format of participation, i.e. using a self-management model based on the spontaneous proactivity of the participants, presented critical limitations and did not reach all the users of the space.

The interview with the representative of the public sector revealed an availability of the local government for collaborations with the activists through an occasional support in their activities (1A\_public sector). One of the results of this collaboration was the co-creation together with the activists a set of permanent public furniture in the public square officially implemented by the municipality. However, this collaboration has shown that there are many challenges in sustaining a participatory management of urban spaces by the residents, allowing the construction of a more decentralized system decision-making process. According to the representative of the public sector, the process of building a "participatory culture requires time to break historic barriers both within the public sector and the civil society" (1A\_public sector). He also reported that the possibility of

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<sup>11</sup> The *Movimento dos Trabalhadores Sem Teto (MTST)* is an organized popular movement created in 1997 in order to claim citizen's rights of appropriate housing in the large cities of Brazil (Regina, 2006).

dialogue with the activist initiative *A Batata Precisa de Você* occurred mainly because of the favourable political scenario in the São Paulo City Hall administration in that period, when some participatory public policies were implemented. Furthermore, it also was observed that the role of mediator of the interviewee as a worker of the municipality was important to allow spaces of negotiation between the public administration and the participants of the initiative.

In this way, the group received a small funding from the municipal program *Redes e Ruas* that "helped the activist group of residents to structure their activities through the purchase of equipment and tools, as well as the publication of the manual *“Como fazer ocupações regulares no espaço público”* (Figure 38) which is accessible through the online common creative platform (1C\_agent+user). This publication proposes the replication of activist tactics by the citizens and provides regulatory information on how to use the public spaces in a proper manner, functioning as a “tool of negotiation between authorities and residents” (1A\_agent+user).



Figure 38: Workshop for building urban furniture with the manual *“Como fazer ocupações regulares no espaço público”* (Image by *A Batata Precisa de Você*).



Figure 39: Urban furniture created by the *Quasares*<sup>12</sup> research design group.

In this way, it is possible to conclude that at some point the activist initiative contributed to distribute power in decision-making processes at a local scale (Barbosa et al., 2016). The urban tactics employed by the community initiative gave visibility to asleep local conflicts and problems, which opened up a channel of negotiation with public and private organizations in the city (Barbosa et al., 2016). For

<sup>12</sup> *Quasares* is a research group composed of young designers, who created the urban furniture *Traçado* in collaboration with the *A Batata Precisa de Você* initiative and the *Instituto de Pesquisa e Inovação em Urbanismo* (IPIU) (1D\_agents).

instance, the painting of a pedestrian path by the participants emerged from the lack of official signalling next to the public space. This urban tactic provoked conflicts with the local government, which later on assumed the responsibility and signalled the path officially. Similarly, the urban furniture installed informally without permission of the authorities attracted partnerships with local organizations that made feasible the co-production of three permanent urban furniture in the public square (Figure 39). The projects allowed testing new forms of production opened up for a process of DIY (do it yourself) and the maintenance measures of the objects carried out by the residents (1D\_agents).

Despite of these facts, the evidences revealed that the self-management and the decentralized participatory format of the bottom-up initiative prevented more effective negotiation processes with the public and private sector in order to achieve more systemic results. In this sense, the participants started to develop a new form of internal organization as an NGO (Non-governmental organization) that could facilitate the process of negotiation with institutions, as well as in order to get support to replicate the participatory tactics in other neighbourhoods of the city (1A\_agent+user).

Moreover, interviews also revealed personal changes in the life of the participants, through the attempt to adapt the collaborative experience to their everyday professional life. For instance, one of the residents reported that the experience in the activist initiative led her to develop an exchange system with local markets, where she was able to exchange services in a collaborative way without involving money in the transaction (1B\_agent+user). Another interviewee reported that this experience completely changed her professional performance, transitioning for a field that works with the promotion of sustainable urban development, as she said: "Today I really do something that I like, which I believe that has a meaningful value for my life" (1C\_agent+user).

## 7.2 CASE STUDY 2:

### Casa do Vapor (Almada- Portugal)

This case study is located in the outskirts of the city of Almada, in a neighbourhood called *Cova do Vapor*, situated in the mouth of the river Tejo, in the district of Lisbon, Portugal. In this neighbourhood lives approximately 183 people, who built their own houses collectively about 60 years ago. Since the community is not considered as a legal settlement by the authorities, the residents suffer the consequences of the lack of public services, such as exclusion, isolation and various social problems (Ferreira, 2014). Each house has its own characteristics, being separated by narrow streets. Since 2011, the peculiar urban aesthetic of *Cova do Vapor* had attracted the attention of academics and practitioners<sup>13</sup>, who have been contributing to open a dialogue with the local authorities about the legalization process of the neighbourhood (Ferreira, 2014).

This thesis analysed the project *Casa do Vapor* that took place in this settlement between April and October of 2013, when a common space was co-created and co-produced with the local residents in order to stimulate the local economy by exploring existing social values such the abilities of community residents for self-sustaining themselves over the years. The idea was initially catalysed by the “ConstructLab”, a French NGO that develops “participative design-build projects through a dynamic network of designers, builders, architects, photographers, graphic designers, gardeners or cooks from different countries” (Römer, 2005).

Thus, the project was taken by a local team of five young people (being one of them a seasonal resident) and by about 100 volunteers from different countries that participated in different moments of the project. The *Casa do Vapor* project started with its own resources, and later it won a € 10,000 grant from the Almada City Hall. Most of the material resources came from donations and the reuse and recycle of available resources. In this way, the construction of the common space resulted in a small public library, a half-pipe for skating, a bicycle workshop, a community kitchen and an open space with different types of playful urban furniture (Römer, 2005).

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<sup>13</sup> In 2011, it was developed in the *Cova do Vapor* neighbourhood the TISA (*Escola Informal de Arquitetura*) project, which co-produced with the local residents a mini mock-up of the community (Ferreira, 2014).

The *Casa do vapor* initiative was selected as a case study by this research project because it can characterize a possible configuration of “designing commoning” from the design agency of a creative community, i.e. from the perspective of a “community design agency”, in which the design practice emerged from the needs identified during the process of interaction between the participants from within and outside of a neighbourhood. The following paragraphs describe the design practice of this case study according to its "Design tactics" and its "Design effects".

### 7.2.1 Design tactics

The construction of the common space of the *Casa do Vapor* project followed an approach in which "design and construction are brought together", i.e. the material result of the project emerged from the "unexpected opportunities captured during the participatory process", rather than from diagnostics made prior to the project (Römer, 2005). Thus, the design process "has been being adapted according to the ideas that have come out" from the immersion of the designers in the community (2B\_agent). Instead of a "finished project" oriented to solve a specific problem, the intention of the core team was to make a project with the "capacity to transform itself" constantly according to the local circumstances (2A\_agent). Therefore, the material “result of the initiative was a temporary common space completely different from the initial idea" (2A\_agent).

This participatory design approach was catalysed by the immersion of a multidisciplinary team in the community for a relatively long period of time, which favoured the construction of a relationship of trust between the external agents and the residents. In this sense, as soon as the construction of the space began by the arrival of more voluntaries, design strategies such questionnaires (Figure 40) as collective mapping (Figure 41) were applied in order to understand the "local needs that could guide the construction of the common space" (2B\_agent).



Figure 40: Wood object for collecting suggestions from the residents (Image by *Casa do Vapor*).



Figure 41: Mapping workshop (Image by *Casa do Vapor*).

Thus, from these activities emerged the material structure of the space, such as the construction of a half-pipe, where workshops were held with children of the community; and a bicycle workshop (Figure 42), which was led by a teenager resident in the neighbourhood (2E\_user). These spaces were made possible through local collaborations with companies and organizations, which donated materials and training sections for the young residents (Ferreira, 2014).



Figure 42: Bicycle workshop (Image by *Casa do Vapor*).



Figure 43: Collective lunch of the participants (Image by Domus magazine).

Additionally, a community kitchen was built with the purpose of making the common space self-sustaining and giving life to the space through collective activities (2C\_agent+user). Thus, one of the voluntaries led a workshop of building an ecological system to filter the water of the kitchen. Here, an old stove was reused, and material was donated to support the activation of the space (2A\_agent).

This kitchen management was run by a resident, who organized daily meals for the participants of the project for a symbolic price (Figure 43). According to the interviewees, the use of the kitchen served as a meeting point where "people could share knowledge more immediately", i.e. in a less conceptual and more empirical way (2C\_agent+user). Two volunteers were able to obtain small funding for the "development of a system of exchange with local retailers to the weekly collection of wasted food"<sup>14</sup> (2A\_agent). The initiative allowed to self-sustain the dynamic of the project, and allowed the development of local activities, such as a competition of homemade pies that mobilized all the community (2C\_agent+user).

Beyond that, a community library was built based on the difficulty of the youth in accessing to official cultural facilities. The space was built through partnerships with local organizations and donations of books by individuals (2D\_agent). This project allowed to start partnerships with institutions linked to the public administration, such as the *Rede Municipal de Bibliotecas de Almada* (RMBA) (2A\_public sector). In this subproject, a resident of the neighbourhood was integrated throughout the construction and management process of the space (2D\_agent).

Moreover, the *Casa do vapor* project had also created a system of artistic residencies that attracted the active participation of several volunteers, who enabled small collaborative and creative projects<sup>15</sup> in the neighbourhood (2D\_agent) (Figure 45). For instance, the development of drawing workshops and the co-creation of symbols that could represent the identity of the community space (Figure 44), as well as film sessions, collecting old photographs of the neighbourhood, among other activities such as building a musical instrument with recyclable materials with project voluntaries (2C\_agent+user).

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<sup>14</sup> The small funding was obtained through an application to a call launched in the *Trienal de Arquitetura de Lisboa 2013* event (EXYZT, 2013).

<sup>15</sup> The Portuguese artistic collective "Urban Sketchers" developed activities of observation drawings; the French art collective "Les Commissaires Anonymes" co-created a set of flags through the collection of symbols in the neighbourhood; and the French art collective "Exyzt" developed the painting of the house revealing aspects of the local fishing culture (2D\_agent).





Figure 44: Flags with community symbols co-created by the “Les Commissaires Anonymes” group and residents (Image by *Casa do Vapor*).



Figure 45: Common space built collaboratively by the voluntaries of the project (Image by *Casa do Vapor*).

The tactics employed to involve the residents in the project took place in a variety of ways, such as community meetings, co-production of a community journal, collective mapping activities, children's games and informal conversations (2D\_agent and 2B\_agent). The construction of the space was mainly led by designers with technical carpentry skills, attracting the spontaneous involvement of youths of the neighbourhood during the process. According to the information collected in the interviews, initially, it was challenging to communicate the project proposal to the community, because of the open characteristic of the design process, which intended to be created during the participatory process with the residents (2A\_agent). However, according to the interviewees, these communication barriers were gradually being diluted through action, i.e. when the results slowly became more visible, opening up to the spontaneous interference of some residents, such as the installation of a swing for the children or the installation of the electrical infrastructure in the common space by some residents (2C\_agent+user and 2A\_agent).

Furthermore, the difficulty of getting funding for the project led to the development of alternative ways of getting resources, such as reusing and recycling practices. Nevertheless, this challenges also facilitated the process of gaining more support of the residents for the project, activating the exchange of practical skills between the designers and the residents (2C\_agent+user). According to one of the volunteers of the initiative "the fact of the project does not have resources made the designers understand the place in a better way" (2A\_agent). For instance, when all the material in the community kitchen was stolen, a group of residents was mobilized autonomously to collect new food supplies. This evidence revealed a more consolidated engagement process of the community with the project (2A\_agent, 2B\_agent and 2C\_agent+user). Thus, the lack of resources and the



significant motivation of the team gave space for the construction of a relationship of trust between the participants.

However, one designer interviewee revealed that "it was very difficult to actively call people to participate in the community, which caused moments of frustration of the core team" (2C\_agent+user). This issue pointed out problems of communication between the external participants and the residents. According to another agent, the "horizontal format of participation applied in the project was not able to integrate people, who were culturally used to deal with more hierarchical structures of participation" (2B\_agent). This difficulty was revealed both by the residents and some of the volunteers interviewed. One of them assumed the difficulty to engage in the participatory activities, characterizing the methodology as "chaotic and confused" (2F\_agent).

### 7.2.2 Design effects

The effects of the *Casa do vapor* design initiative were identified both inside and outside of the community. At the beginning of the project it was identified a lack of communication between the young and old generations in the community. Thus, the project was oriented for the youths of the neighbourhood (2C\_agent+user). According to one of the local residents, after the project was concluded, the young people approached the elderly people, improving their learning skills (2A\_user). Some of the teenagers of the community were greatly influenced by the project, helping them to improve their self-esteem and orientation in their life projects (2A\_user). For instance, after to participate in the project, a young woman dedicated herself to autonomously developing activities for children in the community (2C\_agent+user).

In this sense, after the conclusion of the project, the residents expressed their desire to continue running the project in some way in the neighbourhood. Thus, it was decided through a community meeting to continue with the local library project, by transferring the materials to a small space provided by the local association. The permanent library (Figure 46) was inaugurated in April 2014 through an agreement between the core team of the Casa do Vapor project<sup>16</sup>, a group of residents and organizations linked to the local government. Thus, through this new project the municipality allowed an open access to the official collection of the public libraries of the region of Almada. Up to the end of the field work, about 90 users participated

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<sup>16</sup> The core team of the *Casa do Vapor* participatory project created an organization named *Associação Ensaios e Diálogos* in order to continue the development of future participatory projects.

in the activities of the project, including initiatives such as storytelling, ludic performances, cultural events, and reading and writing activities (2A\_user and 2D\_agent).



Figure 46: Community library in *Cova do Vapor* neighbourhood, Almada, 2016.



Figure 47: One of the wood objects co-produced during the project *Casa do Vapor*, 2016.

After the inauguration of the community library efforts were made to transfer the responsibilities of the space for a group of local residents (2D\_agent). This process was carried out with the help of some external agents of the *Casa do vapor* project, who led training sections with a group of residents. However, the interviews revealed that this process faced many challenges, such as the decrease of legitimacy of the project among the elderly residents and the concentration of responsibilities in only two volunteer residents, who showed a lack of availability to continue negotiating with the public sector (2C\_agent+user, 2D\_agent and 2D\_user).

Additionally, it was observed that one of the causes of these difficulties was the breaking of trust between the external agents and the residents from the local association, who had "power of influence within the neighbourhood" (2D\_user). The interviewee member of that association expressed discontent regarding the opening of dialogue with the public sector achieved by the *Casa do Vapor* project, since the local association had always many prior difficulties to achieve this goal over the years. Furthermore, the interviewee complained that the process of applying and managing the financial public support obtained of *Casa do Vapor* project was carried out without the participation of the local association (2B\_user). Despite of this, they "continued to support the project at the political level and this relationship of distrust gradually changed" through small results achieved by the implementation of the local community library, including an increased engagement of community children in library activities (2D\_agent and 2C\_user).

Moreover, the collected material also revealed changes in the community image both internally and externally. The residents showed more "trust with people that came from outside" of the neighbourhood (2D\_agent), increasing their self-esteem against a sense of exclusion that was built for years back in the past due to its illegal status (2C\_user and 2B\_user). Externally, the community gained greater visibility because the project was registered by several national and international medias. Indeed, after the project finished, the neighbourhood was frequented by many tourists, which encouraged some local business opportunities, such as the opening of a hostel by a resident who participated in the project.

Furthermore, it was observed the approach of the local government and its attention regarding the safety of the residents against possible interventions in the private area where the neighbourhood was placed (2A\_public sector). According to the interview with the representative of the public sector, the permanence of the community library worked as a channel of dialogue between the public sector and the local residents. The project opened up new opportunities for the municipality to "support initiatives proposed by the local association" (2A\_public sector). Although, it wasn't identified in the field work of the research project any concrete effort to change the legal situation of the community (2C\_user).

Beyond that, it was identified that the project revealed effects that expanded beyond the neighbourhood, through two projects carried out by voluntaries of *Casa do Vapor* project. The wood material used to build the common space was reused for the construction of a temporary community kitchen in another illegal settlement in the same peri-urban region<sup>17</sup>. The new project had the intention "to activate the process of community organization and negotiate with the public sector new conditions of access to public services" (2G\_agent). The methodology applied in this new project was similar to the one applied in the *Casa do Vapor* project, such the application of participatory methods organized by external voluntaries, including the reuse of local materials (2G\_agent). It was observed that the project gave visibility to existing conflicts within the community, as well as it gave public visibility to its precarious social situation, which later on provoked interventions of the public sector in the area (2B\_agent).

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<sup>17</sup> For fifty years about 500 people lived in the illegal community of *Terras da Costa* without access to basic services such as electricity and water. The project *Cozinha Comunitária* was led by the Portuguese collective of architects called "Warehouse". The project lasted about a year, from November 2013 to September 2014, being possible through volunteer work; logistical support of the municipality of Almada and of the local associations of residents; collaborations with local companies; donations of individuals; and mainly financing from Calouste Gulbenkian Foundation (2G\_agent).

Moreover, a group of voluntaries of the *Casa do Vapor* project was invited by the City Hall of Almada to implement an official community library in another location of the same peri-urban region<sup>18</sup>. According to a resident of Cova do Vapor neighbourhood, who was directly involved in the head of this new project, “the construction of the new library followed some of the methods applied by *Casa do vapor* project, but in a more systematic manner, since the design team had to follow a calendar established with the public sector” (2F\_user and 2E\_agent). The design of the objects of the new space was permeable to the local needs identified during the participatory process (2F\_agent and 2E\_agent). Moreover, the construction process was carried out through open and creative workshops in the public square, as a way to engage with the residents. According to the interviewees, the format of open participation is not always able to integrate people widely, in addition to the high cost of material and immaterial resources (2F\_agent). Therefore, the creative process was adapted to the local conditions of the new project, which was characterized by measures taken by the public institutional administration and not through a bottom-up decision-making approach.

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<sup>18</sup> The new community project was carried out in the Trafaria neighbourhood, being officially called by *Espaço Cultural da Junta da União das Freguesias de Caparica e Trafaria*. The project was funded by the City Hall of Almada (Camara de Almada, 2016).

## 7.3 CASE STUDY 3:

### Acupuntura Urbana (São Paulo- Brazil)

*Acupuntura Urbana* is a small social enterprise funded in 2013 that works with the design of products and services with the aim to establish connection among different citizens through participatory processes (Strengerowski, Sender, & Fernandes, 2016). The company's concept is based in an analogy with a millennial Chinese therapy named “acupuncture”, recognizing the city as an organic body that can be stimulated to generate systemic transformations (Guerreiro, 2015). Therefore, in the *Acupuntura Urbana* projects, the designers are mediators in the production of common spaces within the megalopolis of São Paulo, with the purpose of connecting people, strengthening relations, generating coexistence and a common sense of ownership of the city. In this way, the design team promotes community dynamics through interventions in public spaces, facilitating collaboration among the residents, public and private sectors (Strengerowski et al., 2016).

The participatory methodology of the *Acupuntura Urbana* design group was developed using creative ways of finding local solutions for city problems together with several urban communities in São Paulo. In this sense, the set of information collected for this research project was restricted to the analysis of the *Acupuntura Urbana* methodology from April to June of 2015, applied in a residential neighbourhood located in the outskirts of São Paulo, called Perus. In that period, the design practice of *Acupuntura Urbana* was applied within the program *Redes e Ruas*<sup>19</sup> promoted by the City Hall of São Paulo. Complementarily, more information about the participatory methodology applied by the *Acupuntura Urbana* group was collected through participant observation during the *Viva a Praça*<sup>20</sup> project in a central and residential neighbourhood of the city, called *Vila Madalena*.

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<sup>19</sup> The *Redes e Ruas* is a program funded by the municipality of São Paulo, which aimed to promote social innovation through cultural activities in public squares organized by urban activist groups of São Paulo (Sampa.org, 2016). Within this program, the methodology of the *Acupuntura Urbana* was applied in two public squares of São Paulo, i.e. *Conde Francisco Matarazzo* in the *Água Branca* neighbourhood, and *Praça do Samba* in the Perus neighbourhood. In that public spaces the *Acupuntura Urbana* worked in collaboration with two urban activist groups, namely *Movimento Boa Praça* (site) and *Coletivo Atados*, within of the *Se liga na Praça* project (Sampa.org, 2016).

<sup>20</sup> Information about the participatory methodology of the *Acupuntura Urbana* group was collected during the application of the *Oasis* game at *Vila Madalena* neighbourhood (São Paulo), conducted by the NGO *Elos*. According to one of the designers interviewed, the methodology of *Acupuntura Urbana* was born from the *Oasis* game (Instituto Elos, 2016) (3A\_agent).

The *Acupuntura Urbana* initiative was chosen as a case study in this thesis because it can characterize a possible configuration of “designing commoning” from a project design orientation, i.e. from the perspective of a “project design agency”, when participatory design methods were applied by a design team. The following paragraphs describe the design practice of this case study according to its "Design tactics" and its "Design effects".

### 7.3.1 Design tactics

In this research, the design process of the *Acupuntura Urbana* was divided into three stages, namely: “engaging, designing and making”. The first stage of the project was the process of engaging the participants through the co-production of an affective map (around six weeks). The second stage of the project was the process of designing a proposal through cultural activities and workshops in the public square *Praça do Samba* (around four week). Lastly, the third stage consisted in the process of building the temporary space through extensive local collaborations (around one week).



Figure 48: Affective mapping of the neighbourhood. (Image by *Acupuntura Urbana* group).



Figure 49: Designing a thematic map of available resources in the neighbourhood, *Oasis* game, 2016.

In the first stage of the project, the engaging process consisted in activities of building a affective map of the capabilities and resources available in the neighbourhood. The goal of this activity was to activate the mindfulness of the participants on the potentialities of the neighbourhood, producing a collective appreciation of the local urban environment (Figure 48). Thus, the collective construction of the affective map intended to reveal simple things that are not appreciated by the residents in their daily routines, such as capacities and talents of the

neighbours, local services, cultural equipment, material and immaterial heritage, green spaces or abandoned spaces that could be transformed, etc (3A\_agent).

In this sense, in order to collect this information, the design team suggested several activities with simple challenges, such as discovering smells, sounds, people, slangs, irregularities, shade, heat or stories (Cidades Educadoras, 2016). The affective map was built collectively with panels, tacks, brushes, sticks, post-its, and then the material collected was organized and categorized by the participants in order to facilitate the discussion about critical community's challenges (3A\_agent) (Figure 49). Moreover, the activities of collective research in the neighbourhood led to meetings with community "leaders", who were considered as among the most charismatic neighbours, becoming this a key aspect for the mobilization of residents during the project implementation (Cidades Educadoras, 2016).

According to the interviews with designers who worked in the project, one of the greatest challenges in approaching the community was a great disbelief of people regarding the collective work and the possibilities of changing the current state of things collectively (3B\_agent e 3A\_agent). According to the interviewees, usually "this process is much more effective when people is invited to achieve their dreams rather than to solve common problems" (3A\_agent), i.e. when the participatory project approach starts with community problems "there is a tendency to transfer the responsibilities to the public sector", discouraging the citizens to do something for the common. In that sense, the activities carried out by the designers strived to encourage residents to see the resources already available in the neighbourhood and how this material could be used to boost their dreams for common good in the neighbourhood.

In the second stage of the project, the designing process took place through a series of self-organized small cultural events in the public square, in which small results of the participatory process were being presented. Moreover, this moment had the function of "valuing the esteem and memory of the place, approaching people and starting the formation of a collective force to achieve a common goal" (3A\_agent). Thus, activities such as public shows with local artists, picnics, open markets, exhibitions of local products, workshops and creative games were carried out in the public square.





Figure 50: Co-production of the model of the common space (*Oasis game*, 2016).



Figure 51: Co-production of the model of the common space (*Oasis game*, 2016).

These activities culminated in a moment of co-creation of the model of the project that would be collectively implemented in the public space of the neighbourhood. Thus, the participants were divided into groups in order to discuss the problems and solutions for the common space (Figure 50). Each group materialized their ideas through urban planning models, and then all the models were put together to mediate the common decisions (Figure 51). It was observed that the mediation of the designers was fundamental at this moment, articulating spaces of consensus between different opinions and proposals that emerged from the discussions. It was also observed that following the estimated time for conducting each co-creation step was important to keep people motivated and ensure a more continuous participatory process. Moreover, each stage of the co-creation process was guided by the designers in a way that each participant could have a voice in the process, including elderly and children. Finally, the construction of the model worked as a tool to facilitate the communication and negotiation of the residents' ideas.

The final stage of the project consisted in developing the common design process through a structural transformation (i.e. around one week) of the public space, involving the collection of resources, a "mutirão" and a final cultural event to inaugurate the common space (Figure 52). In the collection of available resources, the participants were divided into groups in order to co-create strategies to be able to make the project visible and to obtain partnerships and donations for its materialization. This process had the objective of activating a local network and add more collaborators to the project. Later, the collective project was carried out through a "mutirão", when the local government was invited by the participants to collaborate with technical support through the resolution of specific structural problems, such the maintenance of sidewalks and street lighting (3B\_agent).



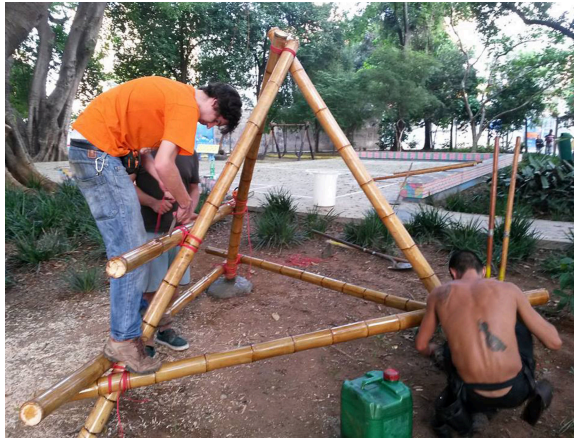


Figure 52: Workshop of construction of urban furniture with reused material (Image by *Acupuntura Urbana* group).



Figure 53: Urban tactic of a crosswalk painting performed by the community (Image by Daniela Giorno).

In this way, the “mutirão” had the objective of bringing to the field the ideas articulated during the previous stages of the participatory project, being this collective initiative the “most active moment of participation and interaction among the stakeholders” (3B\_agent). According to the design team this process is less effective when there are many previous community meetings, and it is more effective when there are smaller concrete actions during the process (Guerreiro, 2015). It was observed that the “mutirão” moment provoked a dilution of social barriers that constituted the power dynamics of the daily life of the neighbourhood (Figure 53). According to the designer interview, in the process of doing and learning together “there was an approximation between the residents with different profiles, presenting themselves as collaborators, regardless of what they do or represent in the daily life of the neighbourhood” (3A\_agent).

Therefore, it was observed that, since the participants realized the practical results of the participatory project, they gained legitimacy and more support from the community (3A\_agent). Moreover, the designers realized that the “aesthetic and technical quality” of the artefacts produced were also very important in the process of legitimizing and activating participation. In this sense, the project integrated collaborations with specialists, who hold workshops with the participants, “ensuring the safety and beauty of the objects” (3A\_agent). In approximately two months, after the conclusion of the calendar of the project, the designers returned to the community in order to obtain the outputs of the participants and once more to facilitate the sustainability of the collaborations build during the project. This return to the community was done through one community meeting, where the designers mediated the articulation in the use and maintenance of the common space. According to one of the designers, it was observed that this moment continued promoting ruptures of the existing

social barriers in the neighbourhood and it opened up the space for future local collaborations among the stakeholders (3B\_agent).

### 7.3.2 Design effects

The evidences collected from the *Acupuntura Urbana* case study revealed that the application of participatory methods generated changes in the dynamics of the neighbourhood of a peri-urban area in the metropolitan area of São Paulo. One of the outputs of the project was a prototype of an online platform that was tested to mediate material and human resource exchanges in future collaborative projects carried out by the participants. However, the evidences have shown that the most important outputs were the process of social interaction among the residents, which strongly contributed to promote the collective action of making the space together. According to one of the designers interviewed "one of the main challenges was to engage people in the methodology in a way that they could replicate the collaborative process after the designers leave" (3A\_agent). Thus, the effectiveness of this process was confirmed in its ability to plant seeds for the continuation of collaborative processes within the community, opening up the way for future social innovations carried out by the residents.

One of the strategies used by the project to achieve the sustainability of the collaboration process was to work together with initiatives that are already taking place in the neighbourhood. According to the designer interviewee "it was important to work with people that were already engaged in the community building processes" (3A\_agent). In this sense, the design team positioned itself as a force to be added to the process of local change and not as a problem solver. Therefore, one of the interviewed residents mentioned that the project allowed the meeting of several local initiatives, providing the exchange of skills throughout a cooperative experience (3B\_user).

This exchange contributed to improve the occupation and use of the public square, a process that led to a better care of the place by the local residents, especially by those involved in the project (3A\_user). The local government had a very active participation by providing infrastructural support to the project, as well as through the active involvement of a group of employees in the maintenance of the common space (3A\_public sector). According to the interview with one of the residents living around the public square *Praça do Samba*, the project promoted the exchange of social innovation experiences during the process of building things together, allowing the development of creative

capacities among the participants (3A\_user). For instance, the project helped one of the residents to develop a local business for the female audience (3A\_user).

Furthermore, it was also observed that “the project was able to bring together agents from different political positions who had conflicts of interest in the decision-making process within the neighbourhood” (3B\_user). According to one of the resident interviewees, this space of consensus, built temporally by the project, was possible due to the agile format of the project that presented well defined tasks integrated in an organized calendar. “The methodology applied in a quick way engaged the people efficiently”, as reported by the interviewee (3B\_user). The project has increased also the self-esteem of the residents by creating new social values from the local context of the peripheral neighbourhood of São Paulo, such as the “local skills of living in a resilient way to solve common problems” (3B\_user).

However, according to one of the city residents, the project “did not reveal the sustainability of the collaborative experience in the neighbourhood, as well as the actual empowerment and activation of community building” (3A\_user). In the opinion of this interviewee, the project did not integrate the most urgent local needs, “focusing only on the reconstruction of the public space in a harmonic way” (3A\_user). In this sense, another resident mentioned that “the changing process needs more time than the project provided, since the activation of the participation needs capacity building in a daily basis” (3B\_user). “I think people do not participate because they do not want to, but because they do not have repertoire, i.e. they do not have a cultural experience of participation”, mentioned the interviewed resident (3B\_user). Despite of this, around one year after the implementation of the project, it was verified that the local government made an intervention in the public square without the participation of the residents, which provoked the mobilization of the residents to participate in the public institution’s decisions (3A\_public sector and 3B\_user).

Another issue highlighted by one of the residents interviewed was the lack of information provided by the design team related with the official funding of the project (3A\_user). Considering that the participatory methodology applied in this study was able to motivate a large number of residents to conduct voluntary work, the fact that the designers had a salary to develop their work caused misunderstandings among the residents. “The community understood that if they (designers) were not paid to do that work, they would not do it”, mentioned one of the interviewees (3A\_user). This reaction revealed the complexity with which the designers have to deal when designing with communities, especially in areas with lack of access to resources to satisfy the community’s basic needs, i.e. not properly provided by the State. Besides revealing a fragile relationship of trust between

the designers and the community, this reaction brought attention about the sensible limits that establish the rights and duties between the public sector and the residents in building a sustainable urban participatory process.

## 7.4 CASE STUDY 4:

### VivaCidade (Aveiro-Portugal)

The project *VivaCidade* was one of the 10 selected projects in Europe forming part of the program “Actors of Urban Change” coordinated by the foundation Robert Bosch Stiftung in cooperation with the NGO MitOst. The purpose of this international program was "to achieve sustainable and participatory urban development through cultural activities implemented by teams of partners coming from the civil society, public administration and private sector" (Surwitto-Hahn & Schwegmann, 2015).

The project, with a budget of 10,000 Euros, was developed in the city of Aveiro (Portugal) and took place over 18 months between the autumn of 2013 and the summer of 2015, reaching about 250 people from within and outside of the neighbourhood (Surwitto-Hahn & Schwegmann, 2015, p. 8). The core team of the project consisted of a representative of the Aveiro City Hall working in the urban planning department of that public institution; a director of a small and middle-sized enterprise working in the promotion of cultural and design projects; and a president of a NGO founded by former students of the Aveiro University, working within the field of social innovation for urban development. During the implementation of the project, the core coordinating team participated in capacity building meetings conducted at the international level with the aim of initiating the construction of a European network of actors for urban change (Surwitto-Hahn & Schwegmann, 2015).

The general aim of the *VivaCidade* project was to get "the local community involved in the requalification of urban voids" in the city of Aveiro (Praça, Cunha, Rosa, Loreiro, & Castro, 2015, p. 43). In that way, the project intended to promote spaces of interaction between the university and the local community, building possible bridges of dialogue with the municipality and local businesses. Thus, in addition to the conducted interviews with the core team and participants of the project, further information was collected in three moments after the construction of the space: during the launching event of a diagnostic book of the project; during the workshops organized to promote the maintenance of the common space, and during the community meeting that discussed the future of the space. Furthermore, and in connection with this project, the researcher participated as a volunteer

in the development of the community project *VivóBairro*<sup>21</sup> in the summer of 2016, since this second initiative is considered as one of the indirect effects of the *VivaCidade* project.

The *VivaCidade* initiative was chosen as a case study by this research project because it can characterize a possible configuration of “designing commoning” from a project design orientation, i.e. from the perspective of a “project design agency”, in which a cross sectorial team took efforts to construct collaborative practices in a neighbourhood. The following paragraphs describe the design practice of this case study according to its “Design tactics” and its “Design effects”.

### 7.4.1 Design tactics

In this research, the design process of the *VivaCidade* project was divided into three stages: “engaging, designing and making”. The first stage consisted in the process of engaging with the local community through activities such urban interventions, storytelling sessions and the presentation of the project for the university and local community during the period of approximately 6 months. The second stage consisted in the process of designing a proposal mainly through community meetings during the period of approximately 8 months. This stage was developed towards the third stage that consisted in the process of building the temporary space through extensive local collaborations during a period of around 4 months.

First, the engaging process began with the collection of memories through storytelling sessions with groups of elderly residents in the central neighbourhood of the city. The activity was carried out through five informal meetings with about 10 people who had lived in the neighbourhood for many years. “The meetings were held at a local café through the use of old photos as a tool to activate the collective memory” (4B\_agent). The collected material provided relevant information about the identity of the neighbourhood, including meaningful meeting places, such as an old tavern that existed before in a small abandoned space. In parallel, the project was presented through informal conversations with the residents and the academic community. Short videos with the memories of

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<sup>21</sup> *VivóBairro* was an event organized by CORDA (*Associação sem fins lucrativos para promoção, defesa e dinamização do Bairro Histórico Rua Direita de Aveiro*) and the European project “Community Participation in Planning” (Concilio, Rafferty, Puetari, & Nogueira, 2017). The whole event was built on a collaborative logic through donations and voluntary work of the residents, merchants and institutions of the city. The event had the objective of promoting the historical district through the valorisation of local market, the scientific and artistic potential of the city.

the neighbourhood were released in online social networks, as well as collaborations were initiated with local media in order to publicize the project in the whole small city centre of Aveiro.

Second, the designing process occurred through six community meetings held with residents, students and interested professionals, bringing together around 25 participants. The meetings were carried out through participatory methods that facilitated both the collective choice of the space and the co-creation of the final proposal that could gather the expectations of the different stakeholders. For instance, collective mapping techniques allowed the participants to discuss ideas, desires, and common concerns about public spaces in the neighbourhood (Figure 54).



Figure 54: City mapping technique (Image by *VivaCidade* project).



Figure 55: Public exhibition of the participatory process and final project proposal (Image by *VivaCidade* project).

During the meetings, one of the City Hall's properties was temporarily provided to implement the project. The abandoned space was located in a central and visible area of the city, being a strategic area to test the methodology of the project (4A\_agent and 4B\_agent). Although initially the proposition of the project has presented the intention to build a temporary common space though low-cost interventions, the residents expressed the desire that "the spatial intervention should be less make shifted and become more durable" (4A\_agent). According to the team interviewees the project was facing pressures from the public sector in order to support the construction of the space within a more traditional format, which is usually used to build traditional public spaces (4A\_agent and 4A\_public sector).

Therefore, the final project proposal intended the transformation of the abandoned space in a small and cosy common area, with street furniture, a wall made with caricatures of the local residents and



a vertical garden. The designing process applied included the organization of a picnic by the participants, where the project proposal was presented to a wider range of community members. Displayed on panels and in a large format, the proposal was opened to public discussion in order to open space for new proposals (Figure 55). Then, two last meetings occurred before the intervention were held, when the participants were divided into groups in order to prioritise and identify the critical needs that would motivate the implementation of the common project and to develop strategies to seek the necessary resources.

Third, the making process occurred through the activation of local networks in order to gather the necessary resources for the project implementation. Since the project budget was limited, it was necessary to look for voluntaries who could donate their working time or material resources. Most of the materials were donated and recycled from civil construction activities of private and public institutions. Moreover, around 20 contributors, including local businesses and patrons had provided material resources and services needed for the construction of the common space. Therefore, a group of residents was able to negotiate with the owner of an abandoned small house to temporarily provide a community laboratory; a neighbour temporarily provided electricity for the space; the municipality managed the donation of wasted construction materials; and local companies provided support to the community project (4A\_public sector).



Figure 56: Open lab (Image by *VivaCidade*).



Figure 57: Public sculpture build with multifaceted wood cube (Image by *VivaCidade*).

The temporary open lab was important for the activation of the space, being "an important moment shared by the participants, which felt the sense of common ownership of the project", as described by one of the residents interviewed (4A\_user). The space functioned as a "living laboratory" harbouring constant exchange of knowledge through practical workshops and everyday coexistence



(Error! Reference source not found.). This process of infrastructuring the collective practice culminated in three intensive weeks, when beyond the initial participants, civil organizations, artistic groups and students were voluntarily involved in different creative activities organized for the project implementation (4C\_agent).



Figure 58: Co-production of urban furniture (Image by *VivaCidade*).



Figure 59: Event of the project in the built common space.

The co-creation of urban furniture began with the construction and distribution of 250 wooden cubes around the neighbourhood with the intention "to extend a literal and easily understandable invitation to build collectively" (4C\_agent) (Figure 57). The wooden cube was presented simultaneously as a "tool of communicating the project in the city, and as a tool used to be creatively manipulated by the participants in order to build a symbolic collective sculpture" in the common space (4C\_agent). The object also served to "introduce the participants to the technical making tools of wood manipulation in the open lab" (4C\_agent). The urban furniture such as wooden benches and tables were co-produced through workshops led by voluntaries with proper technical skills. The first prototypes were exposed in the open space in order to provoke the public opinion. Afterwards, the objects were replicated and customized by the participants (Figure 58). Rather than providing functional objects, subjective and technical knowledge were shared among the participants through the making process.

#### 7.4.2 Design effects

The information collected during the field research demonstrated that the *VivaCidade* project was pioneer in Portugal in providing a cross-sectoral collaboration through a small-scale participatory urban project (4A\_agent). In this sense, the whole experimental participatory process was "compiling a handbook in order to make it visible and reproducible" by citizens, private and public institutions (4A\_agent). According to both the field observations and interviews, after the implementation of the

project, the area gained new social relations and affections by the residents living around the space. One resident revealed that "for her it was a very relevant experience to participate in the project because she lived in the neighbourhood for 15 years and did not know her neighbours" (4A\_user). Therefore, the project provided the encountering of residents, "who began to trust and support each other, as well as started to think how the conditions of the neighbourhood can be improved by collective actions" (4A\_user). Indeed, "the project worked as a platform to activate the common identity and self-esteem of the residents, contributing to emerge a new community sense" (4A\_agent).

In addition to the necessity of having a meeting place in that area, it was observed that the built space was used by the neighbours to organise traditional events in a collaborative and autonomous way. The owner of a small company stated that "there is a collective perspective of keeping the space activated by the residents through small events" (2C\_user). According to one of the residents, the "urban garden generated a new dynamic around the space through maintenance measures carried out by three residents in a spontaneous way", as well as through small gestures such as "the planting of new plants in the garden" (4B\_user).

It was also observed that the project generated a sense of ownership in the neighbourhood through spontaneous actions of surveillance of the common space. "Now people feel partly responsible for this common space" (4B\_user), as mentioned by one of the residents. For instance, when the space suffered an act of vandalism, there was a collective reaction of the residents, preventing that kind of practices to happen in the space (4A\_user). Furthermore, the sense of ownership was also revealed when one of the residents took the initiative to call for the action of the municipality in helping the residents to clean and organise the space (4B\_user). In this sense, the project contributed to break down the barriers in the participatory process between the public administration and the citizens.

However, it was also observed that these effects of the participatory project covered the engagement of a few number of residents. Many design efforts were identified to establish collaborations with bottom-up initiatives of local organizations of the city of Aveiro. Nevertheless, it was also observed a lack of strategy that could focus on the need of the residents that lived around the built space (Barbosa et al., 2016). One of the team members reported that "the older people had a key role at the beginning of the project, however, this public did not participate in the later stages of the project" (4B\_agent). According to the team, this fact may have occurred because "people were always waiting for the others to solve the common problems of the neighbourhood" (4D\_agent). Nevertheless, other interviewee stated that "the residents wanted to participate in the initiative, but they did not know

how to do so because they were usually excluded from institutional participatory processes” (4A\_agent).

The collected material suggested that the engagement process of the residents was interfered by two factors: the bureaucratic process to which the project was submitted (i.e. by the City Hall administration), and the limited period of time provided for the practical part of the project. After the end of the group meetings with the participants when the project proposal was discussed, co-created and approved by everyone, eight months passed until the start of its implementation. The main reason for that was the delayed bureaucratic process of the approval of the final proposal by the City Hall, i.e. the official owner of the urban space (Barbosa et al., 2016). After so many months, the project was finally authorized by the institution, being approved as a "public space of the municipality" (4A\_public sector).

Moreover, the strategy of mapping and discussing at round tables made it possible for the participants to play with the territory, which provided a critical view of the neighbourhood. Furthermore, this moment brought the older participants on board and closer to the younger ones. However, it was identified that during the practice of doing together, all the practical parts of the project were in the hands of a younger group of people with specialized skills, without the involvement of neighbourhood residents in coordination and leadership activities. The concern about the beauty of the space overlaps the collaborative experience in mutual exchange. This was also conditioned by the concentration of practical activities of the project in only three weeks, placing great expectations and demands on the coordination of the project. This situation might have led to an overload of work in the side of the organizing team, one of the reasons why many activities were not completed on time, leading to criticism from some residents, who felt dependent on some of the experts who were no longer collaborating with them at the last stages of the project (4A\_user e 4B\_user).

However, since the space presented a different aesthetic value in relation to a traditional public space, the neighbourhood gained visibility in the city, for example attracting the attention of tourists visiting the city. One of the residents stated that “differently of a traditional public square, the common space built by us became our own home” (4B\_user). The project have also gained wide public visibility when it became a political instrument of the municipality. The information collected in the field research revealed that the public sector assumed a position of being the main promoter of the participatory project, identifying it as a public policy implemented by the City Hall. This interpretation reflected some distrust of the public sector when facing a more horizontal and decentralized urban participatory process. It was observed that this position of the City Hall may

have removed some of the authenticity to the project that could incite even more changes in a more autonomous way (Barbosa et al., 2016).

Despite of the efforts of the three sectors (i.e. small company, NGO and public sector) to promote this multi-sectoral project, the information provided by the field interviews revealed unbalances in the decision-making process, in which the NGO and the small enterprise had little power in the ultimate decisions comparing to the municipality. However, it was identified that the agent that represented the public sector within the core team of the project had an important role in mediating the interests between the project proposal and the public institution. It was also observed that this agent took many negotiation efforts to legitimize the project within the public administration, articulating the bureaucratic pressure imposed by the local government for the practical development of the project (Barbosa et al., 2016).

Despite of these facts, it was observed that the project enhanced relevant changes related with the professional performance of the members of the core team of the project. For instance, the representative of the public sector mentioned that the experience of the project helped her to obtain a better work performance within the organizational structure public entity (4A\_public sector). Additionally, the project clearly contributed to build up new capacities among the members of the NGO, who became actively involved in an international network promoted by the international financier of the project (4A\_agent).

In that way, it was verified that one year after the project ended, the NGO members took negotiation efforts to turn the temporary open lab into an independent Makerspace<sup>22</sup>. Moreover, it was also observed the integration of new participatory strategies by a local business association in order to activate the local market through the collaborative cultural event *Vivóbbairro*. Two promoters of this event were integrated in the international training program of the *VivaCidade* project. One of these participants stated that it was possible to "adapt participatory methods of the project in the actions of the collaborative event", but it wasn't possible to get any support from the City Hall of Aveiro (4E\_user).

In spite of this fact, two years after the implementation of the project, its methodology was integrated in urban policies strategies of the City Hall of Aveiro with the objective to "enhance a participatory

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<sup>22</sup> Makerspace (also referred to as a hack lab or hackspace) is a community-operated, often a non-profit organization and work space where people with common interests, use computers, machinery, technology, science, digital art or electronic art, can meet, socialize and collaborate in community projects (MovGP0, 2008).

culture through the conviviality in the urban spaces” (Câmara Municipal de Aveiro, 2017). According to the representative of the public sector, the *VivaCidade* project led to a better understanding of this kind of urban systems, in which “the role of the public administration may be focused on facilitating this type of participatory project”, working in collaboration with on-going bottom-up projects developed by citizens (4A\_public sector). The interviewee mentioned that “the project raised many barriers in relation to the local legislation, which is not adapted to allow the harmonious development of this kind of participatory processes, presenting many rules that are currently difficult to follow” (4A\_public sector). Finally, it was also identified that the project stimulated the development of collaborations between the university and local bottom-up initiatives, in promoting the development of more efficient participatory processes in Aveiro.

## 7.5 RESULTS OF THE ANALYSIS

This session summarizes the overall results of the interpretation of the case studies through aspects that predominated in their respective design processes for the construction of local collaborations in public spaces. In this study, the design process of the analysed projects was analysed through three holistic categories: “engagement, negotiation and empowerment”.

The “engagement” process points out the analysis of the application of urban tactics used for the production of a collective action in order to achieve a common goal. The “negotiation” process points out the analysis of the strategies that led the participants and stakeholders to negotiate changes in the community and with local institutions towards the achievement of their common goals. Lastly, the “empowerment” process points out the analysis of the design effects concerning changes in local dynamics of participation and the sustainability of collaborative processes in the social context of each case study.

### Case study 1: A Batata Precisa de Você (São Paulo-Brazil)

- The engagement process of this case study was effective in developing an open format of participation, allowing the formation of a self-management system for the common space. However, this model also revealed participation barriers that led to the inclusion or exclusion of certain profiles of participants.

- The negotiation process of this case study was effective through its disruptive character in terms of activist tactics, being able to activate the sense of ownership of the participants; giving visibility to local conflicts and problems, as well as of opening up a channel of dialogue with the local government and collaborations with local organizations.
- The empowerment process of this case study was revealed in the activation of a sense of belonging to the public space in the neighbourhood; in the adaptation of more sustainable habits in the everyday life of the participants; as well as in triggering small initiatives in the public space in an autonomous way.

### **Case study 2: Casa do Vapor” (Almada-Portugal)**

- The engagement process of this case study was effective in emerging the project plan based on the available local resources and capabilities of the participants, which were being integrated during the daily coexistence between the designers and the residents. However, this strategy required a lot of human resources and time. On the one hand, this approach enabled the process of building a relationship of trust between the participants and the designers. On the other hand, the open format of participation faced difficulties to integrate the local residents, who already came from a context of social exclusion.
- The negotiation process of this case study was effective in establishing the collaboration and support of the municipality. However, the dialogue established with the public sector did not involve local agents or residents, being led only by the external actors or designers, who took a neutral position on existing local conflicts.
- The empowerment process observed in this case study improved social relationships in the neighbourhood, namely between the elderly and the youth residents, and it also improved the community self-esteem by giving visibility to its local potentialities. The continuation of the collaborative dynamics caused by the project in the community was conducted by a group of designers and external agents for a long period after the project ended, giving support in transferring responsibilities from the library project coordinators to the local agents. However, this process overloaded the few external agents that have tried to transfer the responsibility to the community agents.

### **Case study 3: Acupuntura Urbana (São Paulo-Brazil)**

- The engagement process of this case study was effective in enabling the participants to make sensitive associations between their desires and the available resources to conduct a common action in the project. This strategy was developed collectively through a series of activities that resulted in the construction of an affective map, where important tangible and intangible resources of the neighbourhood were identified.
- The negotiation process of this case study was effective in bringing together different stakeholders of the neighbourhood, which were in conflicts with each other in the context of local power dynamics. This encountering was achieved through the exclusion of local conflicts that enabled a temporary consensus to achieve the common goal. This process was successfully articulated by the design team. However, it was observed that this strategy raised fragilities in the collaborative process between the residents and the local government, not triggering more autonomous and sustainable changing processes in the neighbourhood.
- The empowerment process of this case study demonstrated fragilities due to the absence of clear strategies that could combine efforts from the public sector and local organizations in order to support the continuation of the activated collaborative dynamics.

### **Case study 4: VivaCidade (Aveiro-Portugal)**

- The engagement process of this case study was effective in the collaborative construction of a temporary laboratory in the neighbourhood, which catalysed the collection of local resources, the integration of more residents and the feasibility of activities for the construction of the common space. However, the initiative found challenges in promoting a more active participation of elderly residents. Here, it was observed that this happened because all the responsibilities were centralized in the hands of young technical specialists who were not residents of the neighbourhood.
- The negotiation process of this case study highlighted the challenges of building a more horizontal participatory process in partnership with the public city government, which submitted the participatory project to a strong institutional bureaucracy, placing itself in a central position in the decision-making process between the three sectors of the core team of the project. Despite of this fact, the mediation role of the representative of the public sector, who took part in the core team, was fundamental for the project to gain institutional

legitimacy. Lately, this agent has also contributed to the integration of the methodology of the project in the development of local public policies by the City Hall.

- The empowerment process of this case study was effective in generating a support network for the neighbours. However, it was verified a lack of autonomy of the residents to continue developing activities in the neighbourhood, since they continued to feel dependent on the specialists of the project. Furthermore, it was also verified that the project influenced other collaborative activities in other spaces of the city, such as academic and activist initiatives.

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Based on these interpretative results, the next chapter presents an analytical view of the case studies, in which are pointed out the challenges to design collaboration in urban communities and how the cross analysis of these particular case studies can bring understandings, suggestions and propositions in order to design sustainable collaborations towards urban transitions.



## **Chapter 8. DISCUSSION**

This chapter presents a critical analysis of the key research outcomes of the case studies through interlinkages between the background literature developed in the first part of the thesis and the assessment of design practices in Europe and Brazil. This chapter is divided in three sections. First, the “Commons and design” section presents an integrated analysis of research results related to the observation of collaboration process by seeking the understanding of the relation between the knowledge of design and common theory. Second, the “Design agency configurations” section discusses the design agency configurations identified in the four case studies in relation to the theoretical framework developed in this study. Finally, the last section “Design process for commoning” discusses the specific details of the interpretation of the overall results presented in the previous chapter according to the following subsections: “Engagement, Negotiation and Empowerment”.

## 8.1 COMMONS AND DESIGN

In this thesis, both bottom up and top down analysed initiatives involve design skills in efforts to build collaborations for the emergence of more participatory, creative and innovative urban communities. Within these two orientations, the designers use their knowledge in a diversity of ways. From bottom-up structures, the designers reveal themselves as activists or volunteers with the aim of putting their knowledge at the service of a common cause together with people from local urban communities dialoguing at the same time with institutional stakeholders. Supported by top-down structures, the designers work within multidisciplinary teams and pursue specific goals and schedules pre-established by public or private funding institutions.

In that sense, the analysis of the case studies showed that the process of transformation of a socioeconomic context and improvement of the common life in a city might depend on the construction of spaces of intersection between these two design approaches. In that way, social inventions in urban spaces are able to carry out more systemic changes when they collaborate with institutions, as well as when the institutions are also able to integrate their interests into ongoing creative social practices. Indeed, this study showed that the construction of open channels of collaboration by design practices are necessary to approach these two dimensions of action in order to promote more sustainable changes in local contexts.

However, the increased development and access to new technologies have been boosting design capabilities, which have been increasingly required in contemporary society, giving opportunity for the people to act as designers (Manzini, 2015, p. 31). This context has been inviting the design professional field to rethink and to reconfigure its role in an increasingly interconnected world, where everyone can develop its design agency to create innovative processes of change. In this environment, designers increasingly need to work in collaboration with non-designers to build new agencies for change. In this sense, it becomes important to the Design field to develop a deeper understanding of the opportunities and challenges of building these intersection spaces, where new forms of doing and thinking design can emerge.

### **Collaboration as negotiation**

The Chapter 1 discussed the process of community formation from the common theory perspective, through which it was understood that a community can emerge through flexible collective agreements able to guarantee the participation of all the involved in the decisions on the use and maintenance of common resources. Additionally, it was understood from an anthropological point

of view, the conflicts and dissensus should be included in order to establish stronger institutions of commons. Indeed, the essential condition for something to become common is totally linked to social factors, which define who will or will not have access to available resources (Euler, 2016). In this sense, the principle of social action on common good allows conflicts to become explicit (Barbosa et al., 2016). Therefore, the conflicts are important elements to take into account in the construction of publics and communities.

Facing this understanding, it was concluded that collaboration can be better developed as a continuous process of negotiation, constantly including both conflicts and consensus caused by different interests of participants involved in the formation of a common, a public or a community. Thus, in this research, the common theory provided new insights to think how design practices can create better mechanisms to sustain existent collaborative systems in urban spaces. In this context, the designers are not neutral agents in mediating collaborations, since they represent political forces of negotiation.

### **Urban commons**

Therefore, the case studies of this research project were characterized as experimental projects for the development of communities through creative interventions in public spaces, where social interactions were activated in order to build a sense of community that could open up new opportunities to improve the common life of a street, a neighbourhood and a city. Thus, the analysed practices were characterized as “urban commons” experiments, which are collective practices that develop alternative forms of production and management of material and immaterial goods through social forms based on exchange, collaboration and affection (Harvey, 2012). Thus, as discussed in the Chapter 2, the urban commons are able to promote the development of social skills from the valorisation of local resources, generating social innovations towards the development of a more sustainable urban economy (Harvey, 2012).

Actually, for something to be common it is necessary to have social practices of “commoning” that legitimize it as common within a group of people (Euler, 2016). Thus, commoning are collective experiments that play and create commons. In this way, it becomes important to understand what practices and behaviours can support commons and what are the challenges for this to happen. This process requires to move from the understanding of “what” resources are common, to “when” and “how” some resource becomes common (Seravalli, 2014a, p. 111). Therefore, the common discussion giving visibility to complex social dilemmas that involve collective actions for sustainability, such as the development of common values of reciprocity and trust among

commoners in community-building process (Hess & Ostrom, 2007, pp. 5–7), as well as the challenges related to accessibility, legitimacy and sustainability of existent urban commons (Bingham-Hall, 2016; Hernberg & Mazé, 2017; Stavrides, 2016).

Moreover, the urban commons express micro political forces that actively participate in the dynamics of power that constitute the urban environment. As micro politics, they are capable of causing small disruptions in collective living standards, presenting spaces of resistance to economic interests that can concentrate resources and cause growing social inequalities in the constitution of cities. However, it is important to acknowledge that the meanings surrounding commons are built in an arena where different interests and levels of power take place (Barbosa et al, 2017). In that way, the political meaning of commons is constantly at risk of being manipulated and misrepresented by different interests that constitute the contemporary society. Indeed, the boundaries of what is common (what is the right of all) and private (what is restricted to someone) become increasingly diffuse. For instance, the words "collaboration" and "sharing" are used by the economic system in efforts to transform all spheres of people's lives into profitable commodities, excluding the transformative capacity of these social practices.

### **Expressions of design agency for commoning**

In this sense, the case studies of this research were practices that opened up opportunities for commoning through interventions in the public spaces of contemporary cities. In the exploratory phase of this research process, described in the Chapter 6, different expressions of design agency for commoning in public spaces were identified through the analysis of a set of local initiatives. According to these practices, five expressions of commoning and their design tactics were identified:

- **Poetic:** Displacement of objects from the domestic to the public environment with the intention of causing subjective disruptions through intense moments of conviviality.
- **Activist:** Installation of interactive and playful objects in spaces of collective claims in the city with the objective to promote affective links among the residents and to facilitate their articulation around common problems and solutions for urban spaces.
- **Communicative:** Appropriation of traditional urban signs in informal pedagogical practices with the aim of bringing people together around common problems of the city, interfering in the public opinion around these problems.

- **Collective:** Activities of co-production of common spaces with the aim of developing the sense of belonging and collaborative processes among stakeholders that inhabit an urban space.
- **Strategic:** Use of informal and creative practices of participation through top down urban planning projects with the purpose of social integration.

The above five categories suggest different design tactics for the construction of the city as a common space. However, while the first four categories integrate a bottom-up perspective, the latter category indicates the incorporation of common meanings by a top-down perspective. In the “strategic” category, the implications of the design tactics applied by institutions (public and private) were discussed, whereas in the “poetic, activist, communicative and collective” categories were identified design tactics that strive to generate discussion and primarily to activate a sense of affection and ownership of the residents with respect to the city, opening up possibilities for themselves to construct conditions for the emergence of more democratic, inclusive and common urban spaces.

Therefore, the exploratory cases revealed different forms of articulation among the critical, creative and practical senses in order to imagine and to create the city as common. While the projects presented design tactics for the creation of more horizontal participatory systems, the analysis questioned the meaning of “strategy” in design practices, as well as the notions of “user” and “form” in design theory when design practices interact with community dynamics. Thus, users were understood as human beings who result from complex process of negotiation, involving macro and micro dynamics of power. In addition, the analysis suggested the researcher to think about procedural social forms that could allow the incorporation of actions of the users, being open to escape from the control of the design project in order to create the conditions for local sustainable changing processes. Therefore, all of these expressions of commoning can be characterized as “emerging design agencies” committed to drive social changes.

## 8.2 DESIGN AGENCY CONFIGURATIONS

In the Chapter 3, it was presented a design agency map, where emerging design agencies were localized in a space of intersection between designers and non-designers. It is in this space that the various ways of putting design capabilities into action among different agents ("expert and diffuse designers") and its intentions ("problem solving and sense making") are realized (Manzini, 2015, p. 42).

In that way, this research explored the idea of “design agency” with the aim of better understanding how designers can act in these intersecting spaces for the construction of more sustainable collaborations committed to procedural and contextual changes. In this perspective, in emerging design agencies, the role of change is not centred on the expert designer, but on different possibilities of interaction between designers and non-designers.

Considering the results of the exploratory phase of this research work, it was strategically decided to further investigate design agency for collaboration through the co-production of common spaces in four specific case studies. The construction of “common spaces” in these selected case studies were materialized through the collective construction of micro public spaces, involving the co-production of events and objects. The idea of common spaces is different from public space. Common space questions the concept of public space through the way it is created and managed. While the public spaces allow the production of social relations monitored by rules of central governance, the common spaces are a set of social relations produced by a group of people, which are responsible for creating and changing the rules of its use constantly (Stavrides, 2016).

Therefore, the case studies produced common spaces as a way to develop common relations. The central idea of common discussion is to understand the mechanisms that enable users to produce and manage their own resources (Bollier & Helfrich, 2012). Thus, this research argued that the creation of these mechanisms depends on creative spaces of social interaction able to offer users the possibility of managing the city in a more responsible and autonomous way, i.e. managing the city with less dependence on the centralized power decision making systems of both the State and the Market.

In this way, four different design agency configurations were examined through the analysis of the case studies, in which designers and non-designers worked together to produce collaborations through the construction of common spaces. In different design agency configurations, the designers mingled with other agencies with the aim of creating processes of change in cultural attitudes and behaviours, opening up opportunities for social forms to generate procedural local changes. Thus, the general proposal of the analysed projects was not to offer immediate solutions to problems, but to spark interest in relevant common issues and to visualize different ways of leading with these issues.

## **Urban contexts**

The cases were located in two macro socio-economic contexts of South-America (São Paulo city) and Southern Europe (Almada and Aveiro cities). These contexts highlighted two particular trends.

In Brazil, it was observed that the analysed practices emerged from urban structures that generally suffer from the lack of regulation in public institutions, presenting public spaces as zones of conflict. Despite of this fact, this particular condition became permeable to social dynamics that involve more autonomously and independently from the institutional structures (Barbosa & Roda, 2014). Therefore, the lack of public spaces has been seen as a space for opportunities in the creation of innovative spaces in a more centralized systems of power.

In Portugal, it was observed that the analysed practices emerged from a context in which urban structures are more consolidated and regulated by the public sector at the local urban planning level, i.e. by the municipality. In this way, the analysed projects presented a need to create spaces of “detours”, i.e. new kinds of public spaces that could strive to escape from the institutionalization of the participation. However, this context revealed a greater tendency for bottom-up driven processes that undergo a process of institutionalization. On the one hand, this may promote more decentralized mechanisms of participation in the long run. On the other hand, the institutionalization of these practices run the risk of losing the ability to develop participatory processes in a more autonomous and transformative way.

### **Design agency configurations**

The analytical view about the social impacts outcomes of the case studies allowed the researcher to further understand design practices in an integrated perspective beyond the contextual particularities of each project.

The four case studies revealed design agency configurations with two distinct agency directions in doing collaboration: “internal” and “external”. According to the conceptual analysis of the local initiatives, the “internal agency orientation” was characterized as an internal force that intends to develop collaboration among themselves and with other participants; and the “external agency orientation” was characterized as an external force intending to build collaborations within a group of participants. In this way, whereas in the internal orientation, the collaborative methodology emerges from creative communities, in the external orientation a team of designers applies particular design methods in order to catalyse collaborations in community settings.

Clarifying further, as showed in the Figure 60 below, the internal and external orientation of design agency identifies two different dynamics respectively: initiatives with a more community-oriented approach and initiatives with a more project-oriented approach. This study classified these two dynamics respectively as “community design agency” (Case studies 1 and 2, presenting a more

bottom-up approach) and “project design agency” (Case studies 3 and 4, presenting a more top-down approach) (Barbosa et al., 2017). Thus, as showed in Figure 60, two case studies of community design agency and two cases of project design agency were analysed in this research project, revealing four different approaches that positioned design skills in the efforts to build collaborative dynamics.

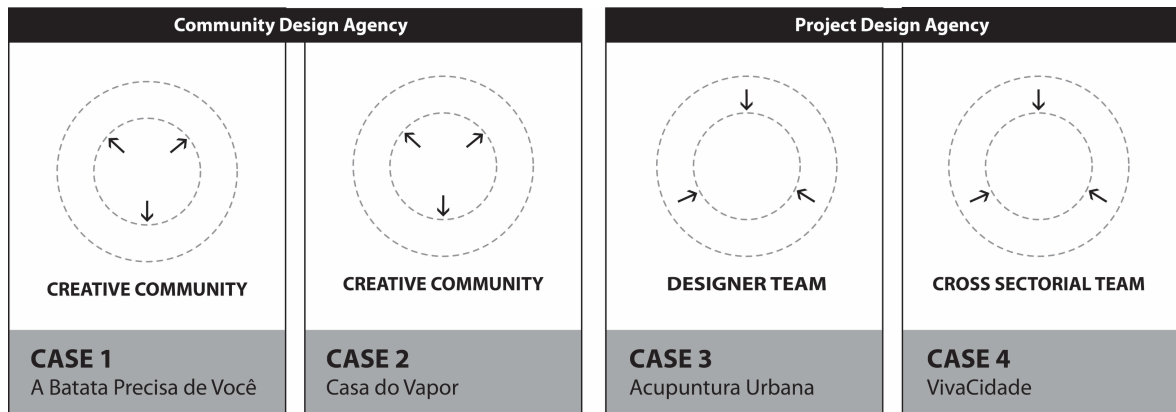


Figure 60: Design agency articulations expressed by the cases studies through a more community-oriented approach (Cases 1 and 2) and a more project-oriented approach (Cases 3 and 4).

In this sense, the design agency of the case studies 1 and 2 characterizes articulations of community design agency through the formation of creative communities, as showed in the Figure 60. The creative communities consist in groups of people that make things together in a collaborative way, inventing and improving solutions to more sustainable ways of living (Meroni & Bala, 2007). In that way, the social forms of these two cases emerged from the combination of existing elements, canalizing local changes by proposing alternative ways of life based on collaborative systems. Despite of their capacity to promote channels of dialogue between city users and local authorities, these creative communities started to make their activities without waiting for top-down measures. Instead, these community actions emerged from grounded local needs, personal motivations, and common interests towards the construction of new visions and places.

The design agency of the case studies 3 and 4 characterizes two different articulations of project design agency, respectively through a more strategical approach of a design team and a cross sectoral team. These case studies are more familiar with the design work environment facing the challenges of building local collaborations from the application of design methods. It was observed that while in the case 3 the designers performed their agency in a more neutral way in relation to existing local governance mechanisms, in the case 4, the collaboration was built through a constant process of



negotiation between the stakeholders that composed the core project team. The consequences of these specific characteristics of the design agency and the position of the experts in the projects are described in more detail in the text below.

### Position of designers

According to the methodological strategy of this study (Chapter 5), each design agency configuration identified in the case studies was analysed by qualitative interviews carried out with three different stakeholders, which were classified as: “agents, public sector and users”. Thus, it was assumed that each project was led by different articulations between these three profiles of participants, as showed in the Figure 61. The “agents” refers to the people that were responsible for starting the project, i.e. designers and non-designers; the “public sector” refers to representatives of the government agencies that were involved in the projects in different ways; and the term “users” primarily refers to residents who have been involved in the dynamics of each project.

In that sense, each case study demonstrated a different articulation between these three different agencies and their respective discourses related with participatory process carried out by the analysed projects. The cross analysis among these three agencies presented in this study enabled to capture elements of the dynamics of power of each collaborative project and consequently some aspects that influenced their effectiveness and sustainability.

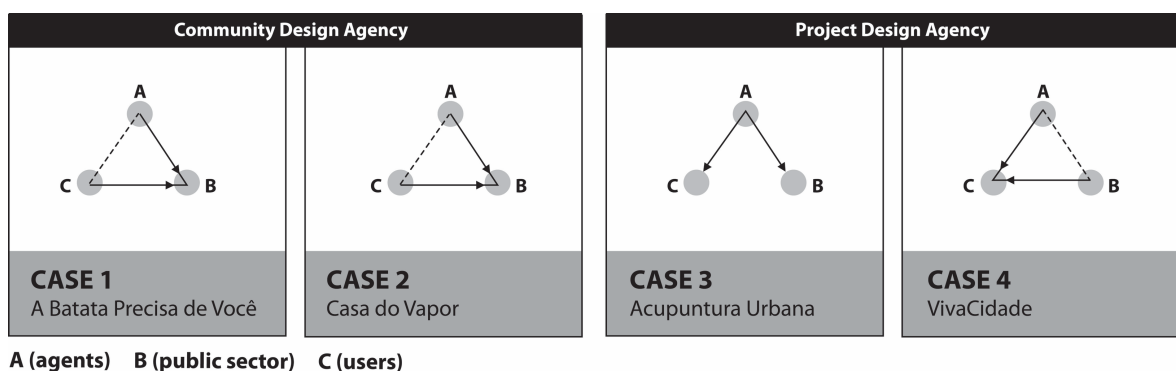


Figure 61: Agency of the designers (agents) in the articulation with other stakeholders in each case study.

Considering that professional designers were involved in the development of all the projects within the agent's group, the diagram of the Figure 61 presents a critical view of the different positions that designers had taken in articulation with the stakeholders. Thus, the designers took three different positions in articulation with other agents (A), public sector (B) and users (C). The dashed line of

the diagram indicates associations made between these three profiles in order to work together. Thus, in the cases 1 and 2, the designers had worked with users and strived to collaborate with the public sector (B). In the case 3, the designers struggled to develop collaborations between users (C) and the public sector (B). Finally, in the case 4, the designers had worked with the public sector (B) in order to develop local collaborations with users (C).

According to this illustration (Figure 61), it is possible to state that the position of the designers in the projects might be an important factor that can influence in the effectiveness and sustainability of local collaborations. In the case studies, the performance of designers worked in articulation with other agencies in order to activate collective actions, according to what designers represent in each of the analysed configurations. For instance, when designers acted with users (Cases 1 and 2), the design action took a more activist and contesting form to activate changes and raise awareness in the micro political dimension. Moreover, when designers acted in a design team (Case 3), the design action took a more neutral position in the territory. Unlike when designers acted in association with the public sector (Case 4), the design action became more institutional or strategic at the macro political level. In this way, the analysis of the different configurations of design agency revealed critical challenges when designers took different positions contributing to the projects not only by adding design skills (Case 3), but also when designers appear as users (residents) in a narrow interaction with the public sector stakeholders (institution), or even when they act as activist agents.

This interpretation can challenge the paradigm of change in design knowledge, asking what conditions sustain a design agency to make something different and what are the implications when designing with other agencies. The results revealed that the design process of the case studies 1 and 2 was mostly supported through a voluntary collaborative system made up of peer interactions, which allowed to attract people of different profiles and later allowed to open up a channel of dialogue with the public sector. The design process of the case study 3 was supported by a public policy program of the City Hall of São Paulo, which allowed the designer agents to apply a participatory methodology in a periphery of the city, activating collaborations between on-going local practices. The design process of the case study 4 was supported by an international organization, which made it possible to approach the public and private sector, as well as social organizations in a local level.

Therefore, these observations suggest that design practices should recognize the conditions that support their agency in building and sustaining local changes. As it will be discussed later, the analysis of the case studies demonstrated that these particular projects had presented different levels of sustainability committed to continuing to promote changes locally.

## Modes of designing

Considering the implications of the designer position in different design agency configurations of the case studies, it was possible to visualize three modes of designing, as showed in the Figure 62 below: “designing in communities”; “designing with designers” and “designing with institutions”. The intersection among these three designing modes brings insights to better formulate the conceptual proposition of “designing commoning”, which emerges as a transition space for a better understanding of design in the construction of collaborative communities. The theoretical definition and performance characteristics of each type of design mode are described in more detail in the text below.

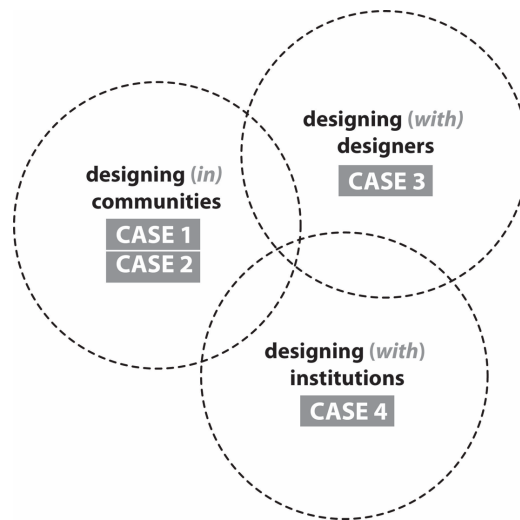


Figure 62: Three modes of designing according to the analysis of the case studies.

- **“Designing (in) communities”** mode refers to a deep involvement of designers with local agencies in order to build collaborative communities. The engagement of designers is motivated by personal desires to be part of a group of agents with similar interests in promoting cultural changes through new design skills. This mode of designing presents an experimental methodology, which emerges from situated issues and circumstances. This category was identified in the case studies 1 and 2, where the designers took part of the agent’s group as local residents. Thus, they were responsible for catalysing the formation of creative communities that strived to produce local collaborations with different stakeholders in the neighbourhood.

- **“Designing (with) designers”** mode refers to the involvement of designers in building communities through services provided by civil organizations, as well as private and public institutions. This mode of designing has also a deep involvement with the community context by believing in the development of design skills contributing to the construction of healthier communities. This mode presents a methodology that is applied in several urban spaces with the purpose of activating the sense of community through collaboration between different stakeholders of a neighbourhood. This category was identified in the case 3, where the designers were external professional agents, who applied a specific methodology in different urban contexts.
- **“Designing (with) institutions”** mode identifies the work of designers involved in a multidisciplinary or cross sectoral teams aimed at building collaborative communities. This mode of designing brings the possibility of merging between the first and the second modes described above, when there is a closer proximity between institutions and creative communities in the construction of collaborations. This mode of designing was identified in case 4, where designers took part of a cross sectoral team in order to create a new methodology that would bring civil society closer to public and private organizations.

While each designing mode gives visibility to the implications of power relations in decision making processes in the domain of each design proposition, the intersection among these three modes of designing had brought elements to the development of the idea of designing commoning. Therefore, the three modes raised awareness and key questions about the designer role in each design practice by identifying their conditions to perform and how these conditions tend to influence the effectiveness of each collaborative process. Then, designing commoning draws attention to understand how design can critically incorporate the dynamics of power in building sustainable collaborative systems and creating opportunities for commoning.

The following sections discuss how these three modes of designing (in communities, with designers and with institutions) is arranged between two design agency configurations (community and project), which affected the power dynamics of acting together.

### 8.3 DESIGN AGENCY FOR COLLABORATION

This topic presents an analytical map based on the challenges, potentialities and fragilities of the projects analysed. In this way, the analytical interpretation of each case study presented in this thesis aims to facilitate a holistic understanding of emerging design cultures towards the construction of collaborative practices for sustainability in urban spaces.

In the following subsections, the case studies were interpreted according to three holistic codes that emerged in the codification of the collected data: “engagement, negotiation and empowerment”. Figure 63 shows that these three holistic codes highlight the “performing, disrupting and sustaining” aspects of the design agency in catalysing collaboration. In this sense, the design analysis suggests that the construction of collaboration for commoning is part of a cyclical process, where design performs participation in the formation of publics, where the disruptive design tactics generate spaces of political negotiation, and finally where design tactics sustain collaboration through a reconfiguration of time in its practices.

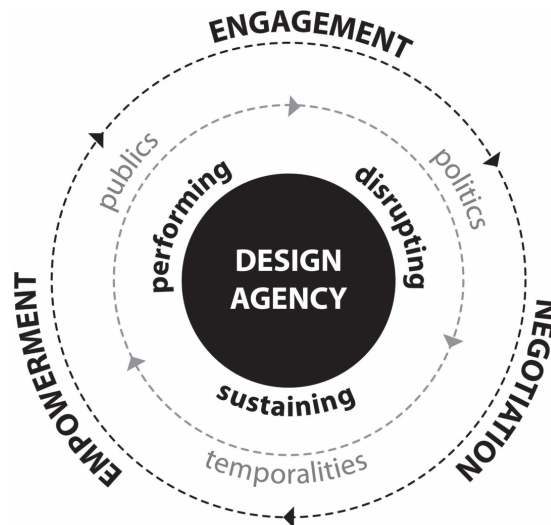


Figure 63: Analytical map of the design process of the case studies.

In the following subsections these abbreviations are used:

- Case 1- Case study *A Batata Precisa de Você* (Community design agency)
- Case 2- Case study *Casa do Vapor* (Community design agency)
- Case 3- Case study *Acupuntura Urbana* (Project design agency)
- Case 4- Case study *VivaCidade* (Project design agency)

### 8.3.1 ENGAGEMENT

This category identifies the process of building a collective action capable to make things happen together, opening up to the formation of a community. This process involves the experimentation of design tactics to activate and perform the participation. Specifically, this holistic category discusses how collaboration emerged from the different analysed collective agencies. The engagement process analysis of the case studies is discussed below according to the following subjects: Building a collective action; Participation activation; Building self-organization; Boundaries of participation; and Co-production process.

#### **Building a collective action**

The formation of a collective action in the **Case 1** appeared as a form of protest due to the lack of urban furniture and green spaces in a central public square of São Paulo. The formation of the collective action in the **Case 2** started with the idea of some agents on developing a collaborative construction of a common space in a neighbourhood that has suffered the lack of public services, social exclusion and isolation. Therefore, these two community building projects (**Cases 1 and 2**) were catalysed mainly by the intersection between local needs and personal motivations, which then were interconnected to a common interest in order to find alternatives to these problems. These two initiatives were carried out without waiting for top-down decisions and measures from the local government institutions. In both case studies, it was identified that the role played by at least one local agent (resident) was an important factor in the formation of the collective actions. This person established interconnections with potential external and internal neighbourhood participants, providing an encountering between different capacities in the formation of a common interest in each particular context.

According to the evidences from the **Cases 3 and 4**, some efforts were identified for the formation of a collective action through sensitive interlinkages between the participant wishes to do something for the neighbourhood and the local resources available to do something in each specific urban context. This strategic interlinkage between people's desires and available resources was materialised mainly through the co-production of affective and handcraft maps. Thus, it was observed that these maps mediated the decision-making processes and the co-creation of the final proposals for the construction of the common spaces. This tactic was relatively efficient to open up the field of possibilities of action of each participant involved in the community project, as well as in the formation of a sense of collectiveness that grounded the collaborative action developed in each project.

## Participation activation

Therefore, the evidences showed that the formation of sustainable communities require critical design mechanisms to activate participation through the interlinkage between the individual and community interests as an intelligent way to guide a collective action or a group. However, it seems necessary to make convergent efforts that escape the traditional understanding of participation, which is normally linked to the consensual democratic exercise that tends to transfer responsibilities to institutional power (Mouffe, 2013).

The case studies under analysis demonstrated that informal activities related to everyday habits and practices, such as cooking and walking together, might serve as catalysts of knowledge exchange among community members. It was observed that these activities were able to produce and reproduce new common meanings, including individual motivations to interfere in local realities. In this sense, the analysis of the case studies suggests that participation should be performed not as an imposed obligation, but rather as a way to explore the curiosity, desire and pleasure of the community members experience (Björgvinsson et al., 2010). In that sens, the participation might become more active, authentic and durable, increasing the probability for the creation of sustainable communities and lifestyles.

Moreover, it is important to understand that the intention to form an audience is not the same as that to enable participation (Dantec & DiSalvo, 2013). In the design infrastructuring perspective, participation can be understood not as something to be activated from issues determined by designers, but rather as a way to open up opportunities and raise issues for the emergence of localized and contextual realities, which may do not follow the program initially planned by designers (Binder et al., 2015). When designers intend to activate participation from certain issues that they consider important, there is a risk of imposing visions that undermine the construction of an audience capable of catalysing changes in a more autonomous and sustainable way (Dantec & DiSalvo, 2013). The case studies showed that the formation of a more authentic and committed community that aims to make things happen together can emerge from situated issues determined by the participants themselves.

In the community design agency cases (**Cases 1 and 2**), the participation was performed through design tactics that interlinked personal motivations of the participants (e.g. activist and learning motivations) and local resource issues (e.g. material needs and economic problems). In this perspective, these case studies were able to organize and develop collective actions directed to these particular issues, which were in close relation to their socio-economic and environmental context. In

this way, these case studies showed that it was possible to create new common meanings through collective rituals developed along the extensive time of coexistence between the active participants (including the designers) and the community members.

In the project design agency cases (**Cases 3 and 4**), the participation was performed through mapping the desires of the participants and the available resources (potentialities in the neighbourhood, including talents, services and spaces). In this way, personal motivations and localized issues were activated through the field of dreams and desires of the participants. Instead of the designers presenting a particular vision about the local problems and its possible solutions, the participants were first asked about their dreams and desires for the neighbourhood. After that, the participants were asked about existing resources that could be used to implement their common dreams and desires. This process had the capacity to invite participation through the activation of curiosity about the neighbourhood, opening up a field for the constructive development of social relations.

In addition to these aspects, the analysis of the case studies showed that the production of active participation might depend of activities that can activate the subjective dimension of the participants aimed at interfering in perceptions about yourself and the other(s). In other words, each participant is recognized by design tactics through her/his various perceptual dimensions. In addition to the need of social interaction usually used to solve a particular common problems, the participants are perceived through their ecological and psychological needs for the establishment of affective relationships between themselves and the urban/natural environment (Guattari, 2001). For instance, in the **Case 3** activities the perceptual dimensions of the participants about the surrounding environment were explored, such as the possibility of feeling the spaces when participants were blindfolded and guided by other participants in the process of experimenting the urban environment through the activation of other senses, i.e. hearing, smelling and tasting. This ludic activity attempted to develop perceptual abilities, as well as to build up the sense of trust within the group.

Hence, the case studies analysis demonstrated that the interrelationship among critical issues, local motivations, people's desires and existing resources, is effective in the formation of a common interest and a strong collective action. This design perspective focused on constructing a common vision on how to develop local capacities in interaction with outside agents (i.e. based on capacity building), rather than focusing on the outside assistance of designers to help local citizens to solve problems (i.e. relying on assistencialism). Additionally, the analysis suggests that the formation of a sense of community might depend upon opportunities that deepen up the individual perceptual dimensions of the participants about themselves and about the community itself. Here, new



knowledge might be produced through the collective building of new relationships that can reveal each participant's peculiar worldview versus common capacities, desires and worldviews.

### **Building self-organization**

Despite of the constructive vision on community building perspectives presented, the design analysis of the case studies revealed that the collective action runs the risk of becoming fragile when centralizing decisions and tasks in the hands of some participants, who are more committed or available to organize and lead community tasks. The participatory propositions analysed in this work revealed a set of challenges in forming self-organized systems that could allow all the participants to make decisions through decentralized decision-making processes. It was observed that in all the case studies occurred an overload of decisions and responsibilities in the hands of a limited number of agents, who demonstrated tiredness and demotivation in continuing in this same position of decision in a long-term.

These findings demonstrated the complexity of formation of peers in the constitution of a system of commons, where everyone ideally might acquire the same rights and duties within a collective action (Euler, 2016). As it was discussed on the background of this thesis, the constitution of a common is a process in constant production that requires negotiations of different interests and modes of life (Euler, 2016). The case studies analysed demonstrated that this process requires time and social capital, which conflicts with financial institutions and entities that usually require the existence of a defined calendar with objective outputs (Franz & Elzenbaumer, 2016). For example, the community design agency case studies had more time to develop activities from needs that were collectively discovered, whereas the project design agency case studies had schedules to be met that prevented the formation of a more autonomous group to continue the dynamics of collaboration more independently.

Given this challenge, the analysis of the case studies suggest the need for mechanisms capable of assimilating different levels and forms of participation, which can allow the transfer of responsibilities through the continuous passage between entries and exits of participants. This process occurred more effectively in the **Case 1**, where collaborative dynamics continued to occur at the site, even though after most of the active agents had left the common space. Besides the time and voluntarily available social capital, some specific tactics, such as the use of an online open calendar of community activities and the publication of a manual about community actions in public spaces allowed the continuation of common dynamics in an autonomous way. Thus, these design tactics of the

**Case 1** promoted a more spontaneous transfer of responsibility, without depending on the designer agents that started the initiative.

### **Boundaries of participation**

As already mentioned, active participation usually starts from the principle of personal satisfaction of "being part" of a collective. This satisfaction emerges when individual capacities have the opportunity to be integrated into collective action (Euler, 2016). However, commoning practices can acquire two distinct forms of organization, i.e. either as "closed systems" that define the limits of who can participate or not; or as "open network of passages" when the collaborative systems are able to maintain the ability to share and exchange know-how with other external agents (Stavrides, 2016). In this sense, the formation of a community always runs the risk of presenting barriers of participation that cause the prevalence of some forms of participation over others.

It was observed that both the design agency configurations analysed through the cases studies presented challenges regarding the inclusion of different capacities in a collective action. Although the **Cases 1 and 2** were able to develop more autonomous and decentralized processes of participation, as they also presented difficulties in integrating capacities of some residents, who were not attracted to participate actively, being involved in the activities as temporally spectators. The **Case 3** managed to involve all stakeholders in the community building processes according to the scheduled activities of the project. This happened because of the fast process of implementation carried out by the designers without incorporating existing conflicts among the participants. Differently, in the **Case 4**, such involvement was relatively weakened due the long period spent between the process of co-creation and co-production of the common space, which was necessary to gain legitimation from the municipality to implement the project.

Thus, the analysis of the case studies revealed that the more open is the integration of different capacities, the lower are the risks of barriers of participation between those involved. In this sense, opportunities for design skills are visualized in the encountering of mechanisms that integrate different capacities in collective actions, reducing the risks of participation barriers that can exclude certain profiles of participants. Considering this, design skills can act within the limits of community formation by trying to keep these limits of participation always fluid and dynamic, avoiding processes of exclusion and repulsion.

### Co-production process

The case studies demonstrated that the formation of a group depends on the materialization of participation through co-production activities, when collaborative capacities are exercised during the creation and construction of objects, artefacts and events. Co-production in commoning practices involves (re)production, which are collective activities of use and maintenance of what was produced collectively (Euler, 2016). This process also involves subjective relationships with what and how things are produced, fostering a common identity through knowledge exchange, sharing of motivations, principles and ideas (Marttila, 2016; Seravalli, 2014b).

Moreover, the co-production also relates to the idea of “collaborative aesthetic experience” (notion suggested in the Chapter 3), which is considered in this study the experience of making together, allowing the production of new collective meanings (Dewey, 2010). In the case studies, it was observed that the production of new meanings emerged in the process of doing and learning together through flexible programs that allowed adaptations to the community desires and available resources, as well as the development of the sense of common ownership.

In this interpretative scenario, the role of designer agents might not only be limited to present prototypes for possible solutions, but also it might facilitate the activation of local agencies capable to produce future situated prototypes. In this sense, prototyping can be best understood as a "thing" in which the process of construction arises as a medium and not as an end to the emergence of situated social forms of participation. Prototyping the "thing" is not only a material subject, but also a ground for socio-material relations with the potential to raise critical issues as a way to activate the formation of an audience (Hillgren et al., 2011). Therefore, the co-production processes of the case studies functioned as a "thing" because they were able to establish links between the participants, which allowed opening spaces for discussing common existent issues, such as local needs and hidden conflicts between the stakeholders.

In the community design agency cases, the construction of objects was raised according to the needs discovered throughout the interaction between the participants. For instance, the activities conducted in the **Case 1** started prototyping urban furniture that could both test the potential of the public space and address immediate needs of the city square where the project was developed. In the **Case 2**, the construction of the objects emerged from the daily conviviality between the design agents and the residents of the neighbourhood, who have later used the space with a relatively high degree of appropriation through the development of spontaneous interventions that were not planned by the initial project.

In the project design agency cases, the objects emerged from workshops planned by the design agents, triggered steps that enabled the co-creation and co-production of objects, spaces and events. The co-production in the **Case 3** managed to broaden up the participation when joining different residents who were usually in conflict or distant from each other in the daily life of the neighbourhood. In the **Case 4**, the co-production was effective in the collection of the necessary resources to make the project feasible by activating the personal networks of the participants, which allowed the construction of a temporary open lab in the neighbourhood.

### **8.3.2 NEGOTIATION**

This category identifies the various forms of negotiation that emerged in the process of building collaborations in the case studies. Here, collaboration is understood as a constant process of negotiation between different interests that constitute the power dynamics of a particular micro-political context. In this sense, this holistic category discusses how the different design agency configurations observed in the case studies have built negotiation spaces. The analysis of negotiation processes observed in the case studies is discussed below according to the follow subjects: Including and excluding conflicts; Disrupting for collaboration; and Local and global networks.

#### **Including and excluding conflicts**

The idea of "agonistic spaces" is directly related to negotiation processes in the formation of collaborations and publics, in which the experience of "antagonism" gives place to the experience of "agonism" (Mouffe, 2013). Here, different interests are negotiated in the generation of consensus. In this sense, the agonistic experience does not hide the conflicts, but places them as a fundamental part to the encountering of more sustainable alternatives for communities, allowing a constant flow and higher equilibrium in the power dynamics in the everyday democratic negotiations (Mouffe, 2013). In this scenario, design agency shifts its role of problem solver to present means to emerge relevant contextual issues, such as conflicts or hidden power relations (DiSalvo, 2012). In this sense, instead of being neutral, the position of the professional design agency is understood as another political force aware of its conditions of action and its influence on the consequences in the production of collaborative practices.

In that sense, the design agencies of the analysed case studies emerged from different negotiation strategies that could incorporate existent conflicts and issues in different ways and intensities. In both configurations of design agency (community and project) that characterized the four case studies it

was identified efforts of inclusion and exclusion of conflicts in different stages of the design processes. While the **Cases 1 and 2** managed to use the conflicts as a way to establish a negotiating space with the public sector, the **Cases 3 and 4** presented different levels of inclusion and exclusion of conflicts in building collaboration. In that sense, it was observed that the community design agency case studies (**Cases 1 and 2**) were able to construct more effective negotiation spaces for change allowing more sustainable collaborations than the project design agency case studies (**Cases 3 and 4**).

In the **Case 1**, the existing conflicts resulting from the process of urban gentrification were used to generate opportunities for negotiation. Likewise, in the **Case 2**, the lack of dialogue between the municipality and the community members was used to open the negotiation in order to put the projects in practice. In the **Case 3**, the conflicts were excluded in order to establish harmonious relations between the different stakeholders. Despite of this, after the design team left the community, there were conflicts between the public sector and the residents, who claimed the participation in the decision-making processes concerning an intervention of the public sector in the public square. In the **Case 4**, the conflicts were revealed during the official process that allowed the access of the space for the intervention, when the public sector imposed its power of ownership of the space through a long bureaucratic process.

### **Disrupting for collaboration**

In the analysed case studies, the materialization of negotiations occurred through the disruptive aspect of their design tactics. As discussed in the theoretical background of this thesis, the "disruptive aesthetic" defines the nature of design tactics able to reorient the perceptual space by interrupting the standard follow-up of a certain process of social interaction (Markussen, 2013). In the case studies, the disruptive aspect was identified when the design tactics were able to project social and infrastructural problems that have been hidden in the community is daily life, as well as when they were able to raise situations of dissensus among community members in order to activate community building dynamics (Barbosa et al., 2017).

Thus, it was observed in the case studies that designing disruptive tactics led to constructive negotiations at various levels, both with respect to individual perceptions of each participant and with regard to negotiations with the public sector and other organizations working in the city. Disruption effects in the worldviews, habits, and professional directions of the involved stakeholders were identified, as well as in the apparent stability and consensual control maintained by forms of centralization of power in each specific socio-economic context. Therefore, the disruptive design tactics expressed the political role of design agency when it was possible to enable relevant changes

on socio-material configurations through experimentation of more horizontal and less centralized participatory approaches.

Moreover, the design tactics of the case studies demonstrated their disruptive character in the subjective dimension of the participants through the activities of co-production of objects, spaces and events. For instance, the collaborative experience of seeking available local resources for allowing the achievement of feasible activities gave to the participants the opportunity to build up new perceptions and capacities on sustainable and collaborative ways of living, such as the daily habit of using the bicycle and the exchange of services within the neighbourhood.

By making activities together, the participants enjoyed the experience of "taking part" of a community building process by integrating personal capabilities into the collective projects. Furthermore, this experience also caused feelings of discomfort when it invited the participants to know more about themselves and their capacities (Deutsche, 1996). Therefore, the disruptive effects of the design tactics were revealed in the process of opening up consciousness about oneself, the other, the natural and the artificial environments that the participants have inhabited. In this scenario, the case studies suggested design tactics that allowed disruption in a balanced and inviting manner, without generating disgust, withdrawal or exclusion.

In this sense, the case studies suggested that the disruptive aesthetic experience can start from the practice of doing together when worldviews are shared through co-creation and co-production activities. This interpretation suggests that the collaborative aesthetic experience might require time to generate disruption in the subjective and social sphere of a group of neighbours. In that way, it also requires the expansion from the idea of disruptive aesthetics to collaborative aesthetic, in which the process of apprehending new meanings is linked to the social interaction in daily life experiences. In this sense, the collaborative aesthetic experience carried out by the case studies suggests the deep relationship between the process of co-creation and co-production through the collective experience of making things together (Bourriaud, 2009; Dewey, 2010).

**Cases 1 and 2** demonstrated that disruptive tactics in urban communities, including the construction and establishment of temporary furniture installations, artistic urban tactics and urban gardening activities were effective in raising visibility to problems and dormant conflicts, opening up channels for negotiations with the public sector (Barbosa et al., 2017). The construction of temporary furniture installations appears as a disruptive tactic to drive the community projects in a relatively autonomous way, since they started to be installed informally without the permission of the municipality. Urban

tactics were used in the two case studies, such as activities around public performances and paintings in the streets, which emerged from the lack of public services in each context. The urban gardening activities in public spaces were also disruptive tactics when they opened up the discussion about the co-production of food in public spaces (Barbosa et al., 2017).

The disruptive aesthetics observed in the **Cases 3 and 4** was revealed through the breakdown of existing social roles, which have taken part of the power relations in each of the analysed contexts. In the **Case 3**, social barriers between different capacities of the participants were broken-down through the practice of making things together, when all the participants had the opportunity to experiment different roles than their daily life routines in the community. In the **Case 4**, this achievement was revealed by the experience of collaboration between the agents from the public, private and non-governmental sectors provided by the international platform of the project “Actors of Urban Change”. In this case study, the experience of the construction of the common space provided adaptations between different ways of working and thinking each sector that integrated the core team of the project.

### **Local and global networks**

Looking the common as a source of knowledge, which is produced and shared by virtual communities through information technologies, the idea of resource is expanded to infinite possibilities between tangible and intangible things produced by communities that cross geographic borders (Hess & Ostrom, 2007). Considering this fact, another relevant aspect that emerged from the scientific analysis provided by this thesis is related to the importance and role of the integration of global networks in the construction of local collaborations. The case studies showed that the integration of global communities in the urban participatory projects might help the negotiation processes with potential partners that were later integrated in the local collaborative practices.

The case studies also demonstrated the potentiality of networking activities, suggesting that the participatory activation processes can include activities to produce local networks able to establish interconnections between potential agents, institutions and global organizations. Locally, each participant needs to have the opportunity to activate their own personal networks, in order to collect the necessary resources to develop the collective project. Linked to a global network, collective action might gain strength when it interconnects with other similar experiences in other localities, promoting exchange of positive experiences able to be replicated. The agents of all the analysed case studies participated in global networks that integrated large communities of interest in collaborative

practices for urban sustainability, which helped in the process of local legitimization, especially from the public and private institutions.

### 8.3.3 EMPOWERMENT

This category refers to the factors that contribute to the continuous process of social change and sustainability of collaborative practices. This involves the sense of belonging, collective ownership, and the autonomy to participate, negotiate, and collaborate. Specifically, this holistic category identifies how the analysed design agencies had supported collaborations in each context that interfered in community building. The analysis of the empowerment processes analysis observed in the case studies is discussed below according to the follow subjects: Temporality; Visibility; Appropriation effects; and Sustaining collaboration.

#### Temporality

The analysis of the case studies drew particular attention to issues of temporality of design practices with communities. The evidences showed that enough time might be necessary to develop commoning practices and sustainable collaborations, and it seems very difficult to sustain collaborative practices in temporary projects that do not present a strategy of continuity. Thus, the analysis of the case studies through the common discussion perspective calls the design to rethink the role of temporality in its practices, suggesting that the time used to produce commoning practices is different from the time of the "project". As discussed in the Chapter 3, commoning is a continuous experimentation process that has no defined end and needs ongoing designing programs that can sustain local collaborations. However, this idea conflicts with the schedules of design projects supported by funding institutions, which rarely support longer term projects and usually require immediate and tangible outcomes (Franz & Elzenbaumer, 2016).

This reflection emerged in the analysis of the effects of each case study. While the community design agency (**Cases 1 and 2**) was able to develop some degree of autonomy regarding the role of participation through the constitution of a group of people willing to continue the actions after the agents who initiated the process have left. The project design agency cases (**Cases 3 and 4**) achieved more ephemeral effects, evidencing dependencies of the creative agents that have left the community after the projects were finalized, presenting doubts about the sustainability of the activated dynamics.

Despite of these observations, the case studies suggest different forms of design agency dealing with time when involved with communities. **Case 1** showed the importance of ritualistic collective



activities in forming more integrated and strong interest groups, capable of sustaining local collaborations and constantly involving new participants. Additionally, the **Case 2** revealed that the daily coexistence between the external agents and the potential participants was able to create relationships of trust, which contributed to achieve gradually the active involvement of the residents in the activities of the project. Furthermore, the **Case 3** demonstrated that the quick and punctual application of an organized methodology was efficient to temporarily establish approaches between different stakeholders that normally have presented different positions and political interests within the neighbourhood. Finally, the **Case 4** revealed that it is necessary to build more flexible and transparent public regulations in order to support spontaneous participatory processes that can be developed by residents at the neighbourhood level, allowing them to remain active and able to integrate constantly new participants in the initiatives.

In accordance with these interpretations, the design infrastructuring approach suggests the importance of an extended temporality in design practice, where a longer relationship between designers and social practices can occur through long-term commitments (Björgvinsson et al., 2012). This perspective suggests that designers might not present very well-defined programs, but programs that are open up to the unexpected and the circumstances that can arise during the interaction with local initiatives. In this way, a program arises more organically through a co-creative process that requires time (Hillgren et al., 2011). According to this view, this process can provide the basis for the formation of independent agencies capable of managing and organizing more durable and procedural changes.

### **Visibility**

Another key element of empowerment revealed by the case studies was the ability of each of the project configurations to facilitate the process of "making things public", i.e. the means used by each participatory project to make visible local issues and available resources within the community. In general, the case studies demonstrated the potentialities of co-production of a common space as a way to raise relevant issues and find mechanisms to deal with them collectively in on-going community processes of change. However, the visibility of relevant issues was revealed in different ways between the two design agency configurations of the case studies.

The design processes carried out by the community design agency cases (**Cases 1 and 2**) promoted visibility to local problems, pressing local governments and city users to look up at community hidden issues, and consequentially opening spaces to find potential solutions in a collaborative way. In the **Case 1**, the residents were invited by the public sector to punctually participate in the process of

physical rehabilitation of the public square. In the **Case 2**, the project gave visibility of local resources, improving the resident self-esteem, generating local business opportunities, and the support of the municipality in carrying out other projects in the neighbourhood.

In the project design agency cases (**Cases 3 and 4**), it was observed that there was a special concern to give more visibility to the programs planned by the funding institutions of the projects than to the local issues raised by each social urban context. Despite of this observation, the design process carried out in the **Case 4** by the cross sectorial team was able to give visibility to the limitations of the regulation of the public spaces, as well as it was able to raise awareness regarding the role of the public sector in supporting bottom-up participatory initiatives instead of promoting new participatory processes from a top-down perspective.

### **Appropriation effects**

Moreover, the empowerment processes presented in the case studies were also revealed in the ability of each project in increasing the dynamism of local initiatives, regardless of the agents who initiated the collaborative dynamic. Here, the process of appropriation is related to the sense of belonging to a collective ownership activated by each project. In this sense, appropriation appears as an important ground for the continuity of the collaborative processes within the neighbourhood.

Thus, it was observed that these effects were more effective in the community design agency case studies (**Cases 1 and 2**) than in the project design agency case studies (**Cases 2 and 3**). For instance, in the **Case 1**, it was observed that the project was able to develop among the participants a sense of belonging to the community space. Here, the participants continued to spontaneously organize activities in the public square without much interference of external agents. Additionally, it was also observed that tools, such as the online and open calendar and the print/online manual “Como fazer ocupações regulares no espaço público”, were appropriated by the public, enhancing a decentralized management and use of the public space. In addition to this, this case study promoted the incorporation of collaborative processes in the daily life of the participants, which sought to live in the city in a more sustainable way.

In the **Case 2**, it was observed that local initiatives allowed the project to continue within the neighbourhood in a new format, i.e. through a community library with the punctual support of the municipality. However, this initiative faced challenges in transferring responsibilities to local agents, who demonstrated the need for more time to acquire capabilities to manage the community project autonomously.

In a different way, the project design agency case studies (**Cases 3 and 4**) revealed a process of appropriation through replications in other urban territories. Thus, it was identified more changes with respect to public policies than to local changes within each neighbourhood. For example, the designer agents in **Case 3** were part of activist movements who strove to implement a law that would allow the self-management of public squares of the city of São Paulo. The replication of community dynamics in the **Case 4** was verified by urban planning programs carried out by the municipality. In addition, it was verified the active participation of the agents (local NGO) of the project in an international network of urban social innovators, which supported the development of new initiatives in public spaces of Portuguese cities.

However, regarding the neighbourhood where each project was implemented, it was observed a relatively low degree of appropriation of the participatory practices by the community residents. This evidence demonstrated a certain dependence of local residents of the design experts to promote new activities in the place. In that sense, this situation might constitute a general risk for the design projects associated with the short time of their activities, revealing a low level of independence of community members to drive the development of new initiatives in the neighbourhood.

### **Sustaining collaboration**

Finally, the analysis of the case studies identified different expressions of empowerment between bottom-up and top-down approaches of the design agency configuration, suggesting insights to think design in transitional spaces where these two configurations can work together in order to produce and sustain commoning practices. For this to be achieved, it seems necessary that the analysis of the potentialities and weaknesses of both design agency configurations can intersect each other.

For instance, the analysis of the community design agency configuration suggests more flexible design programs to achieve community building, able to open up space for adaptations, improvisations, and flexible timeframes. In certain circumstances, this situation might allow capacity building towards the development of meaningful relations that might contribute to the continuation of the collaborative practices in a more autonomous way. In turn, the analysis of the project design agency suggests that the development of tactics and strategies able to interconnect local residents with international networks and institutional structures might be of major value to address capacity building in a more systematic way.

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Finally, the outcomes of the field studies in connection with the theoretical framework of the present thesis indicates that the effectiveness of community practices to promote wider and more sustainable changes depends on the combination of bottom-up and top-down measures. In that sense, this thesis argues that an effective interplay between different forms of governance and power might facilitate the actual implementation of transition spaces, where bottom-up and innovative participatory initiatives can be developed through top-down mechanisms of protection, incentive and regulation (Barbosa et al., 2017).

## **PART IV. LEARNINGS**

This research work had two primary concerns on: understanding collaborative experience in collective social experiments and contributing to Design research. Therefore, this part of the thesis is divided into two chapters. Chapter 9, "Contributions", presents the three core contributions of this thesis, whereas the final Chapter 10, "Conclusion", presents the relevancies of this study in the production of knowledge in the field of Design Research, as well as the limitations of the present research and future opportunities for integrating this work in applications in practice.

## Chapter 9. CONTRIBUTIONS

This chapter presents the results of this research project through three core contributions for Design Research. First, this work points out the new theoretical framework for understanding "collaboration for sustainability". Second, this study highlights a set of strategical insights for "design agency" in building collaboration with communities. Third, this research contributes to the development of a theoretical-practical proposition of "designing collaboration for commoning".

## 9.1 COLLABORATION FOR SUSTAINABILITY

The first contribution of this thesis provides a scientific understanding of the elements of a collective action from the common discussion, in which collaboration emerges as a complex process of negotiation at both the individual and collective levels. Based on this understanding, this study discussed the power relations that surround the agency of design with communities in efforts to build more sustainable local collaborative processes. Thus, the transdisciplinary literature review developed in the first part of the thesis opens up opportunities for design research in the exploration of different design agency configurations, in which designers and non-designers associate themselves and play in the dynamics of power towards the construction of community collaborations.

### Sustainability

In recent years, the collapse of the economic system and the inability of the democratic systems and states to address complex social issues that have been raising with it have caused a growing adherence and unfolding of the common discourse both at the macro- and micro-political levels, as well as in the economic domain. On this background, the common theory has been serving not only as a source of understanding of the impacts and causes of the socio-economic crisis in which we are immersed, but also as a way to bring critical elements to better understand possible alternative lifestyles that can be created by collective actions in various parts of the world. The theoretical discussion of this research started from the exploration of the transdisciplinary character of design research, used here to better understand the challenges that surround the concept of collaboration for sustainability, as well as to find out potential interlinkages between theoretical concepts that surround processes of co-creation with and for communities.

Therefore, the conceptual exploration of the common theory helped to establish the boundaries of this study towards the understanding of sustainability practices. This research work characterized the constitution of a common according to three elements: resources, communities and social interactions. Indeed, each of these elements is directly related to the three pillars of the classic definition of sustainable development respectively: environment, society and economy (Sachs, 2002, pp. 29–30). However, the three common elements mapped in this study open up the possibility of working sustainability in everyday people's lives, rather than only as a political discourse that might dialogue with top-down measures to reduce environmental risks. In this perspective, the concept of common(s) brings individuals and their everyday actions closer to key agents/factors that govern the economy and its consequences in our everyday life. On this background, the economy can be partly

understood as a set of dynamic social interactions that can be catalysed by “commoning” practices, which are responsible for the exploitation, production and consumption of resources and goods necessary for a collective life. Society in common is understood as different communities of interest with autonomy to define rules and values that lead to more sustainable consumption habits linked with the real daily life needs. Additionally, the natural environment is revealed in commons as the different goods that give meaning to life, which are not restricted to material things or natural resources, but also social relations based on cooperation, exchanging and collaboration.

In this way, commons have its foundations in commoning practices, which create mechanisms and strategies that enable people to share ownership and control of material and immaterial resources. Commoning practices also suggest a better understanding of collaborative experience as a complex process of social interactions based on continuous negotiations. In a practical perspective, commoning practices were defined from the following conceptual aspects: “co-production; (re) production; self-organization; decision-making processes in peers; internal mechanisms of mediation and needs-satisfaction” (Page 36).

### **Urban commons**

On the background of the common theory, the city was visualized in this work as a broad territory of dispute of power that directly influences the consumption and distribution of available resources, as well as the access to information and basic human rights. On the one hand, cities and urban communities can experience diverse stages of conflicts, segregation and intolerance. On the other hand, cities might constitute a fertile soil for innovation, creativity and public participation, presenting favourable conditions for the production of common practices. Indeed, the contemporary city is constructed by the interconnection of micro-practices of commons, which might cause different impacts at the decision-making, political and economic levels. In this perspective, to be effective, urban commons might be framed according to the dynamics of changes in community conditions along time, place, working conditions and social relationships, i.e. factors which compound a common urban life. On this background, this thesis targets to contribute to understand urban commons as potential sources for social innovation, since they appear as transition spaces for democratic negotiations between citizens and different levels of power co-existing in cities.

### **Challenges**

Nevertheless, the political meaning of common, commoning and collaboration runs constantly the risk of being exploited by interests of governmental or market-driven power nature, removing the potentiality of these practices to address societal transformations for the common life in the city.



According to the literature and the empirical analysis developed in this research, on-going commons face three main challenges:

- **Accessibility:** the limits that a common can assume by delimiting boundaries that decide who can and who cannot participate and have access to available resources.
- **Legitimacy:** the incorporation of common elements by institutions running the risk of becoming closed and lose their potential for transformation.
- **Sustainability:** the need of mechanisms that support the social and material capital of existing commons, articulating their effects at both micro- and macro-political scales.

### **Opportunities for Design**

This research has visualized opportunities for design knowledge and practice in the involvement of the design agency in addressing ongoing commoning practice issues, in order to better understand the challenges of building collaborations in urban spaces. In this research perspective, design practices are invited to move towards not only the understanding of technological issues, but also to address social capacities that involve the production of commons, which might target to improve social practices that support existing commons and its resulting commoning practices.

Nowadays, emergent commons are activated by the development of information technologies that increasingly connect capacities and catalyse environments that everybody can design. This situation calls for a re-articulation of the practice and knowledge within the field of Design. In the scope of these transformations, emerging design cultures invite designers to mingle with non-designers in the formation of new ways of thinking and doing design. In this scenario, the notion of "user" in design might be understood as individuals who produces and establishes complex social relations, not only as a mean to optimize projected products and services. Moreover, the notion of "form" in design might be understood as situations for social relations and encountering catalysed by design tactics.

Indeed, the transition in the field of Design from the product development to the socio-technical orientation has been bringing new challenges for designers. Here, designers move from the role of problem solvers to become mediators, political agents and sense makers concerning the conditions to address social change in community environments. In that sense, this research project dialogued with three design research approaches in which the professional design agency concentrates efforts on "making things happen"; "making publics" and "making things public" (Figure 5). These approaches respectively suggest that design processes are used for prototyping, articulating and

infrastructuring issues in the formation of communities. In dialogue with these critical approaches, this study argued that the development of design knowledge requires a critical discussion on the conditions that are able to create collective agencies and their power to change something in urban communities.

Thus, this study suggested the need for design agency to become aware of the power structures that support design practices and that directly influence societal changes suggested by designers through community collaboration. Moreover, according philosophical conceptions about the production of power, it is possible to understand that collaboration might be expressed in the following two different levels:

- **Collective:** In this case, collaboration as a negotiation process takes place in the establishment of common values that generate trust and reciprocity towards the development of collective actions, as well as towards negotiations at the political level between different commons and other spheres of power in the city.
- **Individual:** In this case, collaboration as a negotiation process occurs in the construction of a public sentiment through disruptions in standardized subjective structures, involving feelings, habits and everyday actions. Indeed, the negotiation in a collective level depends on the individual process, which lays the foundation for long-lasting changing processes.

According to this understanding, this thesis argues that collaborative processes can gain more autonomy and sustainability when there are opportunities to exercise the negotiating capabilities of the participants, opening up ways for the creation of mechanisms of decentralization and distribution of power. In order to explore this argument, the intersection between power and design was explored within the paradigm of design aesthetics, suggesting the close relationship between the aesthetics and collaborative experience. This discussion resulted in a conceptual map (Figure 7) that characterized collaboration as a “disruptive, total and relational” experience. In this sense, this approach intends to contribute with the development of new ways of thinking about designing collaboration for commoning through the interplay between the process of “making, revealing, interacting, adapting, negotiating and belonging”.

## 9.2 DESIGN AGENCY FOR COLLABORATION

The second contribution of this thesis provides a set of insights for design practice based on the outcomes of the four case studies, which characterized the co-production of common spaces through different configurations of design agency. Here, it was discussed the notion of design agency as a way to think about power relations through design in the context of communities. In this thesis, design agency was explored as a collective energy activated by designers and non-designers, who use design skills in the process of building collaboration in order to distribute and replicate power among the participants of community projects. Rather than focusing on specific skills of designers, design agency is considered something that flows and influences others, generating micro ruptures in consolidated power structures of thinking, doing and living.

The analysis of the case studies has resulted in a better understanding of the dynamics of power on building collaborations in communities, as well as a set of insights for design collaborations with communities. The results showed that power is a cyclical process, rather than a stable structural thing, being necessary to maintain associated dynamics that necessarily include conflicts between different interests among different stakeholders. Therefore, the case studies suggested that the dynamics of power need to be constantly activated with the intention of avoiding dominations and centralisms in the construction of collaborative communities. This understanding opens up opportunities for design practice to facilitate the construction of another kind of power dynamics able to sustain collaboration for social change. In that sense, this work suggests that the design role might move from the power to activate collaboration to actually performing the power of collaboration in the form of situated social-material configurations.

The cases studies were characterized as "urban commons" with the objective of developing community relations able to create environments for social innovations. In this context, commoning practices were materialized in "common spaces" through collective experiments taking efforts to create social mechanisms of self-management through flexible collective agreements. Thus, common spaces were characterized as dynamic social experimentation systems that are open to develop new affective relations with the materiality of spaces, as well as with the process of collective construction of this space.

Although the analysis of the case studies considered the particularities of each socio-economic context, the cross-analysis of the case studies suggested a set of aspects that go beyond the specific conditions of each case study, in order to present insights for designing collaboration in urban

contexts. Thus, taking into account the research project results, this thesis suggests 10 core categories of understanding design agency for collaboration as described below:

1. **Open project:** Design practices might adapt the project focus during the process of making things together according available resources, enhancing the co-creation processes more interconnected to the local needs;
2. **Levels of participation:** Design practices might target on the integration of different modes of participation, avoiding dominations of certain forms of participation in a collective action;
3. **Local resources:** Design practices might focus on increasing the effect of community building activities by incorporating local resources in order to make urban communities more independent of centralized systems.
4. **Making meaning:** Design practices might promote collaborative experience among different local capabilities, seeking new meanings through the process of mutual making and learning together.
5. **Networks:** Design practices might focus at connecting community members locally and globally, including a wide range of different local actors and different levels of power, as well as global communities.
6. **Conflicts:** Design practices might include existent conflicts as relevant sources to construct sustainable collaboration, as well as to maintain the dynamics among different forces that compound a community.
7. **Mediating:** Design practices might concentrate efforts in creating mechanisms of mediation between different levels of power that can open up flexible spaces of negotiation for commons.
8. **Visibility:** Design practices might give visibility to dormant problems and invisible local potentialities, arising negotiations to enable procedural solutions for the common good.
9. **Appropriation:** Design practices might target at creating tools that can be appropriated, adapted or re-defined by local dynamics for building sustainable collaborative communities.
10. **Temporality:** Design practices might connect the time of design intervention with various other temporalities that integrate a collective action.

### 9.3 DESIGNING COLLABORATION FOR COMMONING

The third contribution of this thesis suggests the conceptual map "designing collaboration for commoning" (Figure 64), which was produced from the intersection between the outputs of the empirical analysis and the concepts that this research work dialogued with. Designing collaboration for commoning is presented as a way to provide a better understanding of the complexity of the collaborative process, in which the design agency articulates itself in different ways according to different socio-economic contexts. The conceptual map suggests the importance of increasing the degree of critical understanding about how design research looks at the intrinsic power dynamics that constitute the production of collaboration. This contribution intends to challenge the paradigm of social change in design processes with communities, inviting design research and design practices to think about the conditions that are built in any design agency to make something different.

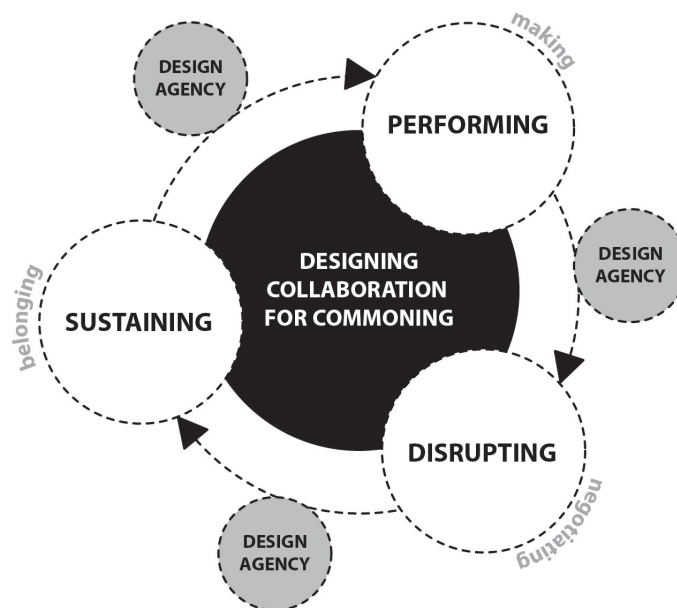


Figure 64: Conceptual map of Designing collaboration for commoning.

Figure 64 presents the conceptual map which points out three main categories of understanding collaboration in design research, namely: “performing, disrupting and sustaining”. In observing the interactions between these key different processes, the design agency for the formation of sustainable collective actions might be constituted in the interplay between social experimentations of “making, negotiating and belonging”, and fostering the development of local collaborative cultures. These processes are better explained below.

- **Performing**

This category points out that the ground for forming a collaborative action might require sensitive links between common desires and the existing resources in particular contexts that can open up possibilities for the development of common projects and achievements. In this sense, participation is linked to the process of constructing new meanings through collective rituals based on conviviality, opening up common spaces of interaction that can promote situated ways of making things together. Moreover, participation might be performed through the personal satisfaction of integrating personal capacities into a group for a common purpose. This dynamic suggests that design agency integrates flexible mechanisms including different levels and forms of participation, which might contribute to the continuous integration of new capabilities and skills through potential agents, who might be able to continue catalysing the collaborative processes.

- **Disrupting**

It is important to acknowledge that the collaborative process might not be established as a consensual interaction, instead through agonistic situations that enable constant negotiations. Agonistic situations through design tactics might be able to cause ruptures and dissensus between the different subjectivities and interests of a urban community. In this sense, design agency might act through disruptive urban tactics that can interrupt the standard follow-up of a process both at the perceptual level of each participant, and at the collective level of a group. In the individual level, the disruptive design tactics might generate dissensus in the subjective structures, contributing to the awakening of emotions, self-awareness and consciousness about the other participants and the environment. In the collective level, the disruptive design tactics might be able to stimulate the visibility of hidden common issues, as well as to stimulate the production of new forms of collective organization able to deal with these issues and to negotiate with other collectives and institutionalized spaces. Moreover, the disruptive effect in design practices should be an on-going process, in which the apprehension of new meanings can be produced essentially through constant processes of negotiation.

- **Sustaining**

This category points out a reflection on the sustainability of the collaborative process from certain conditions, which may take different directions and levels of empowerment. It has been identified that the production of more durable socio-material structures for social change requires flexible design programs that should be open to continuous adaptations in long-term commitments with

stakeholders. The construction of common spaces raises the need for projects that offer time for the confrontation of ideas, the formation of public sense and the reinvention of subjective structures towards the formation of more durable cooperation capacities. Thus, the design agency presents a flexible character by constantly opening itself up to social experimentations that allow readjustments in the design programs, never focusing on a finished end product, but rather in a continuous process of change. In this sense, existing common networks can be recognized, strengthened and expanded through design agency, enabling more systematic changes. Finally, the map suggests that the design agency might act on the frontiers of collaboration by inviting ongoing collaborative initiatives for experimentation or proposing the construction of specific collective actions for a common good.

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The presented conceptual framework suggests interactions between the three processes for designing collaboration for commoning. This conceptual proposal can be viewed as a comprehensive ground to understand more effective design processes in urban community environments.

## **Chapter 10. CONCLUSION**

This chapter presents the overall outcomes and final conclusions of this thesis. First, it addresses reflections to the research questions elaborated in the conception of this scientific work. Second, it discusses the contributions and implications of this work for the field of design research and design practice. Third, this chapter points out the limitations of this study. Fourth and lastly, the overall conclusions of this thesis suggests strategies for future research development in the field of design for urban commons.



## 10.1 ADDRESSING RESEARCH QUESTIONS

The overall outcomes of this work address the following three research questions in the foundations of this thesis:

1. How does collaborative experience emerge from commoning practices?
2. How can design agency reflect the power dynamics of collaboration?
3. How can design practices articulate collaboration for commoning?

The first conclusion addresses suggestions on how the collaborative experience emerges based on both the theoretical and experimental work conducted with urban communities in Brazil and Portugal. The second conclusion explains how design agency orientation reflects the challenges of participatory approaches between different actors in four specific case studies in Brazil and Portugal. Finally, the third conclusion suggests how design practices effectively interlink collaborations, considering the existing power dynamics and emerging design agency configurations.

The specific elements of these conclusions in response to each research question are described below according to each of the three formulated research questions.

### **Collaborative experience in commoning practices (1<sup>o</sup> research question)**

The critical perspective of design for commons in enhancing urban transitions developed along this thesis have provided new scientific knowledge to support the understanding of some relevant aspects about collaborative experience in the formation of urban communities. In this thesis, commons are revealed as processes of social experimentation that are able to influence political discourses, causing small ruptures in the established patterns of collective life. In this perspective, if commons are constituted essentially by social practices, conflicts are also found in the constitution of commons or communities. According to the common theory, a collective action can be understood as an arena in which different interests and levels of power participate in the construction of collaboration. Thus, from this perspective collaboration arises as dynamic processes of negotiation open both to conflicts and consensus.

This understanding was explored in this research through case study analysis of collective practices that took place in public squares in urban environments in two Portuguese speaking countries, Brazil and Portugal. The results of the exploratory phase of this study identified five expressions of commoning practices in public spaces: “poetic, communicative, activist, collective and strategic”.

These categories classified different creative approaches that have striven to produce commoning practices through social experiments of collaboration, sharing and the coexistence of citizens in building new perceptions about local problems and solutions to the urban common life.

Moreover, the analysis of the exploratory cases questioned the concepts of "user" and "form" in design theory towards social innovation processes. Here, it was concluded that "user" is better understood as an individual produced by complex social relationships and circumstances rather than individuals that have to adapt to certain design concepts; and "form" can be viewed as a set of social relationships performed and catalysed by design practices rather than a set of semiotic properties to achieve predetermined purposes.

Therefore, urban collaboration was framed through a set of negotiation processes, including the social production of power, which can be overviewed according to the following two main dimension:

- **Individual**, when it catalyses awareness, affectivities, sensitivities, new perspectives and changes of habits for the construction of a more collaborative and responsible urban life;
- **Collective**, when it provides new capabilities for social groups in the formation of integrated communities that can develop self-organization mechanisms and skills to sustain local changes over time.

On the background developed by this research work, the notion of power was understood as a dynamic process that can be performed by anyone involved in a collaborative process. In this sense, it is important to consider the social implications of the position of designers when dealing with the development of collaborations in communities. Instead of adopting a neutral position, designers might present themselves as additional players in the establishment of cooperation, participating in existing power dynamics in each community context that they work in. Therefore, this thesis concluded that design practices for commoning require temporary spaces that allow dynamic negotiations, involving different capacities and power relations within the community and outside of it. This conclusion opened the field of explorations to the response to the 2nd research question as described below.

### **Design agency and power dynamics (2° research question)**

Taking into account this understanding about the notion of collaboration, this study explored the idea of "design agency" in order to rise new knowledge on how design practices can facilitate effective community collaborations. Thus, design agency was characterized by the articulation of designers

and non-designers for the construction of collaborative communities. Conceptually, design agency was explored as a way to critically think about power through design, identifying the implications of the structures that sustain design practices when designing "in communities" or "with institutions" in the production of collaborative practices for sustainability. Therefore, this research analysed more in detail two main orientations of design agency, i.e. the "community" and the "project", where it was observed that design knowledge can work in the integration of the skills of designers, users, and institutions in order to activate processes of social change.

Therefore, this research work explored collaboration through four different configurations of design agency in four case studies conducted in different urban socio-economic contexts. The analysed cases have revealed that in the cases of the Brazilian and Portuguese interventions both configurations of design agency (i.e. community and project) contributed to social change both through the activation of local collaboration through the co-production of common spaces. However, the analysis of the "engagement, negotiation and empowerment" of the design process of each project revealed different ways to explore the established power dynamics in the formation of collaborations.

In the case studies where "community design agency" was dominant, the collaborative processes were established from a bottom-up perspective. In these cases, the development of collaborative practices presented challenges related to the barriers of participation towards the integration of local agents into more autonomous collective organizational systems. In the case studies in which "project design agency" was the domain form used to develop collective actions, collaboration was built in association with top-down forces. Here, this approach revealed challenges in the positioning of the public sector to support or suggest more horizontal and autonomous participatory practices in the studied design projects.

Overall, these two participatory approaches of design agency revealed the power relations that constitute the urban environment, especially in the ways in which institutions and civil society position themselves according to social inclusion and community building practices. Moreover, the different configurations of design agency showed that power through design is a cyclical process rather than a stable structural system that determines certain orientations for social change, such as those in the interests of the community, market or public institutions.

Here, design agency might play a key role in enhancing capacity building through the activation of community motivations to address common interests. In this thesis, the case studies brought up the possibility of thinking design agency as an energy for social transformation that is collectively built

rather than a particular kind of change defined by designers. This idea of design agency has shown the need for design to rethink ways of building proper forms of power that can actually sustain the dynamics of local changes. In this sense, the design agency moves from the role activating participation in collaborative activities to play a key role in performing the power of collaborations in situated social material contexts.

In the dynamics of power that shape a collective action occurred in the case studies, including designers and non-designers, it was possible to observe that the professional design agency has emerged as a creative force legitimized by certain structural conditions such as time, financial support and social capital available to develop sustainable grounds for building collaborations. Therefore, this thesis has shown that designers can play a strategical role in the activation of key agencies involved in each specific collaborative process towards the formation of sustainable urban community environments. It was observed that this activation process may include flexible design programs that enable community agents to recognize themselves in their own capacities with the aim of creating a dynamic environment open to social inventions. In the case studies analysed in this thesis, the designer strived to play the role of facilitating the exercise of negotiations among the participants through “dialogic, agonistic and democratic” experiments.

Moreover, the case studies showed that rather than facilitating shared decision-making processes, designers should have the role of articulating new forms of emerging public matters of concern that might be able to catalyse localized changing processes. In this sense, the agency of designers should be more effective when they work as activators of mechanisms that facilitate continuous processes of distribution of power. Indeed, it was observed that a diverse range of agencies can have voice and construct different modes of social change in specific local realities. Thus, it is possible to conclude that instead of proposing to empower others, designers might strive to acquire sensitivity to activate existing power dynamics according to the particularities of each socio-economic context. The previous conclusions serve as a background to support the response to the 3<sup>rd</sup> research question described below.

### **Design practices for commoning (3<sup>o</sup> research question)**

The analysis of the case studies based on the categories of “engagement, negotiation and empowerment” of their design process highlighted design agency through “performing, disrupting and sustaining” aspects. This thesis points out these aspects as key catalysts of collaboration for commoning in urban environments in Portugal and Brazil. The overall analytical map illustrated in

the last image of Figure 64 (Chapter 9), suggests that design collaboration for commoning should pay attention to specific challenges:

- **First**, the performance of participatory design methods in the formation of collective action and collaboration requires opportunities for “making things together” in order to generate subjective interferences in the participants and to facilitate the generation of new common meanings.
- **Second**, collaborative work might involve the development of the political role of design, which can be demonstrated in catalysing spaces for negotiation by “making things public”, i.e. design actions might target the objective of giving visibility to local issues in order to address community needs. Then, this process might catalyse the formation of creative publics (“making publics”) with capabilities of enhancing local innovation processes.
- **Third**, the analysis mapping of the case studies proposes to rethink the temporality of design practices in urban community environments. This effort should be considered in order to sustain collaboration that addresses social changes over time through the constitution of socio-material assemblages with capabilities of “making things happen together” continuously.

Considering these design challenges, and according to the analysis of the case studies worked in this thesis, this study suggests that design agency might be constituted in the interplay between “making, negotiating and belonging” processes in the formation of a sustainable collective action committed to local changes. Therefore, this thesis suggests design opportunities on the “frontiers of collaborations” between bottom-up and top-down dynamics, where there is a constant risk of reinforcing established social boundaries. This can be observed if collaboration is activated from within or outside of a socio-material collective.

It was observed that the construction of collaborations from a bottom-up perspective has usually the potential to cause disruptions in community relations, giving visibility to problems and leading to the creation of new alternative lifestyles. However, it also has been identified that this approach runs the risk of ending up in a closed and isolated system by reaffirming existing power relations. Similarly, building collaborations from a top-down perspective can trigger regulatory and policy changes, but it also runs the risk of instrumentalizing the collective experience according to certain political and

economic interests, withdrawing the authenticity of community participatory process to eventually promote local changes autonomously.

Therefore, this thesis suggests that design agency might be more effective through “designing collaboration for commoning” when it is located in the “frontiers of collaboration” performed in transitional spaces which might have the potential to catalyse transitional practices for common welfare. In the frontiers of transitional spaces design agency can become deeply involved with ongoing social initiatives by inviting different stakeholders to collaborative experimentations. In this conceptual proposition design agency can facilitate the constant flow of entries and exits of potential participants integrating different levels of participation in the community projects. In that way, this thesis concludes that design agency presents a high potential to enhance changes towards the construction of more participatory urban environments, embracing different ways of thinking and acting in the city.

Finally, this research suggests that “designing collaboration for commoning” demands that design researchers incorporate a more comprehensive position on the dynamics of power that constitute both the design practice itself and the situated social dynamics with which design practices work with. In this sense, designers need to be aware of the various forms of collaborative processes that can be undertaken. Although design intentions are oriented towards specific achievements for common good, the meaning of collaboration can assume different directions according to local circumstances related with the financial support of design projects and the interests of different stakeholders involved in these projects. In that way, by looking more comprehensively and critically at the different possibilities of formation of design agency, design researchers can incorporate new knowledge in the analysis of the power relations that build the design practice. Here, design research may strive to identify what are the core elements of collective actions that might constructively interfere in “engagement, negotiation and empowerment” processes of emerging communities.

## 10.2 DESIGN RESEARCH AND PRACTICE

Based on these research findings, this thesis states the need for the development of new design approaches that critically include the power dynamics in order to increase the possibilities to effectively sustain collaborative processes in community building practices. Thus, the conclusions of this study have implications both for design research and for design practice. Regarding the design research, it catches the attention for the adoption of proper research methodologies from different

disciplines to produce new design knowledge in order to better understand the common human experience and not just the individual human experience, whereas in the scope of design practice, this research encourages professional designers to take a more comprehensive view of the complexity involved in collaborative practices rather than focusing on solving problems through a certain vision about collaboration.

## **Design research**

The transdisciplinary approach adopted by this research provided a set of insights to design researchers regarding the exploration of concepts from social science, economy, aesthetic and urbanism fields. This thesis suggests that the integration of other areas might contribute to the improvement of the understanding of design processes when dealing with complex collaboration issues in urban community settings. In this sense, this work opened up the field of possibilities of discovering through the use of methods from other disciplines in a designerly way of collecting and analysing relevant information for the construction of the object of inquiry.

Therefore, the starting point of this thesis was based on the immersion in the empirical field looking for collaborative experiments outside of the design area. This condition led the researcher to question the paradigm of change in the design discipline as a way to seek for effective strategies to address common problems. In response, this research states that there are no final solutions when design engages with communities. Actually, design practices might need to incorporate the particular complexities that constitute each community with the aim to facilitate the production of self-sustained continuous and contextual changing processes.

The results obtained from the analysis of the qualitative data using the coding methods was relevant to extract inconsistencies, conflicts and different perspectives within each case study observed. Moreover, the designerly way of coding through the use of visualization tools (e.g. images, sketches, diagrams, mind maps and comprehensive graphics) contributed to improve the understanding of the common human experiences studied. In that way, the methodological approach applied in this thesis has generated the “cyclical coding model”, which can be adapted to other design research studies in the analysis of different discourses in collaborative design projects. The model allowed constant interactions between practice and theory, as well as the constant validation of information generated along the codification process. In addition to the use of software tools, the model also integrated the use of manual tools, allowing the construction of visual maps that helped the researcher to better analyse the potential of collaboration processes of the case studies. Finally, this approach

supported the transfer of relevant information of the practices from particular contexts to a more comprehensive and conceptual level.

### **Design practice**

Additionally, the implications of this research in design practice are revealed in the insights generated by the outputs of the case studies, which have suggested that designers must strive to be more aware of the structures that sustain their practice and its implications in order to address relevant social changes in people's lives. Thus, the outputs of the case studies have suggested that designers might be able to find key opportunities on the “frontiers of collaborations” between emerging design agencies. Here, designers might work with other capabilities in order to follow up community projects that generate sustainable transformative processes. In that way, this thesis suggests that designers might position themselves at the edges rather at the centre of the collaborative process. In that way, they might be able to use their tacit knowledge in order to perceive and activate the potentiality of each agency involved in a collective action. Finally, this dissertation shows that designing collaboration requires spaces that allow these agencies to be visible and active in order to emerge issues, motivations and desires linked to each community's socio-economic context.

## **10.3 LIMITATIONS OF THIS RESEARCH**

In the overall conclusions of this thesis it is important to highlight its limitations, specifically related with the collection of information during the field work campaigns. Here, the qualitative data was obtained mainly through interviews with the stakeholders of each project after all of them had already been implemented in their respective urban contexts. The three profiles of interviewees provided relevant information, being possible to obtain different perspectives about each project, as well as the conflicts and challenges of each collective action. However, this work would be improved if the researcher would have had the opportunity to follow the whole development of the projects, i.e. from their conception to final execution.

Nevertheless, since the project occurred in different urban contexts located in two different countries, difficulties in combining the calendars of the researcher and the on-going projects were among the main reasons to address the full attendance of the whole cycle of the four projects. Moreover, the research project had a limited time span and financial resources to allow the researcher to carry out more detailed fieldwork with other techniques such as ethnographic observation or the application of design experiments with the participants. Thus, the different community projects were being



selected along the timeline of the field explorations, as opportunities to formulate and explore the research questions of this work.

The referred limitations can be justified by the challenges found in the selection of the methodological approach of this study through mapping contemporary practices in real-life contexts without any control of the researcher. Here, the researcher based the selection of the exploratory case studies according to the intuitive ideas combined with circumstances made available in the beginning of this study. After this exploratory phase, the researcher selected, in a more systematic manner, the four case studies for detailed analysis. On this background, this thesis was conducted through an inductive process involving a simultaneous interplay between the theoretical formulation and the development of the field work.

However, it is also important to point out the challenges associated with the involvement of the researcher in the community experiences. This involvement is not usually that meaningful within the field of "Design research for studies", which characterized the type of this research work. In this field the researcher is an observer who intervenes little in the social reality of communities, seeking to bring new theoretical insights for design knowledge by observing community initiatives. On the one hand, in this kind of research project, the presence of the researcher during the implementation of the projects (case studies) can bring a closer look on the collaborative process. On the other hand, a deeper involvement of the researcher within the projects in question would prevent a more neutral view to perceive the relevant nuances in the foundations of community collaborations.

## 10.4 FUTURE DIRECTIONS

Future studies in this area might include an enhanced cross-referencing of different expressions of "design agency". This approach might support researchers to build up a deeper understanding of the power of design when designing with urban communities. Furthermore, additional in-depth studies of the different kind of design agencies involved in the formation of local collaborations may contribute to better understand the performance of designers through the various positions and roles that they can play in this context. In line with this, it seems that a deeper involvement of researchers with ongoing design agencies is required in order to allow closer observations and interactions between the researchers and ongoing processes of social change in urban communities. Moreover, besides seeking to organize the design experience in a very systematic way, it seems necessary that design researchers need to use their tacit knowledge more to incorporate the complexity of social

interactions. In that way, it might be possible to suggest scenarios for more flexible and adaptable design process addressed for specific contexts.

Furthermore, this thesis also envisions research opportunities in understanding how design can strengthen existing urban common experiences through interlinking strategic actors from public and private institutions. This opens up the way for future research concerning an effective use of participatory design tactics in systematic public policy programs, which can be addressed by the planning departments of the municipalities. As such this research work showed that the agency of the public sector in building more participatory urban environments needs to be located more in the “frontiers” of ongoing commoning initiatives by using more flexible devices for supporting them, rather than in the centre of decision processes. Such institutional public instruments should allow these bottom-up collective initiatives to continue to promote local changes in their own neighbourhoods through autonomous decision-making processes.

Hence, this research work suggests that the public sector has a vital role for creating transitional spaces that can link strategic actors through both bottom-up and top-down processes. This work has shown that the combination of these approaches can decrease the risk of micro practices to close themselves by creating boundaries with the outside world or even by disappearing with the lack of social capital and public investment. In this sense, the transitional spaces in question might be able to allow communities to create value based on the outputs of micro and collective initiatives by multiplying their practices in different urban spaces and publics in a more strategic way.

In this perspective, this thesis concludes that a deeper exploration of the idea of “frontiers of collaboration” is demanded by “Design research for experimentation” approaches. This extended work might substantially contribute to create new research design tools that address critical societal challenges in terms of collaborative community building. Such understanding depends on design experiments that rather than aiming to solve problems, might intend to bring new dimensions of understanding design practices. As a consequence, this thesis concludes that novel design approaches for building sustainable communities might suggest sequences of actions and activities to build more solid foundations for common practices in order to promote social inclusion and behavioural changes. In that way, “designing commoning” should be viewed more as an interactive process and not as an end goal. As a result, the construction of sustainable communities might involve processes that can sustain collaboration. Here, these processes might focus on reducing the risk of using collaboration as something that can be used to serve specific institutional interests, where community projects might run the risk of remaining as temporary actions without any long-term strategy for their continuity.

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## ANNEXES (CD-ROM)

### 1. PUBLICATIONS

1. Barbosa, J., Wiltse, H., & Mota, J. (2017). **Power of Design Agency in Building and Sustaining Collaboration: Two Cases in São Paulo**. In *Proceedings of Nordes 2017, Design+Power* (Vol. 7, pp. 1–9). Oslo, N: Nordic Design Research. Retrieved from <http://www.diva-portal.org/smash/record.jsf?pid=diva2%3A1117188&dsid=-3416>
2. Barbosa, J., Reimer, M., & Mota, J. (2016). **Designing participation for commoning in temporary spaces: A case study in Aveiro, Portugal**. In *Proceedings of DRS2016, Design+Research+Society* (pp. 1–17). Brighton, UK: DRS Design Research Society. Retrieved from <http://www.drs2016.org/393/>
3. Barbosa, J., & Roda, R. (2015a). **Design Activism in new scenarios for emerging cities: Two projects in Brazil**. In *Proceedings of Nordes 2015, Design Ecologies* (Vol. 6, pp. 1–6). Stockholm, S: Nordic Design Research. Retrieved from <http://www.nordes.org/opj/index.php/n13/article/view/443>
4. Barbosa, J., & Roda, R. (2015b). **Ephemeral public spaces in the reinvention of affection: Three urban experiences from Brazil**. In P. Elmlund (Ed.), *Proceedings of The Future of Places III, Public space in the new urban agenda*. Stockholm, S: Sustasis Foundation. Retrieved from <http://www.sustasis.net/FOPIII-Academic-Papers.html>
5. Barbosa, J., & Roda, R. (2014b). **Strategic Design for urban performances: Empowering collaborative platforms for sustainable cities\_Phd project**. Poster in Proceedings of Spring Cumulus Conference. Aveiro, P: Cumulus / ID+ Instituto de Investigação em Design, Media e Cultura.
6. Barbosa, J., & Roda, R. (2014). **Design Social e Performances Urbanas. Existe um espaço para a mediação?** In *Proceedings of UD14* (pp. 209–214). Aveiro, P: ID+ Instituto de Investigação em Design, Media e Cultura.

### 2. INTERVIEWS

### 3. CODING PROCESS