Sensemaking In Urban Experiments: The Case of Barcelona's Superblocks

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Abstract
This research analyses the Superblocks initiative in Barcelona within the broader context of urban experimentation. It assesses whether the participatory process adopted aligns with the constructs formulated within Weick's (1988) concept of enacted sensemaking. The research uses a thematic analysis of the minutes from 11 participatory meetings that took place before, during and after the project. The results emphasise the importance of considering the overlooked identity dimension when planning future projects, as this can promote social learning. This study addresses the current lack of literature bridging the gap between urban experimentation and organisational change theories.

1. Introduction

Recently, a substantial body of literature on urban experimentation has emerged, offering a relevant, inclusive and practical approach to system innovation and structural change in contexts of urban uncertainty and ambiguity (Raven et al., 2019; Sengers et al., 2018, 2019). By promoting piecemeal interventions and gradual changes to the urban landscape, urban experimentation enables deep-rooted transitions and adaptations to urban reforms, encouraging support and legitimization of these measures (Evans et al., 2021). Consequently, urban experimentation has become a central concept in sustainability transition literature, with urban and transition studies scholars exploring these processes and how urban experimentation can influence broader transformational processes (Raven et al., 2019).

Urban experimentation has also been situated in the context of complex systems (Sengers et al., 2018) and thus in the context of complexity theories. Rittel & Webber (1973) first developed the concept of 'wicked' or complex problems in planning, conceptualised as issues shared by multiple stakeholders with competing perspectives, conflicting interests, different types of uncertainty and significant intangibles. Urban structures tend to evolve through cooperation rather than being dictated by a central planner (Rittel & Webber, 1973). Portugali, one of the most relevant authors on complexity in urban contexts, has elaborated on the concept of urban self-organisation (Portugali, 1997), derived from Haken's (1980, 1985) synergetics, to describe urban structures. The call for a trial-and-error, as found in complexity theories of cities (CTC), makes planners participants in a 'huge self-organising process' (Portugali, 1997). This approach helps to connect complexity theory with the exploratory nature of urban experimentation.

The concept of learning is central to both urban experimentation and complexity (Sengers et al., 2019). Approaches to urban experimentation that are relevant to this focus on the learning processes initiated by these experiments, such as transition-oriented experimentation (van den Bosch & Rotmans, 2008) or strategic niche management (Seyfang & Haxeltine, 2012). Meanwhile, concepts such as double-loop learning (Sterman, 1994) and adaptive and generative learning (Senge, 2003) frame learning in terms of complexity, locating it at the level of assumptions, behaviours, norms, and interpretative frameworks.

Yet, despite the clear link between urban experimentation and complexity, there has been no systematic interaction between the former concept and relevant complexity-related organisational theories. These theories encompass a broad range of research, including Lewin's action research (Lewin, 1946, 1947), systems approaches (Checkland, 2000; Ulrich & Reynolds, 2010) and enacted sensemaking (Weick, 1988, 1995).

This research aims to demonstrate the undeniable utility of organisational theory, particularly Weick's (1988,

1995) seminal work on enacted sensemaking, in the context of the uncertainty and ambiguity of urban experimentation (Sengers et al., 2019). Sensemaking is the process of interpreting cues about reality to create knowledge about a given situation (Weick, 1988). In short, sensemaking involves placing an input within a framework (Weick, 1995). Understanding these concepts enables better control of appropriate enactment strategies, which can facilitate new approaches to urban experimentation.

This paper uses a framework drawn from Weick's work (Maitlis & Sonenshein, 2010; Weick, 1988, 1995) to investigate perhaps the most iconic case of urban experimentation: Barcelona's Superblocks. The aim is to determine whether the Superblock project addressed the principles of enacted sensemaking, and to explore the potential benefits of doing so.

The paper is structured as follows. The 'Context' section provides an overview of the Superblock project with a focus on Sant Antoni and offers a brief summary of the concept of sensemaking. The 'Research Framework' section adapts the three meanings of sensemaking to the research framework used. The 'Research Methodology' section details the principles of the thematic analysis performed and outlines the documents used. The 'Results' section explains the objective outputs of the analysis and presents categorisation examples for each analysis topic. The 'Discussion' section presents the research's key arguments, linking the discussion of sensemaking to urban experimentation and learning. Finally, the 'Conclusion' section summarises the key findings and suggests avenues for future research.

2. Context

2.1 The Experimentation of the Superblocks

The Superblocks Project is a flagship initiative launched by Barcelona's city council in 2015. The project involved creating clusters of traditional grid-shaped city blocks with car-free public spaces within them. Implementing these superblocks required severely restricting car access to pedestrianised areas and changing traffic flow, with main car traffic being diverted to neighbouring streets. The project aimed to create urban spaces that are more pedestrian-friendly and suitable for children and other vulnerable groups, while promoting more sustainable mobility.

The first superblock was introduced in the Poblenou neighbourhood in 2016, with further projects implemented in other districts until 2023. The implementation of the superblocks was associated with the government of Ada Colau, who achieved an unexpected victory in the 2015 municipal elections. Although a preliminary policy had been approved and included in the Urban Mobility Plan by the previous centre-right mayor (Estruch-Garcia et al., 2024), it was under Colau's leadership that the city adopted the superblocks as a signature project, linking them to other initiatives aimed at reducing car use through pedestrianisation and expanding cycle lanes. From the outset, the city has used the 'superblock' label for various operations across the territory, even reframing earlier, unrelated interventions under the same heading, such as those in Gràcia or Passeig Sant Joan (Boeck, 2021).

The first Superblock Project implementation in Poblenou was met with criticism. A group of citizens organised a non-legally binding referendum, which resulted in the project being discontinued. However, the referendum had a low turnout, raising doubts about its representativeness. The city council proceeded with the Superblock project without adequately informing the public, prompting opposition (Versigghel et al., 2023). According to the same authors, although some opposition to the project persisted, the municipality was able to increase acceptance of the project by undergoing more participatory processes and intensifying consultation rounds after the initial implementation. The Sant Antoni Superblock followed, and the Municipality's strategy was reportedly more cautious, slowing down the intervention stages and actively consulting local residents and workers.

The Sant Antoni Superblock was the first to feature a participatory process from the start. The first meeting with the Steering Group took place in February 2017, and a further ten were held until April 2022 (Supermanzana de Sant Antoni, 2017).

Despite its international success, the project was controversial in the city and polarised political parties during Colau's government (Boeck, 2021; Estruch-Garcia et al., 2024). In the 2023 elections, Ada Colau lost votes and went into opposition. During the campaign, differing positions on the Superblock were set the stage for a reward-punishment dynamic in voter behaviour, and residents directly impacted by the project were likely to either reward or punish the incumbent party (Estruch-Garcia et al., 2024) Although different studies have shown an increase in the tendency to vote for Ada Colau in the Superblock districts (Estruch-Garcia et al., 2024; Marquet et al., 2024), these studies have some limitations. Firstly, they do not guarantee the same population measurements and may overlook events such as the gentrification of districts, which is one of the concerns associated with the measure. Secondly, they only test the localised effects of the superblocks in their immediate vicinity and do not consider how the wider public perceives the actions (Marquet et al., 2024).

Conversely, the media's opposition to the measure often focused on issues such as Barcelona's alleged disorder and decadence, the 'war on cars', and strangulation of the city (Nello-Deakin, 2022). Although the Municipality repeatedly expressed its intention to implement the measure systematically across the whole city rather than in certain neighbourhoods only (Versigghel et al., 2023), by 2023, the affected districts were mainly in central locations (e.g. Poblenou, Sant Antoni and Eixample), raising concerns about gentrification and the promotion of tourism.

The potential challenges of the Superblocks concept are consistent with recent studies that have focused on the limitations of urban experiments, particularly with regard to their ability to promote learning, legitimacy, and the alignment of social goals (Eneqvist et al., 2022; Scholl & Kraker, 2021). Additionally, Colantone et al. (2024) have demonstrated how the implementation of comparable green initiatives has resulted in mounting public dissatisfaction and electoral repercussions. Their study found that residents affected by a car ban in Milan were significantly more likely to vote for the far-right Lega party, which opposed the ban, in subsequent elections. These findings highlight the need for a more in-depth discussion and understanding of the real impact of urban experimentation on urban transitions.

2.2 Enacted Sensemaking

Enacted sensemaking involves a process of forming a coherent worldview by interpreting cues, as well as contributing to the worldviews of others through a sense-giving process (Maitlis & Christianson, 2014a). Therefore, sensemaking involves actively creating environments through one's actions and interpretations (Weick, 1988). This "two-pronged" process of learning and acting relates to Lewin's (1946) action-evaluation interactive process and to Checkland's (2000) conception of an ever-changing problematic situation. This means that action not only proceeds cognition – meaning that one cannot understand a system without trying to change it (Schein, 1996) –, but also that any action upon a problematic situation is immediately followed by a change in the problem itself, requiring constant adaptation to the situation. These core concepts help to explain how urban experimentation shapes broader processes of transformation (Raven et al., 2019).

These authors' emphasis on process-oriented strategies, human-centred approaches, and the tentative nature of change renders their work relevant to the literature on urban experimentation. It should also be noted that all of the literature highlights the risks associated with failure in collective learning processes. Failure to enact sensemaking can negatively impact the life of an organisation. Lewin's three-step model — unfreeze, move and refreeze — can be used to illustrate the importance of ensuring that the sensemaking process freezes in the final stage, rather than returning to the previous status quo and becoming just a 'shot in the arm' for the problem (Lewin, 1947). Failure to refreeze the organisation leads to a process of disconfirmation, resulting in a counter-productive contribution to change (Schein, 1996). Better control over appropriate enactment strategies could empower urban experimentation.

This research builds on Weick's three basic constructs of enactment, namely commitment, capacity and expectations (Weick, 1988). It also builds on the update made by Maitlis & Sonenshein (2010) , relating it to turbulent organisational contexts and renaming the concept of capacity 'identity'. This concept of identity is consistent with

other relevant literature (see Weick, 1995). These three concepts enable us to understand the activities involved in creating a shared worldview, which is present in both crisis and change management literature. These concepts serve as building blocks for analysing the enactment process in urban experiments, acting as both enablers and barriers to the sensemaking process (Weick, 1988, Maitlis & Sonenshein, 2010).

Commitment reflects the extent to which we recognise the need for change, and is foundational to sensemaking (Maitlis & Sonenshein, 2010). However, it can be both productive and unproductive to associate commitment with a previous state of affairs, as individuals tend to generate retrospective explanations to justify a position they have already committed to (Weick, 1995).

Capacity, which Maitlis & Sonenshein (2010) also refer to as 'identity' (a term adopted for the purposes of this study), is the way in which we understand our role and agency within a given context. People tend to pay attention to what they believe they are capable of acting upon (Weick, 1988). Identity is usually most evident when it is threatened; therefore, it is necessary to create an environment in which our identity is adequately challenged. Our perception of identity is never free of preconceptions and can easily be influenced by salience. During organisational change, identities are often completely replaced (Corley & Gioia, 2004).

Expectations, combined with contextual cues, create meanings which are then used to filter subsequent cues, building confidence in a definition of the situation (Maitlis & Sonenshein, 2010, p. 564). Undermining or exaggerating the impact of urban change can have significant implications for its implementation and acceptance by the population. Table 1 displays different examples of the conditions of enacted sensemaking.

Table 1 – Applied constructs of enacted sensemaking

	Context	**Commitment**	**Identity**	**Expectation**
Mann Gulch Fire	Weick's (2009) analysis of a fire incident in which several smoke jumpers were killed after choosing not to leave their tools behind	Firefighters are committed to a set of meticulously rehearsed procedures for extinguishing fires	Firefighters told 'drop your tools' immediately feel as losing their identity to one of people fleeing the fire	Hopeful expectations were created by labelling the fire as routine and relatively easy to manage
Alps' Lost Soldiers	Weick's (1979, in Maitlis & Sonenshein, 2010) tale of a group of soldiers who safely find their way through the Alps using a map that later turns out to be of the Pyrenees	Tenacious commitment to a plan to escape from the mountains helped keeping the group moving	Soldiers believing that escaping was within their capabilities helped keeping the plan	Setting hopeful expectations on the plan helped keeping panic at bay and keep moving
Bhopal Disaster	Weick's (1988) analysis of a disaster in a plant whose symptoms were overlooked by everyone (e.g. alarms were shut off and refrigeration equipment was disconnected).	Lack of commitment to safety and commitment to other opposing values – commitment to secrecy and cost cutting	Employees readily grant the supervisor's claim to authority and the implied capacity to act, taking any responsibility away from them	Low regard for the tasks at hand led to sloppy procedures and inattention to details from every worker and manager in the factory

3. Research Framework

This research adapts Weick's (1988) framework to the context of urban experimentation. Each construct – commitment, identity and expectations – has specific implications for the population and different ways of addressing. This section briefly adapts these three dimensions to an urban setting, providing clear definitions and outlining the framework used in this analysis. The intention is to create a roadmap for analysing the minutes, providing possible examples found within them. The role of each dimension is extensively explored in the discus-

sion section, as well as the concrete cases found and the links to other relevant discussions.

In an urban experimentation setting, the commitment shared by all people should be to the idea of sustainable transition. Common problems arise when faced with divergent opposing commitments, for example a shopkeeper who sees pedestrianisation as a barrier to their business, which can lead to resistance to the transition and retrospective justifications. Therefore, the person presenting the policy should seek to present the case and emphasise the need for deep commitment to the experimentation. At the identity level, the focus is on understanding the scope of action as broadly as possible in order to encompass actions that will meet the need for experimentation. In an urban context, the problem often lies in abandoning an old identity rather than finding a new one – for example, adopting a new way of commuting. An individual's choice of commute (e.g. using a car) may become part of their identity. Expectations relate to a person's understanding of how a given transformation will impact their life at any given moment. In an urban setting, clearly stating the consequences of interventions, providing good descriptions of them and promoting population engagement from an early stage can help to ensure that expectations are formed correctly. Table 2 shows how the meanings have been adapted to fit this research framework.

Table 2 – The research framework

	Commitment	**Identity**	**Expectations**
Relevant objectives in an urban experimentation, related to each construct	Emphasise the importance of the project for society and future generations. Align the commitment to sustainable transitions with other commitments in one's life. Create a sense of urgency around achieving sustainable transitions.	Demonstrate one's ability to adapt to urban transitions. Facilitate a process of questioning preferences, identifying implicit biases, minimising distractions, reducing certainty and overcoming paradigm blindness. Build a new shared identity around sustainable mobility that is compatible with people's lives and culture.	Address people's anxiety about disruption to their lives by describing the impact of the process and providing a clear picture of how it will play out. Demonstrate one's control over the process.

4. Research Methodology

After an initial enforcement period of the superblocks, the city of Barcelona launched intensive rounds of consultation with citizens and stakeholders (Versigghel et al., 2023). The city council hosted participatory meetings that brought together traders, residents, and other local district entities to propose and co-create the analysis and design of the interventions. The Sant Antoni district was the first to hold these meetings since the beginning of the project.

Considering these meetings as triggers of the sensemaking process, characterised by a confrontation of the status quo and interruption of an ongoing activities (Maitlis & Christianson, 2014b), this research uses the minutes from Santo Antoni district meetings to analyse the three constructs of enacted sensemaking during the participatory process. Thematic and critical analyses of the minutes were carried out. The different documents and meeting minutes were accessed via the Ajuntament de Barcelona website (Supermanzana de Sant Antoni, 2017) (Table 3).

Table 3 – Minutes consulted

Document	Date	Coded Remarks
Minutes of the Session with the Sant Antoni Driver Group	27 Feb 2017	36
Minutes of the Session with the Sant Antoni Driver Group	15 Mar 2017	19
Minutes of the Session with the Sant Antoni Driver Group	13 Jun 2017	43
Minutes of the Session with the Sant Antoni Driver Group	14 Jun 2017	15
Minutes of the Session with the Sant Antoni Driver Group	02 Nov 2017	2
Minutes of the Session with the Sant Antoni Driver Group	12 Dec 2017	80
Minutes of the session of the Driving Group and traders of the Sant Antoni Superblock	09 May 2018	40
Minutes of the session of the Driving Group and traders of the Sant Antoni Superblock	26 Feb 2019	23
Minutes of the meeting with merchants and the AVV of St. Antoni in relation to the Superilla de Sant Antoni	28 Jun 2019	38
Minutes of the expanded Driving Group of the Sant Antoni Superblock	28 Oct 2019	46
Monitoring Session of the Sant Antoni Superblock	26 Apr 2022	52

Files retrieved from: https://ajuntament.barcelona.cat/superilles/es/content/sant-antoni (accessed 16/09/2024)

Braun & Clarke (2006) define thematic analysis as a foundational qualitative research method involving the identification, analysis and reporting of patterns within data. According to the authors, it offers a flexible and accessible approach and allows the organisation and description of qualitative data sets in rich detail, deriving meaningful insights from it. This has made thematic analysis a valuable tool in psychological research and beyond.

The analysis does not aim to cover the content of the initial project presentation or the project's specific details. Rather, it aims to understand the nature and content of the discussion held during the meeting segment dedicated to the participatory exchange of ideas with the public (i.e. the question-and-answer session). The analysis of the minutes was conducted at a participation level, meaning that each entry point in the dataset was a remark made by an individual, which was divided into different parts when covering different ideas. This approach was adopted both to achieve a reasonable level of segmentation and because the way the minutes were typed changed throughout the project, resulting in inconsistent data structure and necessitating adaptation of the thematic analysis.

Each entry point was coded according to three main themes: 'Remarks type', whether the remark was voiced by a project proponent or participant and whether it was a positive, negative or neutral comment, request or question; 'Remarks subject', depending on the main subject covered in the remark, which was coded as public space, automobiles, public transport, bicycles, motorcycles or logistics; and 'Remarks nature', that varies according to the construct, i.e. commitment, identity, expectation or the group 'others'. Each remark was coded according to the most salient category concerning its 'type' and 'nature', while the 'subject' was coded according to specific keywords that featured in the text.

5. Results

This section presents the results of the thematic analysis of the minutes. The website of the Ajuntament de Barcelona states that the work carried out in Sant Antoni is the result of a debate process involving neighbours, business owners and other local associations, who constituted the steering group (Supermanzana de Sant Antoni, 2017).

The first meeting was held on February 17th 2017 and the last one on April 26th 2022, with a total of 11 meetings listed on the Ajuntament de Barcelona website (Supermanzana de Sant Antoni, 2017). Work on implementing the

Superblock began in September 2017 and was divided into three phases, extending until October 2019 (Ajuntament de Barcelona, 2019c).

The meetings always followed a similar format. First, there was an opening session with an introduction to the agenda and an overview of the superblock framework, along with some remarks about previous sessions. Then, there was a question-and-answer session about the project or specific issues regarding the intervention. For example, the meeting held in February 2019 focused specifically on loading and unloading logistics, while the meeting held in June 2019 focused specifically on the construction process and timings.

5.1 Remarks Type

The type of remark was coded into two main groups: proponents and participants. These two groups represent a clear distinction between the people participating in these sessions: the Ajuntament representatives, who were on the side of those proposing the superblocks, and the civic society entities participating in the process. This clear differentiation is evident throughout all the analysed minutes.

The remarks from civic society entities and individuals were categorised according to the type of participation they represented: questions, neutral comments, negative comments, or positive comments. This categorisation provides a brief insight into the views of these entities (Table 3).

Table 4 – Type of remarks

Row Labels	Remarks
Participant	178
Neg Comment	41
Neutral Comment	42
Pos Comment	9
Question	86
Proponent	205
Proposal	205
Grand Total	383

The balance of remarks from participants (178) and proponents (205) indicates a participatory process. Within the group of participants' remarks, a prevalence of questions (86) is visible, followed by a nearly equivalent number of neutral comments/requests (42), negative comments (41), and lastly, positive comments (9).

Questions were mainly asked for two reasons. The first was related to the project's operational characteristics, e.g. requests for information on unloading and street parking, or specific points such as the Ferran Sunyer School exit (Ajuntament de Barcelona, 2017b) , the location of motorcycle parking spaces (Ajuntament de Barcelona, 2017a), the location of logistics unloading bays or cycle lanes (Ajuntament de Barcelona, 2018), or issues related to the construction site (Ajuntament de Barcelona, 2019a). The second category of questions was related to the outcome of the project. It was asked whether the project was the same as that implemented in Poble Nou (Ajuntament de Barcelona, 2017b), . Other questions related to forecasts for an increase in traffic looking for parking, specifically on Viladomat Street (Ajuntament de Barcelona, 2017a), whether there would be a gentrifying effect on the neighbourhood (Ajuntament de Barcelona, 2017e), and whether there were studies proving that the project would reduce pollution, given that it would cause vehicles to slow down and turn more (Ajuntament de Barcelona, 2017d).

Neutral comments/requests are usually remarks that describe the participants' needs without making any direct positive or negative judgements about the project. Examples include requests for traffic management, such as

improving neighbourhood access (Ajuntament de Barcelona, 2017b) or reducing traffic speed with the help of speed cameras (Ajuntament de Barcelona, 2017e), managing parking by creating new parking areas or changing from blue to green parking zones (Ajuntament de Barcelona, 2017e), and deciding on furniture locations, such as placing benches outside a school (Ajuntament de Barcelona, 2017a), and expressing opinions on newly created or grown bar terraces (Ajuntament de Barcelona, 2019b).

Negative comments encompass negative opinions on various topics, such as the outcome of the project – e.g. the idea that the neighbourhood would become a maze (Ajuntament de Barcelona, 2017b) –, the fainess of the project – e.g. illustrating that some streets will be improved but others will worsen their current situation (Ajuntament de Barcelona, 2017c) –, or general complains – e.g. complains from Shopkeepers on Calabria Street and Viladomat expressing being "left out" of the action (Ajuntament de Barcelona, 2019a), or the idea that Sant Antoni is tired of being a testing area for Barcelona (Ajuntament de Barcelona, 2022) –; and even complains about specific operational characteristics – e.g. complaints about the loss of parking spaces (Ajuntament de Barcelona, 2018), complaints about two-way cycle lanes (Ajuntament de Barcelona, 2017d), and specific traffic management in certain areas, such as next to the Cotxeres Civic Centre (Ajuntament de Barcelona, 2017c), as well as the lack of cleaning and maintenance of the new spaces created (Ajuntament de Barcelona, 2019b).

Positive comments are usually expressed in support of the project. For example, AMPA Ferran Sunyer School appreciates the work done (Ajuntament de Barcelona, 2017b), Vicenç Gasca values input, consensus and support for the measure (Ajuntament de Barcelona, 2017e), requests for the expansion of the measure (Ajuntament de Barcelona, 2017a), or the great satisfaction with the project demonstrated by the Ferran Sunyer Primary School (Ajuntament de Barcelona, 2019b).

5.2 Remarks Subject

The subject of the remark is divided into the six most common topics: public space, automobiles, public transport, bicycles, motorcycles and logistics. Each remark was attributed to one of these categories when a keyword related to the concept was found. This means that each remark may cover different subjects (Table 3).

Table 5 – Remarks subject

Public Space	Automobile	Public Transport	Bicycle	Motorcycle	Logistics
92	76	12	21	6	54

The subject of 'public space' was the most frequently addressed topic (92), relating to street furniture, greenery and shop terraces. This was followed by 'automobiles' (76) and logistics (54). Further down the ranking were 'bicycle' (21), 'public transport' (12) and 'motorcycle' (6). Different topics arose in different meetings. Different topics arose in different meetings. Figure 1 shows the proportion of topics covered in each meeting.

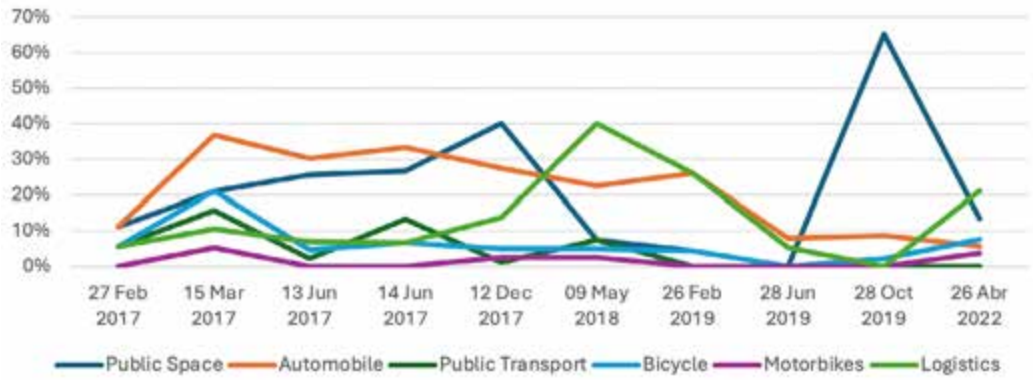

Figure 1 – Proportion of remarks attributed to each subject per minute[1]

1 The minute of the meeting held on November 2017 was excluded from the graph due to lack of substantial content

5.3 Remarks Nature

The nature of the remarks was coded according to the main themes addressed in the research framework, which draws on Weick's (1988) and Maitlis & Sonenshein's (2010) three constructs of enacted sensemaking: commitment, identity and expectations. A fourth group, 'Others', was included, encompassing remarks dedicated to overall project details and operational information on how the participatory process will proceed. Similarly to what happened with the type of remark, the nature theme is coded based on the most salient category for each one. The results are shown in Table 3.

Table 6 – Remarks nature

Remarks nature	Nr of remarks
Commitment	29
Expectation	228
Identity	7
Others	111
Grand Total	375

The results clearly show a higher propensity for remarks to fall within the realm of 'expectations' (228), with a significant difference from the other two categories: 'commitment' (29) and 'identity' (7).

Distinguishing between remarks that express the idea of expectation and general enquiries about the project is a complex task, as the line between the two is thin. The general rule applied was as follows: continuation of a given activity versus interest in general details of the plan. For example, asking 'What material is this wall made of?' is different from asking 'Will I be able to hang a frame on this wall?'. The former seems to be a general enquiry about the project (although there may be a hidden intention), while the latter is a direct concern about expectations regarding the outcome of an activity. The categorisation criteria and examples are shown in Table 7.

Table 7 – Categorisation criteria and examples

Nature of remark	Criteria	Examples
Commitment	Questioning or referring to general goals and consequences of the measures	"Will we get safe streets for children to play on?"; "(...) the measures to be taken should generate spaces to avoid sedimentation (...)"; "If bicycles ride next to cars, are they very exposed to pollution?" (Ajuntament de Barcelona, 2017b)
Identity	Questioning or referring to ways of being or one's agency	"(...) citizens have the right to have a car" (Ajuntament de Barcelona, 2017a); "(...) they are used to doing things in a certain way and that they are concerned about change" (Ajuntament de Barcelona, 2018)
Expectations	Questioning or referring to specific tasks or tasks already taking place	"Situation regarding the Ferran Sunyer School exit"; "What about the buses?"; What will Ronda Sant Antoni look like? (Ajuntament de Barcelona, 2017b); "How will you access the Sant Antoni Market?"; "Will there be a reduction in parking for residents?" (Ajuntament de Barcelona, 2017a);
Others	Questioning or referring to general dynamics of the project, the participatory process or specific operational assumptions	"Question: Is this the same idea that has already been implemented in Poble Nou?", "what type of actions will be carried out?" (Ajuntament de Barcelona, 2017b); "Is there a forecast for an increase in traffic on Viladomat Street?" and "Why is Parliament Street considered a civic axis?" (Ajuntament de Barcelona, 2017a)

6. Discussion

6.1 General Conclusions

The initial conclusion to be drawn from the analysis is that the three pillars are not consistently addressed during the Sant Antoni Superblock participatory meetings. The minutes show that the expectation dimension is given more emphasis than commitment and identity (Figure 1). Further elaboration of this preliminary analysis is outlined below.

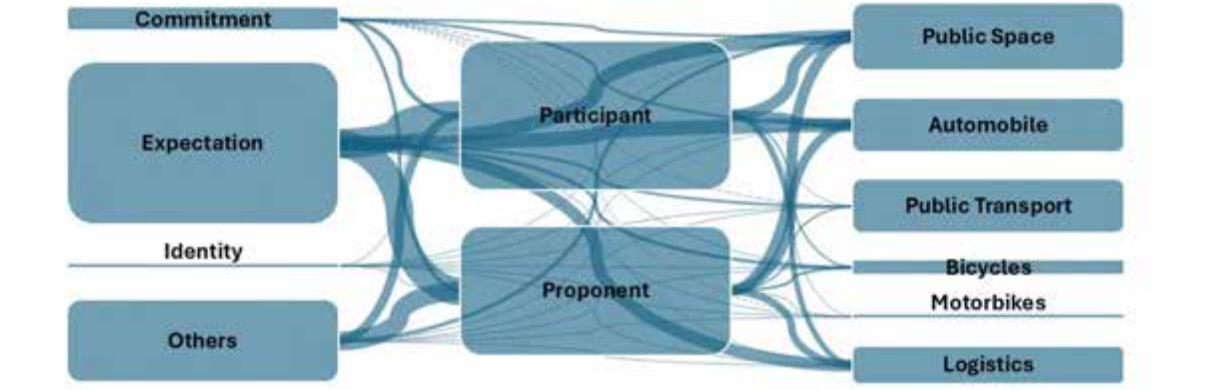

Figure 2 – Cognitive mapping of the type, subject and nature of remarks

Commitment

Commitment is associated with adherence to a specific set of actions. It is a necessary element in providing a sense of value to one's actions and is a vital foundation for keeping individuals moving forward and keeping panic at bay (Maitlis & Sonenshein, 2010). However, the concept of commitment can also be counterproductive when an individual is committed to an opposing worldview. In order to achieve commitment during a process of change, it is necessary to create a clear and compelling vision of successful change; storytelling is generally considered to be an essential part of this process (Weick, 2012).

Although this construct was not explicitly addressed in the minutes, examination of other documents suggests that the Ajuntament de Barcelona endeavoured to emphasise the importance of the project in the introduction to each meeting (Supermanzana de Sant Antoni, 2017). The initial segment of the participatory meetings consisted of a presentation by a municipal representative outlining the Superblocks project's overarching objectives. This presentation addressed the need to reduce greenhouse gas and carbon emissions, as well as the city's gradual pedestrianisation. Furthermore, the documentation reveals the integration of the commitment to sustainable transitions with other commitments, such as promoting healthier lifestyles and enhancing commerce. This integration fosters a sense of urgency for the realisation of sustainable transitions.

Therefore, although commitment was not a common theme in the content analysis of this research, it is a construct that has been considered when implementing Superblocks.

Expectations

Expectations are related to the anticipation of the outcome of certain actions on a problem. Consequently, they are associated with the ability to interpret cues, form a mental image of the problem and decide how to address it (Weick, 1988). Excessively optimistic or pessimistic expectations can influence the outcomes of a given situation. For expectations to align, people must possess a coherent conceptual understanding of the progression of activities.

A thematic analysis of the minutes revealed that remarks concerning expectations were the topic that was addressed most frequently. In most of these meetings, the tangible impact of the transformations on each street is discussed, along with the alternatives and participants' opinions. A key issue in the presented documentation

is the creation of a clear mental image of the planned interventions, which involves presenting visual aids and providing detailed explanations of specific street segments.

In the context of the Superblocks initiative, the municipal authorities placed significant emphasis on establishing consistent communication channels and disseminating information about the project's progress and subsequent implementation phases. Despite potential critiques regarding the extent to which the project was a bottom-up initiative (Boeck, 2021), proximity to the population promoted effective management of expectations.

Identity

Identity refers to how we understand our role and agency within a given context (Maitlis & Sonenshein, 2010; Weick, 1988). As our actions are limited by what we perceive as possible, the larger this scope, the wider the variety of actions we consider. Remarks such as 'citizens have the right to have a car' (Ajuntament de Barcelona, 2017a) and 'they are used to doing things in a certain way and are concerned about change' (Ajuntament de Barcelona, 2018) suggest that some participants were unable to broaden their perception of possible actions beyond the current paradigm.

According to Weick (1988), someone who believes they can adapt to a wide range of situations is open to a variety of inputs because they will always find a way to cope with them. Conversely, a person whose identity is closely linked to the way they currently do things - for instance, driving home - will not be able to consider alternative ways of being.

The Superblocks project challenged the dominant identity of car users. However, the analysed minutes barely addressed the question of identity or attachment to previous ways of doing things before the Superblocks intervention. Had the project encouraged people to broaden their perceptions of what they can do, they might have been more open to accepting changes. The following sections will explore the lack of consideration given to this issue, and its potential impact on urban experimentation.

6.2 Identity Problems and Implications

Due to their promotion of the pacification of streets, the Superblocks were often portrayed by the media as a 'war on cars' (Nello-Deakin, 2022). However, despite a scientific consensus on the need to promote more sustainable modal choices, the reasons behind our natural inclination towards cars is explained by transport behaviour science (Dyson & Sutherland, 2021). Dyson & Sutherland (2021) explain that the preference for the automobile over public transport, for example, can be attributed to convenience, reliability and status, deeply ingrained processes that have a tremendous impact on our subconscious decision-making processes. 90–95% of our daily tasks are performed automatically, and drivers only consider which mode of transport to use for 14% of trips (Dyson & Sutherland, 2021).

The problem stems from the fact that we see the car as an extension of our identity. In his famous analysis of the 1949 Mann Gulch fire in Montana, Weick (1995) reports that the smokejumpers resisted instructions to leave their tools behind in order to sprint to safety more quickly. Those who left their tools behind were reportedly able to run to safety, while those who did not were overtaken by the flames. Some men did not consider leaving their tools behind because they were part of their identity – the idea did not even cross their minds. Identity therefore acts as a filter for potential actions, which become more rigid in a crisis situation when most of us act almost on autopilot. Cars may be seen as tools for fighting fires. Despite the fact that they prevent us from running away from a figurative fire – the climate crisis – we tend to cling onto them.

Our identity shapes our worldview and influences the way we perceive problems. This can result in tenacious justification, blind spots, selective attention, confident action, and self-confirmation (Weick, 1988). Even when the other dimensions of sensemaking — commitment and expectations — are aligned with the change process, these mental processes affect how we interpret information. This can lead to retrospective justifications for certain events, causing commitment to change to fade.

The analysis of the minutes reveals a preoccupation with project parameters that were repeatedly proven to be irrelevant by municipal research and presentations, yet which were still addressed by the population. This may be due to selective attention, such as the preoccupation with increased traffic due to fewer available parking spaces and lower speed limits (e.g. 'Question: Pacifying traffic slows down vehicles and makes them turn more. Has it been well studied whether this reduces pollution?" (Ajuntament de Barcelona, 2017d), "Will there be an increase in traffic looking for parking?" (Ajuntament de Barcelona, 2017a)). Furthermore, during the implementation of the project, there was an increase in problems that were only indirectly related to superblock implementation and derived from deeper roots. These included an increase in robberies in the area during construction (Ajuntament de Barcelona, 2019c), rats appearing in flowerbeds (Ajuntament de Barcelona, 2019c), increased noise on the streets due to more people using them, and groups of skaters using the new pedestrian area (Ajuntament de Barcelona, 2022). The attention dedicated to these issues may be seen as a selective attention bias towards the outcomes of the project.

6.3 Experimentation and Social Learning

The Superblocks project was developed based on the principle of urban experimentation. These experiments are socially inclusive, practice-based and challenge-led projects and initiatives that aim to develop system innovation through social learning, addressing ambiguity and uncertainty (Sengers et al., 2016). The implementation of urban living labs and urban experiments has increased due to municipalities' growing confidence in "government by experiment" (Bulkeley and Castan Bróto, 2013, in Raven et al., 2019, p. 258). The Superblocks project aimed to facilitate urban transitions through small, tactical interventions showcasing the positive impact of street pacification and a gradual rollout across the city (Rueda, 2019).

The primary intention behind urban experimentation is to introduce solutions into limited urban environments to generate objective or empirical evidence of their advantages (Caniglia et al., 2017, in Evans et al., 2021). However, as we have seen, a lack of identity in a project can lead to tenacious justifications and blind spots. Since these justifications influence both perception and action, they often become self-confirming (Weick, 1988). In other words, people will perceive the 'objective evidence' and act unconsciously according to their preconceptions. Physical changes alone will not promote a transition.

The concept of social learning has also been addressed in literature on experimentation (Evans et al., 2021; Raven et al., 2019; Sengers et al., 2019). Experimentation is considered to be characterised by social actors aiming to facilitate social learning in relation to a new socio-technical configuration (Sengers et al., 2019). This type of experimentation requires facilitation to enable systemic learning by doing. This necessitates an inclusive, broad-based and iterative approach to learning with goals that are monitored and evaluated across a series of steps and phases (Sengers et al., 2016).

Identity can then hinder the learning process. According to Weick (1988) , as people only understand their actions after they have taken them, it is inevitable that they and their actions will become part of a crisis. Learning therefore often requires one to admit to being part of the problem and accept that, had people acted differently all along, they would face a 'different set of problems, opportunities and constraints' (Weick, 1988, p. 309). During organisational change, identities are often completely replaced (Corley & Gioia, 2004). We can therefore conclude that learning depends on updating one's identity, making it an essential concept for successful urban experimentation.

6.4 Path Forward

According to Weick, the process of sensemaking is initiated by a trigger event, which he defines as 'a specific event that is identifiable in time and place, and traceable to specific man-made causes' (Shrivastava, 1987, in Weick, 1988, p. 308). In the case of the Bhopal plant, the triggering event was the leakage of toxic gas (Weick, 1988, p. 309). For the purposes of this research, the triggering event is considered to be the meetings that preceded the implementation of the Superblock. These meetings introduced a change in the outside world, altering the way people perceived it and how they thought it behaved. Weick (1995) describes this moment as 'sensebreaking'.

Sensebreaking increases sensemaking activity, since people have to reinterpret external cues in light of new events. According to Maitlis & Sonenshein (2010), two actions associated with wisdom are required to promote an adaptive rather than destructive role for shared meanings: the capacity to update and the capacity to doubt. Updating involves awareness and enables individuals to revise their interpretations based on new information. Doubting involves considering different possibilities, trying them out, and modifying, transforming, or abandoning them as necessary. Various processes can be employed to encourage a sensebreaking and sensemaking dynamic.

This approach aligns with the concepts of double-loop learning (Sterman, 1994) and adaptive and generative learning (Senge, 2003). These are forms of learning that operate at the level of assumptions, behaviours, norms, and interpretative frameworks. Senge has developed group techniques that provide feedback on accepted assumptions and behaviours. These techniques may include visioning processes, scenario building, backcasting exercises and small-scale social-technical experiments/bounded socio-technical experiments (Vergragt & Brown, 2007).

Updating our identity may also involve reassessing the boundaries of our possible actions and expanding our perception of problems. Ulrich & Reynolds (2010) develop the idea of boundary experiences as joint activities that foster a sense of community and lead to boundary judgements through a participatory process.

According to Senge (2003), the role of a leader in a learning organisation should be to: build shared visions by encouraging personal views, communicating and asking for support, consider visioning as an ongoing process, engage in extrinsic and intrinsic visioning and differentiate between positive and negative visioning; bring mental models to the surface and challenge them, help spot leaps of abstraction, balance advocacy and inquiry, differentiate between espoused theory and theory in use; recognise and defuse defensive routines; and, lastly, to engage in systems thinking, seeing interrelationships and processes (not things and snapshots) and understanding dynamic (not detailed) complexity. Methodologies such as soft systems methodologies (Checkland, 2000) and critical systems heuristics (Ulrich & Reynolds, 2010) can be employed to this end.

The goal of the learning process should be to reduce saliency and promote a safe environment in which to question and doubt present preconceptions. This makes it possible to update shared meanings, particularly those relating to identity.

7. Conclusion

Urban experimentation can facilitate meaningful, sustainable transitions in today's cities. However, to promote the necessary learning and deployment of urban solutions, enacted sensemaking must be addressed. The sensemaking process may be hindered by a lack of commitment, conflicting identities or unrealistic expectations. Moreover, given that all sensemaking is provisional and incentivised by the fast pace of the world in which we live, the capacity to update meanings must be permanent.

The results of the thematic analysis of the minutes make it clear that the identity dimension was not adequately addressed during the participatory meetings. The codification used showed a low prevalence of remarks related to this shared meaning. When these were addressed, they tended to demonstrate a limited perception of people's agency. The paper has also explored the problems arising from the lack of proper shared meanings in an urban experimentation. By analysing complexity-related organisational literature, we can understand how a lack of shared identity around a change can affect an organisation.

Although the research was limited to analysing the meeting minutes, considerable findings emerged that will inform future agendas. Future research could extend these findings and test their validity among those affected by the Superblock implementation. Questionnaires and semi-structured interviews with participants and Ajuntament members could shed light on the challenges of not incorporating sensemaking into participatory meetings. Additionally, new research could focus on strategies that encourage doubt and the updating of shared

meanings, particularly with regard to commitment, expectations, and identity. This could involve exploring new participatory processes that promote complex systems thinking.

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