Borrowed practices: renew or hold

Examining the potential for the spreading of libraries of things in Mexico City through social practice

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Abstract:

Libraries of things, non-for-profit physical spaces where people borrow objects they would otherwise buy, have spread over Europe, the U.S., and Canada and have now emerged in Mexico City, where challenges to sustainability such as increased consumption levels and insufficient waste management abound. Collaborative economy initiatives like libraries of things are exposed as more sustainable alternatives to conventional patterns of satisfying human needs. Practices related to CE are not foreign to citizens in Mexico City as historical traditions of trade and barter and circulation of used objects have remained vibrant in convergence with monetization. Yet, the aforementioned practices have often been regarded as pertaining to lower class status. Nevertheless, collaborative economy platforms, while for-profit and often relying on digital technology, have recently begun to thrive in the city, becoming part of everyday practices in different strata of society and thus challenging culturally embedded notions of status. In this regard, research and discourse around transformative economies in the Global South is scarce, and in Mexico it is mainly focused on either the thriving for-profit platforms or the solidarity or social economy initiatives in response to pressing socio-economic justice concerns. This study provides an insight on the sector of the collaborative economy that is based on non-for-profit and face-to-face interactions. Three elements of social practice theory: material, skills & know-how and meaning, were used to preliminarily assess shaping factors in the spread of the practice of sharing objects in libraries of things in Mexico City. A localized overview of everyday practices and perceptions of libraries of things was obtained through interviews at a middle-class housing unit and supported by literature reviews and data collected with members of collaborative economy initiatives in the city. Results show that the practice of sharing objects is acknowledged and participation in physical platforms of the collaborative economy can potentially be embraced by members of different backgrounds within the socially heterogeneous middle-class sector in the city. However, the overall motivations to participate do not include elements sustainability or social justice. Nevertheless, classist prejudices of status and hygiene around used and recycled objects were found to be fading and actively transformed through trust in response to the economic crisis and greater presence of alternative ways of consumption. Barriers like mistrust in the government and lack of validation or support from the latter were identified along with needs to establish mechanisms for accountability and participation at community and citywide levels.

Keywords: libraries of things, collaborative economy, practice theory, Mexico City, consumption, sustainability.

Word count: 13996

Acknowledgements

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List of Abbreviations:

LOT - Libraries of Things

CE - Collaborative Economy/Economies

UI - *Unidad Independencia*

NGO – Non-Governmental Organizations

1 INTRODUCTION

1.1 Study Overview

Libraries of things (LOTs) consist of physical spaces where people can borrow objects instead of buying them, ranging from household appliances, electronics and tools to board games and even clothes (Büchler, Hahn & Schwinghammer, 2006). The LOT movement, situated within the collaborative economy (CE) movement, has a common goal of achieving a "more sustainable and cooperative economy" by saving money, natural resources, space, and building community through sharing objects (Büchler, Hahn & Schwinghammer, 2006, p.2). LOTs have spread over Europe, the U.S. and Canada and recently emerged in Mexico City with one example. In a megalopolis with severe challenges to sustainability like increasing levels of consumption (SEMARNAT, 2013), a growing population of nearly 9 million inhabitants (INEGI, 2015), and a lack of comprehensive waste management programs (Guevara García & Montiel-Corona, 2014; Ojeda-Benítez & Beraud-Lozano, 2003; Muñoz-Cadena, Arenas-Huertero, & Ramón-Gallegos, 2009), LOTs could help challenge current models of consumption in transition to less resource intensive patterns of sufficing human needs.

As more sustainable alternatives to conventional patterns of sufficing human needs, CE initiatives are not foreign to Mexico City dwellers. LOTs in the city are bound to interact with historical customs of trade and barter and other similar face-to-face initiatives that have aims of transforming patterns of consumption and interaction within communities (Carmen, personal communication, March 7, 2017). Moreover, Mexico is the second country in Latin America with more tech-based CE initiatives (IDB, 2016), which increases the probabilities of more people adopting similar practices. The strong presence of sharing/CE businesses like Airbnb and Uber in the city and locally created examples of sharing and trading objects and services, have rendered the CE and its different exponents growing components of Mexican discourse and practice in the last years. Nonetheless, all of the aforementioned initiatives develop amidst very context-specific and culturally rooted notions of status, varied levels of accessibility and understandings (Helms & Palacios, 2016; Mendoza Escamilla, 2014), and thus each will have different impacts on sustainability.

1.2 Research Gap, Aim & Research Questions

Available reports around CE in Latin America are mainly based on digital platforms; largely including business oriented ones (IDB, 2016; Helms & Palacios, 2016). According to the literature review

carried out for this study, non-for-profit initiatives like LOTs that rely on in-person interactions have not been widely documented. Related studies around solidarity and community economies with focuses on social justice and governance are most prominent. Considering that widely available documentation and study of CE initiatives based on face-to-face interactions does not exist in Mexico City, it is pertinent to explore how people view and can potentially replicate and shape these practices. Through the lens of practice theory, this paper is set to provide an overview of the shaping factors in the potential spread of the practice of sharing objects in LOTs. Practice theory provides an alternative view of consumption patterns and their impact on the environment by looking at everyday actions and the elements that enable them. Shove, Pantzar & Watson consider understanding how 'practices emerge, persist and disappear as links between their defining elements are made and broken', as key to comprehending how practices can shift (et al., 2012 p.21). In this case, towards practices that can enable LOTs to exist in Mexico City as seen through a microcosm view of Unidad Independencia (UI), a housing unit of 16,000 inhabitants. The three elements of practice have been coined by Shove, Pantzar & Watson as material, competence and meaning (2012) and are seen to shape practices as they integrate with each other and change in their composition. For the purpose of this study, I have labeled them material, skills & know-how and images & meaning to include descriptions by Reckwitz and Schatzki (2002, 2001). The subcomponents of these practices have been taken from Kuijer's summary of the elements (2014). My aim and research questions are thus based on these elements and are as follows:

Aim: To assess the elements of practice that are available and can shape the establishment of libraries of things in Mexico City as initiatives for increased sustainability.

RQ1- What are the existing material (infrastructures, tools, objects, bodies) elements of practice available for the establishment of libraries of things in Mexico City?

RQ2- What are the existing skills & know-how (routines, competences, awareness) elements of practice available for the establishment of libraries of things in Mexico City?

RQ3- What are the existing images & meaning (concepts, values, ideologies) elements of practice available for the establishment of libraries of things in Mexico City?

1.3 System boundaries & sustainability science components

Data on practices and perceptions of CE initiatives, LOTs and policies for sustainability is focused on Mexico City and was collected during the month of March 2017. Also, the literature review reflects national information in absence of local sources. Information on everyday practices was obtained at

a middle-class housing unit named Unidad Independencia in the south of Mexico City and will be given a broader perspective through information from interviews with members of CE initiatives in the city. This thesis will cover definitions of LOTs and CE and relate them to the Mexico City context, including a brief account of historical & social notions around practices of sharing and utilizing used items. It will also provide an overview of current consumption patterns and related public policies in Mexico. Through the specific lens of practice theory's analysis of consumption, only three key categorization elements and their subcomponents will be used to provide an overview of people's everyday practices in relation to sharing in LOTs. However, the analysis of the shaping factors of LOTs through practice will not be complemented with a detailed historical account of large scale economic and political power structures that interplay with people's everyday practices.

This study is situated within the field of sustainability science, which studies the interplays between natural and social systems and how they influence sustainability challenges affecting the wellbeing of present and future generations (Kates, 2011). In a very localized way, issues of environmentally unsustainable production, consumption and waste management that jeopardize the life support system of the planet are addressed through a social science approach focused on practice theory. The interdisciplinary goal of this study represents a main component of sustainability science as it calls for a questioning of "the basic assumptions of modern society" to complement natural science approaches (Jerneck et al., 2011) Finally, this study provides "usable, place based knowledge" key to sustainability science (Clark & Dickson, 2003, p.8059), and adheres to the core theme of "sustainable pathways, strategies and implementation" (Jerneck et al., 2011, p.72). This is achieved by informing practical implementation and social learning around LOTs in as part of the CE and in acknowledgement of natural limits to growth.

2. PAPER ROADMAP

The thesis is structured as follows. In section 1 the case will be presented, introducing LOTs and the CE movement in Mexico City. I will also provide context information on the participants and the location of the two groups I interviewed. Subsequently, in the theory section, I will cover the basic concepts of practice theory along with the three elements of practice in relation to consumption on which the methodology and data analysis are based on. I will then present the methodology in section 3 to describe and justify the format of my research. Here I will also cover the ethical components of the study. Finally, I will proceed to expose my results and discussion divided into three sections representing the three elements of practice mentioned above and divided each into

responses from UI and members of CE initiatives. The results and discussion section will also reveal my methodological constraints or limitations.

3. CASE

3.1 Libraries of Things & The Collaborative Economy

3.1.1 Libraries of Things

While each library of things (LOT) has its own format, administration strategy, and membership strategies for sharing items (Balch, 2016; Kohlstedt, 2016; Johnson, 2016), they are all physical spaces where people "have access to all kinds of objects they would otherwise have to buy" (Büchler, Hahn & Schwinghammer, 2006, p.1). Some of the objects that can be found at LOTs range from clothes, toys and kitchenware to tools, sports equipment, electronics and household appliances (Johnson, 2016). LOTs around the world, also called 'tool', 'toy', 'lending', or 'sharing' libraries depending on their format (Local Tools, n.d), often share a common goal of working "towards a more sustainable and cooperative economy" (Büchler, Hahn & Schwinghammer, 2006, p.2). According to the organizers at the library of things in Vienna and Toronto, the first LOT in Europe opened in Berlin in 2010 and since then, over a dozen have been started across the union (Judith, personal communication, November 8, 2016; Büchler, Hahn & Schwinghammer, 2006). In the United States and Canada there is a more vibrant scene with more than 40 such libraries, initially inspired by projects like the Berkeley Public Library Tool Lending Library established in California in 1979 (See Figure 1) (Berkeley Public Library, 2014; The Sharing Depot; Kohlstedt, 2016). While not pictured in Figure 1, I only found two LOTs in Mexico and now in Latin America, although this does not mean they cannot exist. One is *El Cambalache*, a women-led moneyless project located in San Cristóbal de las Casas in the southern state of Chiapas (elcambalache.noblogs.org). The other one, included in this study, is *Herrateca*, whose founder claims is the first tool library in Mexico City. At *Herrateca,* tools are loaned mainly to visual artists and membership is based on in-kind donations. According to their web pages and personal communication with the founder of *Herrateca*, both libraries consist of physical spaces where people can attend to borrow objects or use them on-site. Finally, as reflected in their web pages, both LOTs have open discourses related to degrowth and aim to provide alternatives to significantly reduce mainstream consumption patterns and address issues of social and/or environmental justice.

Figure 1. Distribution of tool lending (sharing) libraries around the world as mapped by Local Tools (n.d).

3.1.2 The Collaborative Economy

Broadly, LOTs fit into the global set of initiatives sometimes called 'transformative economies' where institutions or communities build and experiment around alternatives to hegemonic social and economic practices (Porro, 2016). These initiatives are not new and can build upon, in each of their particular contexts, on historical examples like neighborhood associations, social/popular economy policies, laborer consumption organizations or barter & exchange markets, which have sometimes emerged during periods of great social and economic transformations (Porro, Atela, Peiron & Surinach, 2013). More specifically and pertaining to this study, LOTs can fall under the umbrella term of collaborative economy (CE), defined by the large *Ouishare* platform as models of collaborative consumption or 'sharing economy', that enable "circulation of products and services among individuals through sharing, swapping, trading, renting, borrowing or giving, fostering access over ownership and reducing waste" (2011). A defined framework around CE is still in gestation around the world and it is difficult to coin the term because these platforms often also include for profit circulation of products between companies and consumers and have a strong digital technology component (IDB, 2016; Porro, Atela, Peiron & Surinach, 2013). Nevertheless, CEs are also known to encompass offline and face-to-face projects too like neighborhood exchanges, and

trade & barter, second hand or agro-ecological markets, which are not necessarily for-profit endeavors (Piñeiro, Suriñach & Fernández Casadevante, 2017, Porro, 2016).

Porro has identified a section of the CE universe as the 'procommon", where initiatives have explicit goals of transforming the economy, functioning under structures with limited hierarchical and contractual dimensions favoring free access (2016). As seen in Figure 2, there is an area where transformative economy initiatives are more closely aligned to others with strong values of justice, democracy and sustainability within their economic transformational goals (Porro, Atela, Peiron & Surinach, 2013). According to the previously exposed definitions of LOTs, it is in this area and section of the CE category that I wish these initiatives to be regarded throughout this text. I acknowledge that the presence of social justice and sustainability components will depend on each individual LOT, but a more situated definition of their position within CE can be a good starting point in their analysis and conceptualization. All in all, this thesis exposes the initiative in recognition that practices around it at the societal and individual levels are yet to be developed. And that each LOT will define for itself in which exact area of the CE it will fall, including how its participants articulate it in comparison with examples from other parts of the world.

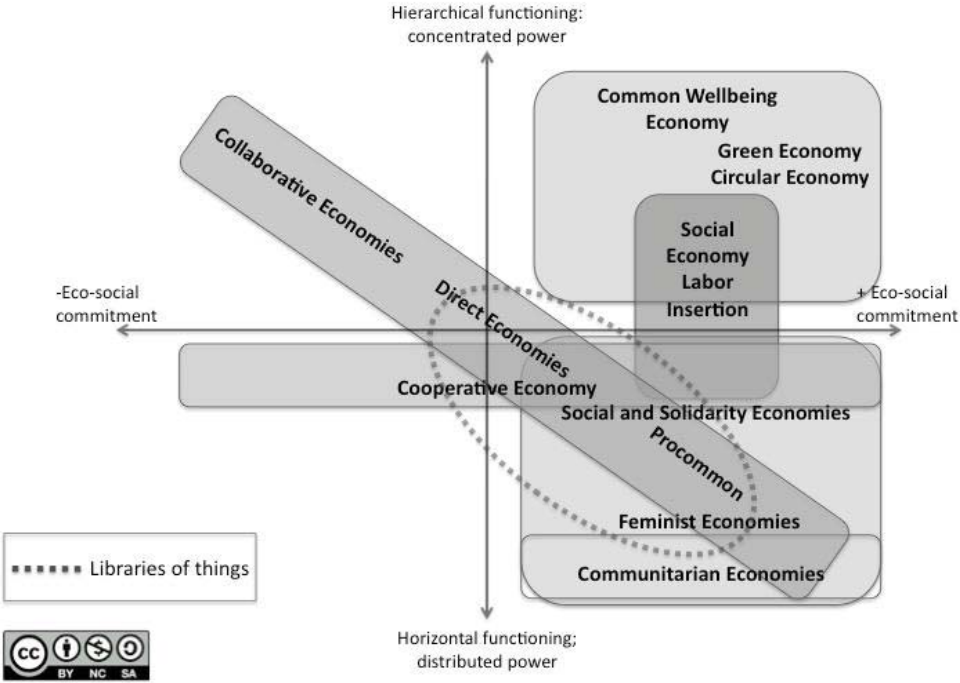### POSITIONING OF LOTs AMONGST CATEGORIES OF TRANSFORMATIVE ECONOMIES

Figure 2. The dotted indicates the position of LOTs within the collaborative economy category and in relation to other transformative economy initiatives, moving away

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from hierarchical proposals onto the area of more inclusive initiatives of higher environmental & social sustainability. Translated and adapted from Porro (2016).

3.2 Collaborative economy and sustainability

In face of the recent boom of CE initiatives that are capital intensive or rely heavily on technology, each initiative must be analyzed individually to see to what extent they promote sustainability. Up to now, media discourses in Latin America and Mexico around alternative modes of consumption often discuss the regionally thriving for-profit and tech-based platforms like AirBnb or Uber (IDB, 2016; Mendoza Escamilla, 2014). Moreover, academic papers on the environmental impacts of these CE platforms are also becoming vast. The academic discourses in Latin American on transformative economies such as the solidarity and social economies mainly focus on how they address pressing issues social justice and governance in the region (Presta, 2016; Abad Montesinos & Abad Montesinos, 2015). Overall, the mainstream CE movement is more focused on the need for social and economic sustainability to address economic crises, leaving environmental sustainability as a secondary or standby component (Roxas, 2016; IDB, 2016). This leads to preoccupations about practices that can lead to increased patterns of consumption, unnecessary mobilization and transport of goods or to a greater consumption of parallel or substitute resources (Martin, 2016). Davidson & Infranca define that while dense urban areas have issues of efficiency and face many challenges, their levels of "scale, proximity, amenities and specialization that mark city life" are key to enabling initiatives of collaborative economy" (2016, p. 218). Furthermore, they state that "sharing enterprises rely on a critical mass of providers and consumers who are sufficiently close to each other or to other amenities" (p. 218). While this can mean that LOTs will likely have enough objects to be shared, this mass circulation of objects can prove unsustainable as mentioned above. This is why it is key for each individual initiative to be studied in its mandates to preserve sustainability and truly transform conventional patterns of consumption.

Leila Wien (Vienna LOT) and other LOTs in Europe have their origins in principles of degrowth, something that is also reflected in both LOTs found in Mexico. In the case of *Leila Wien* the initiative was inspired by the *Solidarische Ökonomie-Kongress* (Solidarity Economy Congress) in Vienna in 2013 (Judith, personal communication, November 8, 2017). This is just one example of the how LOTs can belong to the category of strong sustainability, since degrowth is associated to discourses of the natural limits to growth and non-substitutability of natural resources, calling for the least possible consumption of materials and energy (Faran, 2010; D'Alisa, Demaria & Kallis, 2014). Strong sustainability in relation to consumption would entail "multi-level non-consumption concepts and

practices" and participation of "diverse grassroots movements and communities" (Hobson, 2013, p. 1083). LOTs can be seen as grassroots transition projects to low-tech economies that result in significantly reduced consumption by circulating locally available items and relying on new items depending on each of their particular policies. This can address the goal of conserving the actual levels of natural capital as essential and not substitutable by stock capital (Faran, 2010). Yet again, the specific and environmentally significant configurations of LOTs in Mexico City are yet to be seen and shall be analyzed accordingly to their goals, quality and durability of items used and discursive articulations about non-consumption.

3.3 Consumption & Collaborative Economies in Mexico

3.3.1 Consumption in Mexico City & Related Policy Discourses

Nowadays, Mexico City resembles other large urban centers of the world. Under the current phase of neoliberal capitalism, Mexico City has integrated a new economic model, shifting away from protectionism and closer to an economy of services that has provided in material terms, a novel influx of new goods and services (López Santillán, 2007). The patterns within this globalized model, which make consumption increasingly dependent on foreign inputs, also expand the scope of sustainability challenges outside of the national borders, rendering it key to address issues of consumption. Mexico's consumer confidence indexes, which reflect people's optimism about the future national and household economic situation and the possibility of purchasing durable household goods, have seen sharp decreases since 2012. On the contrary, actual levels of confidence on their economic situation and the possibilities to buy durable goods show a short increase in relation to the past four years. The economic expectations at the national level have resembled the economic reality of the country, however (INEGI, 2016, p.4). While these numbers reflect only four years, they portray, amidst uncertainty, increased levels of consumption of durable goods, which are important constituents of LOTs. Previous numbers to complement this show that solid residue generation per capita increased by 17% from 1997 to 2009 and durable good household purchases increased by 27% during the same period (SEMARNAT, 2014). Considering that the production, commercialization and disposal of these goods are determinant for sustainability, research around alternative or improved ways of relating to these objects is extremely relevant.

The national discourse around consumption in México is founded on sustainable development goals as set in the Brundtland report (SEMARNAT, 2014; UNEP 2011) The 2014 National Strategy for Sustainable Production and Consumption establishes goals for sustainable development that ensure human well being (2014). These practices have been associated with weak sustainability as they have economic development at the forefront as a definer of sustainability but propose no challenges to the natural limits to growth (Faran, 2010). In this strategy, critiques to consumption and unsustainable production are associated with economic choice by consumers and manufacturers, suggesting assigning economic prices to depleted natural. Moreover, the reusing component only involves producing items with longer lifecycles and incorporating residues onto productive cycles (2014). At the local level, México City's 'Green' plan follows similar development goals and addresses the issue of solid residues through improved recycling & waste management programs and sustainable design only, but does not openly encourage reduced consumption (SEMARNAT, 2014; Secretaría de Medio Ambiente, (n.d). Yet, as part of this plan, the city has installed a monthly 'barter market' where people bring recyclable waste to exchange for food. In this regard questions of whether people attend the market out of need instead of as part of a culture of recycling emerge, including the possible encouragement for consumption of recyclable goods and leading also to parallel waste production. Overall, both mandates include plans to facilitate economic and normative allowances for sustainable development initiatives (SEMARNAT, 2014; Secretaría de Medio Ambiente, (n.d), which can render economic and institutional resource availability for the spread of CE projects onto more spaces in the Mexico .

3.3.2 Collaborative Economy in Mexico City

In comparison to the Global North, more in depth analysis and context specific discourses around CE in the Global South are still emerging, and CE as a formalized or institutionalized sector is located at an early stage of its development (Roxas, 2016; IDB, 2016). Nevertheless, initiatives that fit in the 'procommon' area of the CE like trade and barter or community cooperatives are at the heart of Mexican culture and date back as far as pre-hispanic times. They persist now in examples of weekly street markets called 'tianguis' and flea markets, which merged with monetization during the colonization period (Licona Valencia, 2014; Wilken, 1977; Villegas, 2010). Trade and barter practices, in hand with local farmer's markets have seen a revival in towns and cities in Mexico in response to economic crisis & threats to social cohesion and traditions and also as trendy modes of consumption (Escamilla, 2013; Carmen, personal communication March, 2016; Tianguis y Mercados Orgánicos, n.d.) This includes the recent emergence of *Herrateca*, the first self-proclaimed tool library in the city which caters to visual artists. In relation to reusing items, an underground industry

of recovering used clothes and selling them for very cheap is a main resource for many residents in the city, in spite of its criminalization in some cases related to hygiene and the black market (Gauthier, 2010).

The spread of practices related to all of the above initiatives into all strata of society may be limited because they all face stigmas of low class status (Mendoza Escamilla, 2014). Bertrán Vilà holds that since colonial times in Mexico, the way people ate defined which class they belonged (2004). It is safe to say that these prevailing notions in Mexican society also apply to the places where people obtain their sustenance. In relation to this study, traditional markets were places where trade and barter took place and their symbolic association with lower class groups still holds, permeating practices of sharing and utilizing used items. Nevertheless, the increased presence of large scale government initiatives like *EcoBici* public bike sharing system (Ecobici, 2017), the thriving CE startups and the adoption of traditional trade and barter practices onto trendy formats might soon make sharing used items even more popular and widespread.

3.4 Unidad Independencia and Interviewees

UI housing unit was inaugurated in Mexico City in 1960 during the period of the 1940's to the 1980's where a model of industrialization based on substitution of imports resulted in greater public spending for urban equipment (López Santillán, 2007). The planning of the housing unit was in tune with federal social security 'doctrines' of the time, which defined a need for goals of social interdependence to be achieved in conjunction with the state (Unidad Vecinal Independencia Ciudadana, 1999, p5). The Athens Charter of 1933, determined that the four functions of urban planning should include "inhabiting, working, circulating and recreation" and was key in defining the infrastructure of the unit and its goals of "social re-composition and the organization of services" (p.5-6). It is said that the Athens Charter was exemplified and improved at UI by providing workers and their families with all necessary services and environments for their welfare. Some of these areas and services include cultural, health & sports centers, schools, natural recreation areas, and commercial areas, away from transited roads and near industrial zones. All of which stand today to a great extent under a local administration, serving its 16,000 inhabitants (p.8-11; Administrative Officer, personal communication March 8, 2017).

While I ascribe to the symbolic characterization of UI housing unit as predominantly 'middle class', I wish to acknowledge the social heterogeneity of middle class neighborhoods that has been

recorded in the city, including the San Jerónimo area where it is located (López Santillán, 2007). On the other hand, respondents from CE initiatives represent a broader overview of the movement in Mexico, which develops amidst the remains of Latin America's popular economies, the influences of Eurocentric cooperative moments and western terminologies appealing to needs for social cohesion (Porro, 2016; Piñeiro, Suriñach & Fernández Casadevante, 2017). The membership or area of study of these respondents ranges from tech-based CE initiatives like the *Ouishare* platform transportation, crowd funding and housing, to in person examples like trade/barter markets and the aforementioned *Herrateca* tool library. Following are tables 1 and 2 listing respondents at UI and those belonging to CE initiatives to illustrate their backgrounds and for further reference in the results.

Table 1. Name, age, gender and occupational diversity in respondents from UI social housing unit.

UI resident name	Gender, Age	Occupation
Germán	Male, 61	Retired
Juan Pablo	Male, 19	Student
Carlos	Male, 57	Public Servant
Lourdes	Female, 63	Homemaker
Margarita	Female, 50	Homemaker
Laura	Female, 59	Homemaker/Designer
Marilú	Female, 47	Merchant
Pamela	Female, 18	Student
Administrative Officer	Male, 59	Member of Administration at UI

Table 2. Names and related projects of members of collaborative economy initiatives.

CE initiative respondent name	Initiative (s)
Carmen	*Mercado de Trueque Itinerante* (Itinerant Barter Market)
Katia	Creative industries, *Ouishare*
Karen	Thesis on trust and CE in Mexico
Mauro	*Herrateca* (Tool library for visual artists)

4. THEORY

4.1 Theory Overview

A group of theories of practice stemming from social theory, philosophy and cultural theory have developed in questioning the dichotomies between structure and human entities (Schatzki, 2000, Kuijer, 2014). These theories are based on the early works of authors like Pierre Bourdieu, Anthony Giddens, and Michel Foucault, to name a few (Schatzki 2000). Contemporary exponents include Theodore Schatzki and Andreas Reckwitz as well as Elizabeth Shove and Alan Warde who have both provided key insights on the embodied practices of consumption as part of the reproduction and transformation of daily life (Kuijer 2014; Warde, 2005). By recapturing attention as a particular way of comprehending society, the varied theories of practice hold as their common denominator an understanding of human behaviors from the middle of the two opposite dichotomies: individual human action and the structure or system (Warde, 2005). By explaining practices as individual actions grounded in collective and structural developments, Theodore Schatzki recognizes that the conceptual framework of practice theory provides a "general or abstract account" of social life where individual actions cannot explain the structures they develop under or vice-versa (2001a, p.12). Under its lens the lens of practice theory, people's everyday practices are taken as the main and smallest unit of analysis where each time a person takes an action, they are said to be performing a practice (Schatzki, 2001a). Overall, Schatzki concludes that both social structures and individual actions are a result of practice (2001a).

In more detail, a practice can be seen as a noun in the sense that any action can be viewed as part of a practice, and consequently, these practices can be replicated by people in conjunction with others or in private (Kuijer, 2014). Finally, while a single performance of a practice can be explained through its composing elements, it will only represent one exposure of the greater practice-as-entity which contains many other of its examples (Kuijer, 2014). The distinction is made between practice-as-performance and practice-as-entity, to show that practice-as-entity represents the dispersed actions over space and time with their rules and understandings, or the whole of human activity (Higginson et. al., 2015; Shove et al., 2012; Warde 2005). Therefore, practice as performance happens when elements of a practice are integrated and enacted in situated and context-specific moments in time, bringing the practice to life (Shove et al., 2012; Higginson, McKenna, Hargreaves, Chilvers, & Thomson, 2015) In relation to these elements, Schatzki sees practices as "embodied, materially mediated arrays of human activity centrally organized around shared practical understanding" (Schatzki, 2000, p.12). Therefore, the prevalence of a practice and

the possibility of its evolution lie on how adequately it can be embodied and enabled through common practice understandings and developed skills. Consequently, the body that can willingly and skillfully replicate a practice will represent the convergence of the mind and the activity itself (Schatzki, 2000; Kuijer, 2014). I have selected practice theory in acknowledgement that it can reflect social life in "pluralistic and flexible" ways that allow for "complexities, differences and particularities" (Schatzki, 2008 p.12) and possibly enable me to provide an initial overview of shifting practices around collaborative consumption in the particular context of Mexico City. Finally, I agree with Halkier & Jensen's interpretation of the arena of social theory focusing consumption as moderately social constructivist (2011), validating it with Blackburn in recognition of its analysis of social categories and dynamics as actively created in the social sphere (2016).

4.2 Key Elements of Focus

Reckwitz claims that practices are "routinized behaviors" formed by interdependent "things" and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge" (2002, p.249). Based on this, Shove, Pantzar & Watson have compiled three main elements that are relevant to the study of patterns of consumption: material, competences and meaning (2012). Kuijer, who analyzes sustainable design under these three divisions, recognizes how they "overlap and elements mutually influence and shape each other" (2014) acknowledging Shove, Pantzar & Watson's emphasis on how the existing or severed links between the elements will define the trajectory of a practice (2012). In sight that this listing has been successfully associated with the study of consumption (Shove, Pantzar & Watson, 2012; Kuijer, 2014), I utilize these three elements to frame my research design and analysis and have listed them as: material, skills & know-how and meaning to encompass Schatzki's and Reckwitz's descriptions of them (2000; 2002). The hope is to portray a useable image of the practice of sharing through LOTs to inform, in some extent, its potential reproduction in the particular context of Mexico City. Since the specific lens in social theory addressing consumption has been proposed as an alternative view of consumption to address issues of sustainability (Shove, Pantzar & Watson, 2012), I make use of it hoping it can provide a view of LOTs that informs its common goals if promoting social and environmental sustainability. A deeper explanation of the categories of the three elements of practice as mentioned above are defined in the following subsections to give logic to the structure of this study.

4.2.1 Material

Material elements have been increasingly recognized as forming part of practice under the claim that "activities interweave with ordered constellations of non-human entities" (Schatzki, 2000, p.12; Shove, Pantzar & Watson, 2012), rendering material dispositions key to understanding particular and localized practices. These elements are listed as "objects, infrastructures, tools, [and] hardware" (Shove, Pantzar & Watson, 2012, p. 3) where the body itself forms part of the hybrid entity of non-tangible elements-in line with Bruno Latour's work (Kuijer, 2014). In speaking of such dispositions, it is important to mention that while comparable items or infrastructures may be available in society, they may not be accessible at the same levels to all groups of people or individuals (Kuijer, 2014). This makes a case for practice theory in its analysis of practices as reproduced in particular contexts, and thus relevant in avoiding generalizing or obviating power structures that operate within them. Related to practices of consumption through LOTs in Mexico City, this element is relevant as these practices emerge and will face different infrastructures, objects to share and potential willing and experienced bodies to perform them.

4.2.2 Skills & Know-How

Kuijer summarizes skills as "learned bodily and mental routines, including know-how, levels of competence and ways of feeling and doing" (2014, p.27). Again, in line with Latour, skills can be dispersed amongst people and objects as they form a hybrid material entity (Kuijer, 2014). Shove, Pantzar & Watson further their definition of it based on Gidden's work as "practical consciousness, deliberately cultivated skill, or more abstractly, as shared understandings of good or appropriate performance in terms of which specific enactments are judged" (2012, p.3). Furthermore, both Schatzki and Warde clarify that such competences may include both the capacities to enact a practice and also the know-how to define, identify, evaluate and react to them (2000b; 2005). These definitions stem from the works of French sociologist Pierre Bourdieu who described the consistent internalization or "embodiment of cultural representations in human habits and routines", which also includes "acquired dispositions of thought, behavior and taste" (Scott, 2014). Notions of routine, conventions and collectivity in the study of patterns of consumption implies that practice will be enabled if those who embody it have the necessary materials and infrastructures at hand, the ability and knowledge to replicate it and ascribe a conducive value to it (Warde, 2005). Consequently for the study of LOTs, the differentiation of the adopted practice amongst different individuals and groups that are exposed to this initiative will depend on their

understanding of this practice, the way they consciously embody it and the meaning that they ascribe to it as they come to experience it.

4.2.3 Images & Meaning

Overlapping and interplaying with skills & know-how are images and meaning which are the commonly shared ideas and concepts that give symbolic and social significance to a practice under norms and values; these drive the reasons to perform it and its purpose (Kuijer, 2014; Shove, Pantzar and Watson, 2012). Shove, Pantzar & Watson have combined both Reckwitz's "mental activities, emotion and motivational knowledge" with what Schatzki has defined as 'teleoaffective structures' which are, goals, tasks, determinations, beliefs and even moods to organize a practice in temporal and spatial terms (Shove, 2012). These images and meanings are at play and evolve as a practice is performed. In other words, informed by its background, a practice creates new meanings on the go, eventually informing collective images according to its particular context. This also leads us to understand that while practices as entities have ascribed meaning; they are not always performed in the same way, establishing moments with probabilities for change. As Alan Warde describes, practices are dynamic in themselves, as people in multiple moments and settings "adapt, improvise and experiment" in response to doctrines and patterns related to them (2005, p. 141).

4.3 Consumption and Sustainability

This study focuses on shifting patterns of consumption in relation to collaborative economies and around the particular initiative of LOTs. The following are specific examples of the findings of Elizabeth Shove and Alan Warde, key exponents of practice theory in regards of consumption. According to Warde, 'moments of consumption' happen within a practice and these are informed by different purposes and encouraging factors, generating different wants on the go. These moments are defined as a mixture of what people "do and feel and what they mean" around "goods, services, performances, information or ambience, whether purchased or not" (p.137). Since, consumption is a moment in practice that evolves according to different conventions and is given meaning as it is replicated, it becomes not a mechanical procedure but one embedded with agency. In relation to sustainability, the ways in which these moments of consumption interact at the collective level, can help us understand general implications for the environment and the enabling factors of the practices to be focused on (Warde, 2005, p.137). From standpoints like these, where the consumer is not the object of focus and instead the practice and its moments of consumption are prioritized (Warde, 2005), we are finally free to build a bridge between the

dichotomy of agency and consumer culture without blaming either of them for unsustainable practices.

Shove points out that by analyzing the factors and experiences that drive overconsumption of natural resources, we may be able to identify common assumptions of practices that change with culture or over generations. She stated that is possible to understand environmentally significant change through these 'collective conventions' (2003). Shove has also identified three shifting expectations of comfort, cleanliness and convenience in consumption as encompassing the 'environmental hotspots of consumption (2003 p.3). These can provide more detailed insights of why people engage in certain practices and how these notions shift over time. In relation to the study of consuming through LOTS, respondents are finally seen as agents of change within changing cultural and economic structures. Shove Pantzar & Watson claim that there is great potential in the revival of practice theory for comprehending shifts in practices (2012), and that finding systematic ways of exploring their reproduction and transformation is key. The following are definitions to sustain the systematization of this study as per the three elements of practice defined by these authors.

4.3.1 Changes in Practice

In speaking of the path in which a practice develops, Warde further explains how it will vary according to the institutions in place, space, market patterns and traditions (2005). However, the reason why practices are sought after in this theory is because as they develop, they contain the abilities of both replication and transformation and thus set the bases of behavior change, in spite of their previously set "understandings, procedures and objectives" (Warde, 2005). Theories of practice are vast in explaining the abilities of replication in practices or their inertia through principles of routinization, habit or tradition, showing that the performers often do not exert much reflection or awareness when enacting them (Warde, 2005). In terms of transformation, practices will change as the links that hold their elements together are created, broken or endure, knowing that those links are made out of moments of practice as performance, which give life to the practices in themselves (Shove, 2012). Furthermore, practices will be maintained depending on how efficiently the 'shared embodied know-hows' are impressed on the carriers of the practice and if they are constantly performed (Schatzki, 2000, p.12). Practices are also said to influence each other, coping, innovating and borrowing from each other in their evolution (Warde, 2005). Knowing that LOTs are imported initiatives materialized in venues for the specific practice of sharing used items, their replication will be shaped by this 'borrowing' and the innovative dynamics that take

place in interaction with the 3 elements of practice in the specific context of Mexico City. Class stigmas around the consumption of used items in Mexico are then reflection of the set of "acceptable doings and sayings broader then the behaviors already performed in the practice" according to Schatzki (1996, p.102). However, these images are only symbolic and do not reflect the ways in which people develop the practice in everyday performance, and how they are also influenced by the particular ways of performing it by others around them (Kuijer, 2014). This renders the group of acceptable and unacceptable practices fluid and subject to change over time. This is relevant for the translation of the initiative of LOTs onto the Mexico City context, where growing replicators of the practice may embody local and foreign examples for its development that may lead to challenge existing conventions around sharing used items.

5. METHODOLOGY

5.1 Research Design

My design of this research is based on the focus on consumption in practice theory as presented by Alan Warde (2005), and by the three elements of practice theory as summarized by Shove, Pantzar & Watson (2012). This qualitative study was designed around these three elements to understand perceptions and shifting practices around LOTs and the CE in Mexico City. Moreover, organizing the data collection and analysis under these three elements can be a practical and succinct technique for a clearer presentation of the results. The two groups that were interviewed to better understand these shifting perceptions and practices around the CE and LOTs in the city were composed as follows: 9 residents at UI housing unit, including a member of the administration and the other by 4 members of different CE initiatives in Mexico City. The number of interviews conducted was sufficient considering the available timeframe for fieldwork and the number of willing respondents in both categories. The response rate at UI was of 30% of the people I approached to ask for an interview, as some people didn't have time to respond or simply rejected the request.

I chose UI out of awareness of its origins as a social housing unit that maintains certain patterns of social cohesion based on its origins in policies of social security and Latin American popular economy, inclusive infrastructure and a running administration (Alfaro Salazar & Ochoa Vega, 2011; Porro, 2016). Accessibility and safety were two other motivations for my choice as the unit has free access for me to find and approach participants in its public areas. Moreover, there was a local

administration was willing to respond to my questions. Based on this, I assumed that this area would provide a context where people were prone to respond with familiarity around a potential CE initiative like a LOT at UI because of the encompassing policies of social integration that are related to the CE in the universe of transformative economies. The intention was not to create a case study of the specific neighborhood but for data to provide microcosm image of middle-class populations in the city, despite its particular historical, demographical and geographical particularities. Finally, my decision to interview people involved in the CE movement in Mexico City was informed by the need to triangulate and provide a broader perspective and more robust insights of the reality of CE in the city for the foundation of LOTs. Information from CE initiatives was further supported by the literature review of relevant theory and compilation of documents related to national and local policies, the neighborhood under question and the LOT and CE movements around the world to provide context.

5.1.1 Interview design

The semi structured interview guide for residents of UI was formatted into three sections relying on the 3 elements of practice theory for easier data classification and analysis (see Appendix 1) Some of the questions in the 'images and meaning' section of the interview were informed by Shove's notions of comfort, cleanliness and convenience to provide insight onto issues of class. The format of the interviews with members of CE initiatives was more open-ended and based on key focus terms initially obtained in Lund, Sweden when I undertook a preliminary scoping of the LOT movement. At this stage, I held an open-ended discussion with a member of Leila Wien (LOT in Vienna) named Judith and I also reviewed their *Library of Things Starter Kit*, which is a compilation of experiences from LOTs around Europe and one in Canada (Büchler, Hahn & Schwinghammer, 2006). My choice of key terms was validated and complemented after my first interview with one of the founders of the Itinerant Barter market. The key terms obtained from these sources were: government support, funding, trend, face-to-face interaction, history, and trust and were later matched with the 3 elements of practice for the purpose of data analysis. The questions asked to the administrative officer of the unit were based on the key terms that I categorized for the CE initiatives respondents, the answers that were obtained would serve to give context and validation to the ones obtained from the residents.

Questions for both UI residents and CE initiative members were also guided by Foddy's recommendations for construction interview questions (Foddy, 1993). Key points incorporated from Foddy's guidelines included: consideration of people's background to formulate intelligible

questions, formulating engaging questions to maintain interest, avoiding suggesting or insinuating answers to questions, keeping questions as open as possible and clarifying the topic and key terms of investigation beforehand in the consent form.

5.2 Data Collection and Analysis

5.2.1 Data Collection

The semi structured interviews and open-ended discussions took place after the literature review process from the 6th to the 13th of March 2017. In order to provide diverse perspectives, the interviewees from UI ranged in ages from 18-63 and the gender distribution was 5 women and 4 men. In the case of the CE initiative members, there were four women and one man, all around 30 years of age 30's. As presented before, Figure I portrays this distribution for further reference. The sampling methods at UI and with members of CE initiatives were a mix of convenience and snowball sampling. Convenience sampling takes place when "respondents who fit the criteria of the story are identified in any way possible", and snowball sampling happens when potential participants are recommended by previous participants (Emerson, 2015, p.166). At UI, respondents were selected as they were available to be interviewed around public spaces in the neighborhood and I purposefully selected as much of a diverse range of participants as I was able to in terms of age and gender. 4 out of the 9 interviews were done with people who recommended or recruited others and other 5 were done outside in public areas, this was because not all potential respondents had time to participate. While I tried to obtain responses from people of all ages, most of the people available for interviews were older than 47 years old with the exception of an 18-year-old woman and a 19-year-old man. This reflects the age range of the population living at UI, which was confirmed during an interview with a member of the administration. In the case of the interviews conducted with members of CE initiatives, the method was mixed from convenience sampling, where three of the respondents were recommended by acquaintances and one of them was a result of a "snowball" dynamic where one respondent recommended the other for further insights on CE initiatives (Emerson, 2015).

5.2.2 Data Analysis

For the data analysis, I transcribed the notes of all thirteen interviews in Spanish to individual documents per participant and then translated them to English. I then proceeded to fill in an Excel document divided into sections according to the three chosen elements of practice theory, the respondents' names and their answers for categorization. This categorization avoided the need for

coding because all of the questions in the interviews were already divided according into the three elements of practice and could thus be adequately analyzed. Any information not pertaining to elements of practice reflected in the research questions was not included in the final results transcription. As mentioned above, the questions that I posed to the members of CE initiatives, including the administrative officer at UI, were not the same as those for the neighbors at UI. Therefore, in the analysis stage I matched the key terms that I used as guidelines for the interviews with members of CE initiatives with the three elements of practice theory as visualized in Figure 3. Matching them to the three elements of practice allowed me to triangulate with data obtained at UI while acknowledging that these three elements often inform and overlap with each other.

KEY TERMS FROM CE MEMBER INTERVIEWS IN RELATION TO THE THREE
ELEMENTS OF PRACTICE THEORY
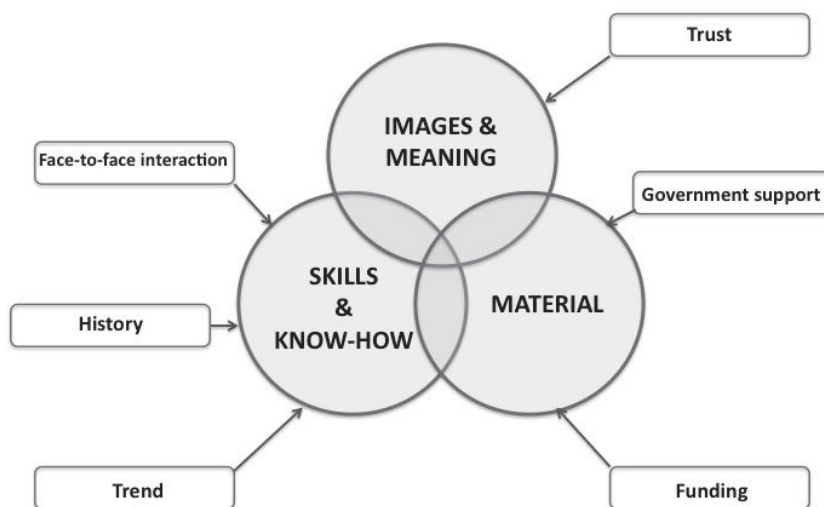
Figure 3. Categorization of key terms that emerged in CE interviewee responses according to the three overlapping elements of practice theory. The three elements of practice are based on categorizations by Shove, Pantzar & Watson, Reckwitz and Schatzki (2012; 2002; 2001).

5.3 Consent Form & Ethics

In order to be able to fully inform and obtain the consent of all participants, I adapted a survey consent form from Colorado College and translated it from English to Spanish (Institutional Review

Board, n.d). I read the form out loud to each one of the participants and handed them the sheet for their review. Accepting to participate in the interview and keeping the form expressed each participant's consent. This form was handed out in Spanish and has been added in English in Appendix 2. The form includes my contact information, a description of the research project and information on ethical practices and data safety, including the possibility to withdraw at any time from the study. Also, all participants were offered to read the results when they are published if they wish to and each one of them selected the name under which their responses would be presented. All of the 20-minute interviews were conducted in public spaces and in respect of people's times, even if it meant adjusting the number of questions asked to tailor to their availability and disposition.

6. RESULTS & DISCUSSION

6.1 Material

Responses in this section show the available infrastructures, tools, objects and bodies that can shape alternative patterns of consumption within the initiatives of LOTs. The non-body components that were found throughout the study involve infrastructure as available spaces, objects for sharing and economic means and means of transportation to allow for participation at LOTS. Results include both available means and also hypothetical ideas of how these means can be managed and where they can be obtained.

6.1.1 Unidad Independencia

In terms of infrastructure, there are spaces available for situating a LOT at UI that are part of the cultural spaces destined to maintaining social cohesion and human wellbeing (Unidad Vecinal Independencia Ciudadana, 1999). During our interview, the administrative officer at UI even proposed the administration building for a LOT showing me a large room that is available and currently serves as storage for books and gardening material they lend to people from time to time. Coincidentally, the administration building is the space where most of the interviewees think it a LOT should be located. Both the theater and the administration building are located in public and easily accessible areas of the housing unit, around 300 meters from most points in UI. López Santillán holds that urban infrastructure is a result of political decisions linked to economic models of their time and clearly influences social practices, but is transformed by the meanings and uses

that individuals give to them over time (2007). This is true for UI where people including the local administration are giving new meanings to spaces that were built more than 50 years ago in response to new needs and uses in the community.

Both available monetary and in-kind tools can shape the practice of sharing through LOTs at UI even if different acquisition levels are present in the neighborhood. The available economic means for the consumption of durable goods were compared with the fees that respondents suggested for the participation and maintenance of a LOT. Respondents at UI usually spend from $100-5000 MXN ($5-250USD) every time they purchase durable goods (objects that last over time and have multiple uses). It was also found that younger people spend less per purchase but spend more often. In comparison to buying new items, the amounts that people are willing to spend in symbolical memberships or damage deposits at a LOT range from $100-300 MXN ($5-15 USD), which are significantly lower than their average expenditures for new items. It is evident that respondents see the initiative of a LOT as demanding low economic investment and relying on community participation instead. Three respondents suggested that the LOT should be composed of donated objects and be sustained by voluntary community participation and four suggested symbolical membership fees. Germán suggested that the administration pay for maintenance fees and that people from the community volunteer to repair and show others how to repair objects. A hypothetical question was made regarding objects people would like to share. Responses showed that things people have or know are available in the neighborhood for exchange include: tools, electronics, dishes, toys, household items, appliances such as juicers, sandwich makers and blenders, bicycles, sprinklers and hoses. When imagining the potential objects that could exist in the LOT Lourdes exclaimed, "I already see myself renting a lawnmower!". The administrative officer at UI mentioned that there are funds available to be allocated for an initiative like a LOT. While the availability of objects to share does not reflect a citywide reality, it may show that housing units or neighborhoods with good levels of social cohesion can provide infrastructures and means for tool circulation.

Bodily components as palpable material elements available at UI are present through the willingness of people and the local administration to enact the practice and accommodate it to their context. Throughout the interviews, intentions to participate and inform the practice of sharing through LOTs were strong. Even though this willingness is related to a hypothetical installment of a LOT in the unit, definitions of what they could look like in the community showed potential for intervention and improvisation. When asked if willing to share knowledge (in repair cafe, for example) or volunteering in everyday tasks, all of the respondents except two said they

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would like to do so in some way or another. The will to reach a LOT was exemplified as most respondents travel around 2-18 kilometers to buy durable goods. In comparison to the distance that people usually travel to shop, four indicated they would travel more to find a LOT, three indicated they would travel less and one said that they would travel the same distance as they usually do. Finally, in spite of these responses showing intentions to travel longer distances, most interviewees suggested the LOT to be located within the perimeter of the housing unit.

Davidson and Infranca pose that cities can be conducive for practices of the CE because of their density and circulation of resources (2016). This holds true at UI where population density is high and there are available objects as it is not a closed community. In this regard, Warde states that material elements can be "socially shared" because communities at different levels have access to like objects and spaces (2005), but we must not forget that not everyone has the same levels of accessibility to them. (Kuijer, 2014, p.26) Fortunately for UI, the unit has very high standards of physical accessibility as ensured by the administration in response to the high numbers of elderly residents. However, this may not be a reality in other neighborhoods. Finally, barriers to accessibility may not only be physical but also cognitive and even symbolic. This proves Shove's emphasis on how practices can only be successful if the links between their elements are strong.

6.1.2 Members of CE initiatives

Some of the information from CE initiative members provides a broader perspective of the available infrastructure, tools and willing bodies for the sharing through LOTs in Mexico City. CE initiatives have seen immense growth in participation and are enabled by certain physical and virtual infrastructures that are also expanding. Increased participation by people from different backgrounds was said to have taken place at the trade & barter markets, the tool library and the digital platforms described by Karen and Katia. Carmen, member of the trade & barter movement in Mexico City, mentioned how 4 years ago there was a 'boom' at the market she helps organize. She "Initially you could mainly see 'anarchists' participating, and now you even see old middle class ladies selling their homemade cupcakes", she said. This indicator of a potential spread of the practice under study to different contexts of the Mexican society reflects the will of individuals, however, the will of higher institutions in relation to CE initiatives is yet to be seen according to the respondents.

In contrast with the eagerness to provide logistic and economic support for the creation of a LOT expressed by the administration at UI, CE initiatives in Mexico City do not perceive high levels of encouragement from the local and national government. CE respondents identified issues such like

lack of validation, uneven relationships and insufficient regulation as affecting their development. These issues can result in lack of infrastructure or sufficient funding, especially for platforms that are not-for-profit like trade & barter markets and LOTs. Katia, who works with the digital *Ouishare* and other digital platforms notes that in Mexico the government does not have resources, or claims not to have any. In terms of the relationship with NGOs she claims that they do not know how to work directly with NGOs, specifying that "they do not know how to operate these programs but yet they are paternalistic". These comments were also echoed by Mauro, founder of *Herrateca*, who in regards to government support for the LOT said, "Institutionally in Mexico it is not possible so we have to generate these spaces from other logics", and recognized that funds for *Herrateca* have come from institutions like *Fundación Jumex* in Mexico. Finally, in terms of validation and visibility, Karen, who analyzed various digital sharing and CE platforms commented that if the government does not regulate or establish how these platforms of CE must operate, then the practice will not be validated in society. "Through establishment and regulation, these initiatives can given visibility and can be led to interact with and fund these platforms" (personal communication, March 15, 2017). Certainly, government regulation holds a prominent space in large digital CE forums as they are a growing part of the country's economy and user's rights (IDB, 2016; Karen, personal communication, March 15, 2017). However, the way it can influence smaller grassroots projects like LOTs and trade & barter markets needs to be carefully discussed so infrastructures and regulations do not favor business driven initiatives only.

6.2 *Skills* & Know-How

6.2.1 Unidad Independencia

As seen above, levels of participation and exposure to of many types of CE initiatives have increased at different levels of society in Mexico City. These growing numbers result in greater levels of enacted routines, competences and awareness that show how skills are present both in people's reality by having interacted with them and through examples in discourse. This also means that they are able to articulate around their functioning. While responses from UI residents did not show signs of relating sharing used items at LOTs with historical trends of trade and barter, their awareness and experience with CE initiatives were informed by emerging initiatives at the government or citizen level. Added to skills and the ability to embody physical and mental patterns appropriately, Schatzki specifies that skills and know-how also include the capacity to talk about and recognize them (2000). Initiatives related to the CE where residents have participated include

trade & barter markers, garage sales, video game exchanges, flea markets and second hand stores. This means that certain competences, related to the CE may be present. Even those more closely related to LOTs like flea markets, garage sales and trade & barter markets. Foreign and large-scale examples of CE practices were also reflected. Carlos, a retiree mentioned practices in Japan where people share bicycles and umbrellas with strangers and Mexico City's successful *EcoBici* bike sharing program run by the government. While it is not possible to generalize all residents of UI, it is possible to assume that by living in a neighborhood whose administration allows for community gardens, local product markets, and welcomes sustainable produce markets, people at UI may have higher exposure practices of sharing used items. And while conventional patterns of consumption prevail as the dominant model, residents may still be able to articulate on, participate and shape similar initiatives like LOTs. This conclusion stands for other residents in Mexico City under the premise that CE initiatives, including in-person, digital, and government led, are increasingly popular in many middle to upper class neighborhoods or areas that concentrate large numbers of people for recreation. Therefore, the capacities of articulating and competences of sharing items can be said to already be part of the common discourse. However, their spread remains constrained by the symbolism that prevails around them, especially ones that involve used items.

6.2.2 Members of CE initiatives

During these interviews CE initiatives were said to be mainly informed by foreign initiatives and in interaction with ongoing historical examples of trade and barter in Mexico. Mauro from *Herrateca* said they were inspired by the trend of LOTs that is happening outside of Mexico to locally adapt the tool library. "We have adapted the process from other examples. We want to do it in DF and get examples so other people can replicate. It is a model that is easy to administer". Mauro says that at *Herrateca*, which is destined to serve local visual artist's needs, adapted its format by trying to understand the local dynamics and build a strategy, knowing that Europe and the United States these exercises exist.

Persistent routines also define people's skills in terms of consumption but are regarded in different ways by members of CE initiatives. Carmen said that four years ago, there was a trade & barter boom where a lot of people became involved and saw the emergence of the *Mercado de Trueque Itinerante* (Itinerant Barter Market), which she helped create. But with the crisis she has seen that people are looking more to rent and buy. "Maybe this is because before there was not so much need for money and people do not afford themselves the luxury of trading things. Buying becomes a codependent relationship. When things get harder, you come back". For her, to come back to

those dynamics is a strong symbol of an economic crisis.. On the other hand, Katia from *Ouishare* said that crisis has enabled CE initiatives to spread. She pointed out, "there is a grave economic crisis in Mexico. In Europe it already happened, where people were faced with the need to trade things and share. In Mexico people haven't gotten into these types of solutions". This implies that people may 'have' to learn the skills and know-how depending on the context, and if an urgent need for it arises. However, for Carmen, this happens the opposite way; people resort to old habits when faced with hardship and this may be because the link between meaning and material elements in conventional consumption is still stronger for most people, whereas collaborative patterns of consumption are yet to be strengthened in skills and meaning.

Overall, reasons why people engage in practices of sharing are varied. These reasons will inevitably limit the number of interactions and skills developed around them. While know-how can also be informed through media or discourse, a practice needs to be performed and given specific meanings according to the context in which it develops to withstand. Consequently, specific skills pertaining to sharing of objects within LOTs are yet to be developed, even if they are informed by already embodied practices of sharing used items present in the city. Yet again, they will have to evolve and acquire new meanings as they interact with the particular context of Mexico City and the specific neighborhoods in which they emerge. Consequently, these emerging images & meanings will have to maintain strong links with newly acquired skills & know-hows to surpass the routines of conventional consumption.

6.3 Images & Meaning

6.3.1 Unidad Independencia

Components within of images & meaning include reasons to participate and a purpose in their existence as well as the "social and symbolic significance of participation at any moment (Shove, Pantzar & Watson (2012, p.22). These were mainly reflected in notions of trust and status, showing that trust can even override discomfort and prejudice. Explicit meanings and symbolisms around the practice of sharing objects are present in Mexican society as reflected in interviewee responses, and will certainly affect how CE initiatives are regarded. Since the material and skills & know-how elements are present as enablers of the practice of sharing used objects, the new significance given to previous assumptions will act as a key determinant in their successful replication. Therefore, many concepts, values and ideologies expressed around this element overlap with the other two elements of practice.

The main perceived benefits of taking part of LOTs, were convenience and saving money. Both can be related to overviews of economic crisis presented previously from members of CE initiatives. Only Marilú stated that she would change her mentality by participating in realizing that she does not need things as much and understanding how accustomed we are to buying things we don't use. Juan Pablo, one of the youngest respondents, said that he would appreciate things more through this practice. These responses have implications in analyzing the meaning & images related to the practice of sharing. The fact that the main guiding purposes for participation are economic may imply that this is a more pressing concern to respondents than social cohesion or the environment. Moreover, while all respondents agreed that they would be encouraged to participate at LOTs if they knew more about related environmental benefits, there were no other signs of environmental reasons to take part in the practice. I tried not to force the term of sustainability during the interviews, acknowledging that there are potential sustainability benefits in reducing consumption and that people's priorities vary between contexts.

In search to include more voices into the data and understand how people interact and inform each other's performances of a practice according to their meaning, I enquired about the easiness of transforming current patterns of consumption. In these questions I also asked about how respondents thought their family, friends or neighbors would respond to the image of a LOT. Most of the respondents referred to a willingness to accommodate and get used to this new practice, some even mentioned that they would agree to overcome prejudice or discomfort to participate in an initiative like LOTs. This willingness to change the meaning of a practice could be valuable according to Shove because it can indicate replication potential and creation of practices according to the changing perceptions around them (2003). Overall, we can see that people may be willing to adapt to the practice of consuming through LOTs but may not see others doing it. This can be due to the fact that through the interview process they have become familiar with the practice and have had the opportunity to define if they would like to participate or not. Also, when asked what the respondents' friends and family would say about their participation in a LOT, most respondents indicated that their close network would be or eventually be interested in the initiative. Marilú said that they would first say, "you are crazy" but then let themselves be convinced. All participants see the practice of sharing objects at LOTs as an example for others, the image of this reflects Warde's description of how practices influence each other as the borrow cope and innovate in relation to others who embody them (2005).

Related to this topic of perceptions amongst practitioners are the notions of class. This was a key component of the symbolism that practices of sharing and consuming used items hold in Mexican

society. All the respondents recognized the existing stereotypes around people who utilize used objects in Mexico. The practice of utilizing used items was recognized in relation to people who cannot afford to buy new things. Proving how these practices are subjective and are challenged in everyday was a comment by Germán: "Everyone looks for bargains, even if they see that I look for bargains, I don't care". Elizabeth Shove relates shifting notions of cleanliness with status (2003), however, considering that notions of status are set aside and reflected in residents' eagerness to share the practice with people around them, this was not the case. During these questions it was where people became more creative, providing a general perspective other's opinions and coming up with solutions to solutions to any hygiene concerns. Overall, of these respondents acknowledged that at as long as things were kept clean at the LOT, then they had no problem in using them. One of those respondents recognized that they might have uneasiness or discomfort but would still use objects. Only one of them felt that people would rather have their "own dirt". This information indicates that the element of hygiene is key to the practice of sharing objects. But again, high levels of trust are at play, making the barrier of cleanliness more vague and easy to overcome. The sense of easiness and practical problem solving show that the practice of sharing at LOTs may be easier to adopt than one may think.

Gender stereotypes regarding the acquisition of durable goods were reflected as two female respondents said that they do not know prices or frequency because their father or husband is in charge of buying durable goods. Moreover, a respondent mentioned that his wife is the consumerist at home since she "influenced by television and fashion". Notions of age were also present in defining who would be benefitted the most by LOTs. 5 out of 8 interviewees responded that people who could be interested in making use of LOTs were elderly people with one of them also stating that families could rent out objects for parties and reunions. Overall, along with their eagerness to participate, respondents associated a LOT to be beneficial for people with limited economic possibilities. The element of trust is a key indicator of people's sense of security and the meaning that they give to other's involvement in the practice. Trust in neighbors and the initiatives of LOTs themselves as effective and innovative overrode any issue that could arise. Care for community is also a significant element may inform this and was exemplified in the choice of which objects should and shouldn't be loaned at the LOTs such as pornography or violent objects. This may indicate a sense of responsibility with other consumers that may not be present in free market shops like supermarkets.

Suggestions at UI who should administer an LOT informed residents' perception of the government. Four residents suggested that NGO's or people from the neighborhood administer the LOT, three

suggested that the UI administration be in charge of administering the LOT, and only one of them suggested that the county administration be in charge instead. Overall, community organization or civil society is perceived to be the most adequate to run a LOT in the area. Mistrust in administration or government was present in most answers including one that suggested that administration be in charge, saying that they have to ensure that this is not for profit "so it has a good image". Other answers included comments about how the government would not give it follow up, that they did not trust the government. To further understand the images of trust amongst individuals, I asked whether the respondents thought that people would take better care of their own items as opposed to shared items. More than half of the respondents said that people would take better care of used items. Juan Pablo, the youngest respondent, said that if there is trust people take better care of things. Germán stated that with information, people can generate conscience to take care of used items. While it was acknowledged that some people in the community may not take care of objects at LOTs as well as others, solutions were provided for this. These responses reflect how agency in the participants interacts with greater symbols and systems of class or division. The importance of trust is reflected in these answers, showing that LOTs can serve as community spaces where people feel comfortable and safe knowing possibilities are high of people taking good care of shared items. These responses echo the higher levels of trust on NGO's and citizen organization structures and summarize how challenges to notions of hygiene or comfort are taking place as they emerge within practices. In conclusion, links between people and material elements (used items) are being reconfigured. In relation to LOTs, these links are greatly influenced by perceptions of the government, priorities in personal needs and the nature of the interactions that people have with each other. All of these can be reflected at the collective level thus shaping what the practice-as-entity will consist of in the particular context of Mexico City.

6.3.2 Members of CE initiatives

Shifting concepts, values and ideologies are exemplified collectively and permeate the development of CE initiatives at large. Through interviews with members of CE initiatives, concerns about the still undefined framework around them were made evident. While different types of CE initiatives are becoming popular in México City, there may be a lack of outspoken discourse on their purpose. The relevance of adopting a framework and a consolidated discourse by participants will vary on the goals of each CE initiative, dividing those who have are founded on goals of deep transformations of social and economic models, and those who tag along with mere shifting patterns of consumptions. The lack of reflection and conscious embodiments of the practice of sharing used objects means that while people have acquired the skills to participate and can acknowledge

related initiatives, they may not be able to articulate around their ultimate reason of their existence beyond a trend. Frustration was evident around CE some respondents who see commercial initiatives spreading without inciting any reflection or profound changes in consumption patterns. Carmen argued that although there are some alternative spaces in the city that are explicitly "anti-system", there is a growing number of barter spaces and alternative economy initiatives in wealthy areas but they do not have any reflection on the purpose. Initiatives that engage in reflection exercises often use scales of value defined by participants. Katia also emphasized that people are aware of and participate in the CE but hold no concepts to sustain their actions. This renders the links between skills and meaning weak, making it possible for practices of sharing to fade if more concrete concepts and adherences are not formulated. In the case of LOTs, they run the risk as well of becoming imported trends that lose participation as time passes if the community does not engage critically and consciously, even if the material elements for their existence are present.

Trust is a key component of most CE platforms, whether digital or face-to-face. Karen provided an insight on why people may not participate as much in collaborative economies: 1. They are not familiar with it. 2. Because they don't trust. Some of the CE initiative members hold technology as key to spread these projects and some emphasize the need for predominant face-to-face dynamics. Yet, those favoring digital interactions acknowledged that CE businesses often rely on face-to-face events and dynamics to build trust amongst clients/participants. Karen said that in person interactions are key to build trust, particularly in México as opposed to other countries. Likewise, Carmen felt strongly about face to face interactions between people in alternative forms of consumption, she said it is very important "because we cannot trust in each other if we don't know each other and share our needs", she also claimed that technology separates people of different ages and levels of accessibility. While LOTs involve face-to-face interactions, perceptions around digital platforms are relevant in measuring the importance of in-person community building. In comparison, Katia from the *Ouishare* platform sees the issue revolving more around a digital gap and the fact that there are currently no people trying to break it here in México so people can successfully interact through these platforms. "There is an Internet duopoly and people have not discovered other uses of Internet. They think that Internet is only social media and Google". Midway between these opinions is Karen, who studied various digital CE platforms and adds that people with digital platforms very often support from offline events. "In México, human relationships are important to trust in people in comparison maybe to Europe", giving the example of *Dadaroom* which has found it effective to host meet-ups every Thursday for potential roommates to meet and build trust. Compared to the reality of UI, face-to-face interactions may be more adequate to cater to the age range of residents at UI.

Collected data shows that Skills and know-how are increased through greater interactions with CE initiatives as a result of proximity and willingness to participate in them. This opportunity to shape images and meaning by enacting the practice of sharing items must result in strong connections with these skills. In order for participation in initiatives like LOTs trough sharing used items, the rewards obtained must be seen as greater than the ones provided by conventional forms of consumption. Ways to change these goals include exposure to more CE initiatives that build trust amongst individuals who can inform each other's practices and in turn give them individual meanings for transformation. In summary, while images and meanings around the practice of sharing used items are being challenged by increased interactions in CE initiatives and their presence in the city, a lack of more consolidated and explicit discourses about the purpose and even safety of the practice may render it weak over time and less fruitful for sustainability.

6.4 Methodological Limitations

My study included only a small number of participants within a diverse neighborhood to provide insights on everyday practices around LOTs. While a lot of the information coincided with the one obtained through interviews with members of CE initiatives, it does not reflect the experiences and sentiments of the whole of Mexico City. Furthermore, the convenience and snowball samples may imply that a more randomized selection could have been achieved, even if I tried to select people from different backgrounds. Furthermore, the diversity in age ranges could have been constrained by the demographics at UI and the times of day where I recruited participants in public spaces. Moreover, being LOTs a very new initiative, a lot of the questions asked were hypothetical and the perceptions will be materialized as the LOT movement expands in Mexico City. Nonetheless, these perceptions are key in informing levels and terms of participation for future projects and have triangulation with responded from individuals who know the topic of CE well. Also, there are components of practice theory, such as a deeper insight into notions of comfort, cleanliness and convenience that can provide an even more detailed account of where the practice of sharing objects through LOTs has emerged and where it may be going. Nevertheless, being an exploratory study in a context where studies of initiatives around CE in México focus on for-profit and mainly digital initiatives, this preliminary and localized data can provide elements of focus for further research on grassroots and in-person programs and exercises. Finally, the main findings regarding government support and need for cohesive articulations for human and environmental wellbeing around these types of practices are key. These reflections, added to a more systematic review, can

serve to inform all digital CE businesses and grassroots initiatives, formats focused on in-person interactions and the government itself when analyzing next steps.

7. CONCLUSION

7.1 Summary of Findings

As seen in the literature review and the perceptions around practices of sharing used items, government regulation and support are lacking, however, there are government initiatives related to the that may prove it as an enabler for these practices in the near future. Moreover, contrasting with literature that reflected class and status as dominant barriers to the spread of these practices are participant's willingness to challenge or disregard these notions, allowing for stronger links amongst available tangible elements, the skills that people have acquired around sharing in the city and meanings focused on finding new ways of interaction beyond stereotypes. By providing a localized image in the form of a microcosm of Mexico City through a middle-class housing unit complemented with broader views from CE initiatives, this thesis found particular developments of three elements of every day practices that can shape practices of sharing used items through LOTs. The findings can serve as an overview of the barriers and enabling factors for the replication of these initiatives that have been imported and will now see their development in shaping and being shaped by localized practices. This research provides an insight to a particular initiative that has not been widely documented within the CE and to contribute to research gaps around CE in general in Global South contexts.

7.1.1 Material

This thesis found that Mexico City, an urban center with a large flow of resources has infrastructures, economic means and objects available to sustain practices of sharing items at LOTs and that these are facilitated in areas with certain levels of social cohesion. Even if these material allowances are not provided by the large governing institutions; face-to-face and non-for profit initiatives like LOTs have found necessary resources in this urban center, including human capital as expressed by members of CE initiatives. Moreover, available individuals (bodies) to enact the practice are represented by the growing popularity of CE initiatives. Furthermore, the distribution of resources and regulation of these dynamics by authorities must be addressed in careful consideration of business-oriented initiatives as different from grassroots non-for profit endeavors

such as LOTs. Considering that practices also transform the spaces they take place in, hypothetical and practical presentations of LOTs already show a potential of appropriation of otherwise unused areas.

7.1.2 Skills & Know-How

Results show that the practice of sharing used items is acknowledged and increasingly embraced by people of different backgrounds in Mexico City, are familiar with the practice both as a concept and having experiences it. Awareness and competences of practices in the CE stem from existing traditional practices and the growing presence of both business oriented and non-for profit initiatives in the city. Even if LOTs have only one example in Mexico and cannot be generalized through other experiences, the similar competences that have developed show the potential for it to be replicated. In this sense, people are becoming more accustomed to utilizing used objects and thus have been able to talk about the practice in the interviews. LOTs in Mexico represent the borrowing and innovating of 'imported' practices, and like similar initiatives coming from abroad have adapted and evolved to their context informed by locally available competences and ways of articulating around them.

7.1.3 Images & Meaning

Images and meaning were vast findings in this study and overlapped strongly with the element of skills & know-how. Drivers and goals of the practices of sharing used items at LOTs included trust and care amongst individuals, trust in the government, saving money and a reconfiguration of notions of class and status. However, while these terms were present in various interviews, a lack of critical concepts was evident and was even emphasized by members of CE initiatives. Not having a defined purpose and goal for these practices may break the links between any developed skills and may render them mere trends or to be founded in purely utilitarian goals. Nevertheless, deeper notions of care and trust were reflected throughout the responses, showing that people trust in each other and wish for LOTs to be safe places. The images and meanings based on notions of status or hygiene that permeate Mexican society were also challenged or portrayed as irrelevant. Finally, lack of trust in the government showed a preference for local administrations or citizen-led organizations to manage LOTs. Nevertheless, face-to-face interactions were seen to be key to create the much-valued trust that enables changes in ideologies and therefore participation in alternative practices like sharing used items.

7.2 Potential for Further Research

A main goal of this study, in line with definitions of sustainability science is to produce useable, place-based knowledge (Clark, & Dickson, 2003). The logical next step in this direction would be to utilize the experiences and perceptions of practice related to the CE & LOTs, in acknowledgment that performance of a practice can lead to its transformation. Knowing that basic components of the 3 elements of practice are present in Mexico City but that relationships with institutions are weak, urban living labs can serve as opportunities for residents to develop the city along with other chosen stakeholders (Mulder, 2012). The suggestion of enabling an urban living lab is also informed by residents and administration's eagerness to create a LOT. Moreover, the creation of a practical study can serve as an example within the CE movement on scarcely documented practices within it. An interdisciplinary approach can also include a lens of social metabolism, which will include the natural sciences and delve into historical elements at play in regards to LOTs and sharing used items. In hand with practice theory, González de Molina & Toledo argue that the study of social metabolism must also incorporate "immaterial or intangible" processes that happen in societies, interacting in subtle and sometimes non-visible ways with material processes (2014, p.61). This more detailed account can be used to further understand the drivers and effects of the CE in respect to the environment through the analysis of material flows.

7.3 Implications for Sustainability in Mexico City

Throughout this study, LOTs have proven to fit into the area of CE initiatives with goals of deeper socio-economic transformation and were perceived by respondents as relying on face-to-face interactions and few economic resources. This implies that based on their foundations, they can lead to successful patterns towards non-consumption if they are consciously replicated. If sustainability is explicitly articulated as a goal, LOTs can come to exemplify good responses to pressing challenges to sustainability in the city and also address socio-economic issues. Particularly because available elements for their creation and articulation are already available. In the specific context of Mexico City, these initiatives will need to relate to similar initiatives to build capacities. They must also enter in critical dialogue with CE initiatives to define goals related to the environment that are more prominent in their discourse. Initiatives like LOTs can come to enhance local and national goals of sustainable development by setting more ambitious examples. These can be set by formulating context specific steps to achieve reductions in consumption, and formulating a culture where natural limits to growth are considered as guidelines for the operation of any project.

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APPENDICES

1. Consent Form

(Translated from Spanish)

Potential of Libraries of Things in Mexico City
Unidad Independencia

You are invited to participate in a brief interview on 'object libraries'. Your participation will take approximately 25 minutes and is completely voluntary. There are no known risks or discomforts associated with this questionnaire. This questionnaire will contribute to a better understanding of the possibilities of the solidarity/collaborative economy movement in Mexico City, focusing on Unidad Independencia. You can withdraw your answers at any time. Your answers will be strictly confidential and the digital data will be scanned and stored in secure electronic files. Any report of this publicly shared study will not include your name or any other personally identifiable information unless you indicate it in this interview. If you have any questions or would like a copy of the results of this study, please contact the researcher. By completing this questionnaire you indicate that you are over 18 and that you agree to participate in this study.

Libraries of things, as described in this survey, are non-profit community spaces where people have access to objects that they would otherwise have to buy (household appliances, tools, toys, sports gear...etc). Through these initiatives that are related to the collaborative economy-resources, space and money can be saved. Some sustain themselves with borrowing fees and others with memberships in the form of money or as objects for the library. By sharing these spaces, an opportunity is also opened to generate other projects, to increase a sense of community and to modify environmentally unsustainable consumption patterns (Büchler, Hahn & Schwinghammer, 2006 p.2-3). It should be mentioned that these projects have spread in Europe, the United States and Canada and in Mexico have begun to exist, with the example of one Chiapas. Each community creates its libraries according to their customs and needs.

2. Interview Guide

(Translated from Spanish)

Interview Guide-Libraries of Things in Mexico City

A. General Information

1. Name or alias as you wish to appear in the study.
2. Age, occupation, gender.

B. Material

1. How often do you obtain objects that are not food or personal care products? (appliances, toys, tools, books or other electronics, for example).
2. About how much do you spend on these objects and what kind of payment you use (credit-cash, debit?
3. Where do you usually obtain them, how far are those places and how do you get there?
4. Who in your household usually gets these objects?
5. In comparison to your parents or grandparents, do you believe that people now consume more or less objects of this type?
6. Do you think the people of this neighborhood consume at the same degree as you do?
7. Speaking of libraries of things, who in this neighborhood do you think would be interested or benefitted in finding a space like this?
8. What space in this housing unit do you think would be the most suitable to start a library like this one?
9. How many times a week or month do you think this library should be open?
10. If there were a library of things near you, what is the furthest you would walk or travel to get there?
11. What do you suggest should be made to promote these libraries and make everyone in the Unit feel included and want to use it?
12. Who do you think should be responsible for implementing these librarie: NGOs, government, administration or the residents of the Unit?
13. Some libraries charge a membership every so often or charge a deposit for rent. In some, just leaving an object allows you to participate-which format do you believe can be the most appropriate to sustain this library?
14. How do you think resources to support this library can be obtained so people can run it?
15. How could it be ensured that people return the objects so that everyone can still enjoy them?
16. What if someone accidentally damages an object?

C. Powers and abilities

1. Do you know any place where people exchange objects or share them in this Unit or Mexico City? Used things?
2. Do you know where items go when they are discarded?
3. Today in Mexico we are more used to buying with money exchanging or sharing things.Do you think it would be easy to get used to obtain and use objects in this alternative way?
4. Do you think that if more people get used to consuming this way, this can contribute to the
5. environment?
6. At libraries of things there will not be as much variety as in stores. What feelings come to you when you think of having access to objects only a few days a week or a small variety of brands etc?

D. Images and meaning

1. In terms of comfort, which are the differences you see between consumption of new and shared things? How can it be made more comfortable?
2. In terms of cleanliness which are the differences you see between consumption of new and shared things? How can cleanliness be ensured?
3. Do you think there are stereotypes about people that utilize used or recycled things in Mexico?
4. How easy do you think it can be for your neighbors in this Unit to change their consumption habits?
5. In the future do you see yourself having more or less things?
6. Do you think it might be fun to change the activity of buying for one of borrowing?
7. What things do you think would change in your life by borrowing/sharing objects instead of buying them? (socially, time-wise, resources)
8. Would you be willing to reconsider this feeling knowing that you might help the environment by utilizing used things?
9. What kind of objects you would like to find in this library and what would you definitely would not share?
10. Do you think people would take better care of shared objects or of their own?
11. What would your friends and family think if you tell them about libraries of things?
12. How do you think would people from other neighborhoods look at Unidad Independencia if people here shared more objects?
13. Would you be willing to participate in a library of things by sharing knowledge of volunteering? To what extent?
14. Would you get clothes at a library of things? Why or what kind of clothes?
15. Do you think anybody could be affected by the existence of a library of things?
16. Finally, do you think the term "library of things" is adequate? Do you suggest another?

Thank you!