

Conflicts in real-world labs – Perspectives of critical and ambivalent residents on a temporary public space redesign project in Berlin

Real-world labs make the mobility transition tangible for residents. However, these experiences are not always positive, and often local conflicts arise. Based on in-depth interviews, the authors show that perceived procedural unfairness as well as the redistribution of space are the main drivers of a sceptical attitude towards redesign projects.

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Abstract

Real-world labs (RwLs) are often used to explore and foster the mobility transition. Many RwLs dealing with mobility transition temporarily reallocate public spaces from motorized to active transport or to leisure activities. While some residents accept and enjoy the changes, others react with scepticism, rejection, or protest. This can lead to conflicts. Controversial perceptions and conflicts among residents make a permanent redesign rather challenging for the administration and the politicians. In this paper the authors investigate the related conflict types and counterarguments by studying the case of a temporary redesign of an intersection in Berlin. Based on in-depth interviews, they untangle procedural, distributional, and identity conflicts which might underlie the critical and ambivalent perceptions of residents. An abundance of conflict issues pertaining to procedural and distributional conflicts are revealed and emphasize the role of the RwL process.

Keywords

active mobility, conflicts, mobility transition, real-world labs, street-space redesign, sustainable mobility, sustainable urban planning

Real-world labs for the mobility transition

Redesigning car-dominated space to public space used for active transport¹, leisure activities, and climate change adaptation is a major measure of the low-carbon mobility transition. Since the pandemic, the awareness of public space and its use has increased. Across various cities, areas of motorised traffic were redesigned with summer streets, pedestrian zones, pop-up bike lanes, and superblocks emerging as prominent examples (e.g., Aldred and Goodman 2021, Becker et al. 2022).

Often, these redesign projects are implemented in the form of a real-world lab (RwL). RwLs are a form of transdisciplinary research involving various scientific and civil society actors, serving as experimental processes in the real world to generate knowledge aimed at fostering a more sustainable future. These labs consist of several real-world experiments (Räuchle 2021, Schneidewind et al. 2018). In the mobility sector, the general idea of redesign RwLs is to change the infrastructure temporarily with support from involved stakeholders such as local residents, businesses, administrations, and policymakers. As an action-oriented approach, redesign RwLs make the mobility transition perceptible and visions tangible for citizens. Moreover, the processes of redesign RwLs are subsequently analysed and evaluated to get system, orientation, and transformation knowledge for permanent implementation (Pohl and Hirsch Hadorn 2007).

Altogether, redesign RwLs have two main intentions with regards to the mobility transition. On the one hand, they aim to reduce the negative impacts of excessive car use in cities; for example, greenhouse gas emissions, high space consumption, and crashes (e.g., Bertolini 2020, Oltmanns et al. 2022). On the other hand, they aim to enable learning about mobility transitions at both a local and a larger scale (e.g., Singer-Brodowski et al. 2018).

The reaction of the local population and their contributions to co-creation in the context of redesign RwLs is very important. They are directly affected by the change of urban infrastructures.

¹ Such as walking and cycling.

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Even if these redesign RwLs are being introduced with the best intentions, they remain contested (e.g., Marcheschi et al. 2022, Goetting and Jarass 2023). Controversial perceptions of redesign RwLs and conflicts between residents make a permanent redesign rather difficult for administration and politicians. In response, this paper aims at shedding light on the different conflicts surrounding redesign RwLs that change urban space as part of the low-carbon mobility transition. To this end, we conducted interviews with residents who have an ambivalent or critical opinion regarding a redesign RwL in Berlin.

Conflicts surrounding redesign projects

Literature on pedestrianisation provides valuable insights concerning the analysis of conflicts in the context of redesign RwLs. Infrastructural changes promoting active mobility are often confronted with resistance from residents, motorists, and local businesses (Parajuli and Pojani 2018). Based on street-space redesign projects in London, Hickman and Huaylla Sallo (2022) stress the need to shift the lens from technical questions surrounding pedestrianisation to embracing different views and subjectivities of actors involved in any redesign project, because they are conflictual. A similar observation is made by Zografos et al. (2020) in Barcelona. They underline the importance of struggles for authority as crucial conflict aspects. More generally, Brovarone et al. (2023) stress that substantive, procedural, and relational conflicts in the governance of pedestrianisation initiatives are underestimated. These conflicts around the redesigning of public space can hinder both the transformation of temporary RwLs to permanent implementation as well as their expansion to a large-scale low-carbon mobility transition.

A major cause of conflict around temporary redesign projects is the political and cultural promotion of personal vehicle use (Sovacool and Griffiths 2020), influencing perceptions of space and mobility practices. Any change to the automobile status quo is thus of personal relevance to many (Paterson 2007, Urry 2004) and prone to conflict. This is underlined by Sargisson et al. (2022) who interviewed 13 project leaders and planners of the *Innovating Streets for People 2019–2021* programme in New Zealand. Public resistance to the transformation of street space stems primarily from restrictions to car use. The authors suggest that people feel stronger about the expected loss (of car infrastructure) than expected benefits. Kyriakidis et al. (2023) show that people who use their car frequently and experience traffic congestion are opposed to temporary interventions in Athens. They also find that subjectively poor aesthetics and limited public consultation can influence the rejection.

Conflicts can be analysed from different perspectives. Saretzki (2010) distinguishes between object-related, actor-related, and regulation-oriented approaches. To analyse conflicts that arise from RwLs, we follow the object-related approach because it examines what the conflict is about, encompassing political priorities, economic interests, justice considerations, individual rights,

TABLE 1: Description of conflict types and related central questions (adapted from Becker et al. 2014, p. 20).

CONFLICT TYPES	CENTRAL QUESTIONS
distributional conflicts	What are the costs and benefits of the RwL and how are they distributed?
procedural conflicts	Which problems occur in the planning and decision-making processes of the RwL?
space-use conflicts	How shall the space of the RwL be used?
identity conflicts	Which conflicting identities with overarching visions, values and interests do different parties, and even individuals within themselves, have?

and resource distribution. Adopting this perspective, considering both the object and its social dimensions, assists in analysing the conflict types associated with redesign RwLs. For our analysis, conflicts are conceptualised as a probable impact of RwLs, embedded in a socio-psychological realm (cf. Augenstein et al. 2022).

Taking an object-related approach to conflict analysis, a helpful framework to understand the different types of conflicts around redesign RwLs, which will be used in this paper, is proposed by Becker et al. (2014). It was originally designed for analysing local conflicts in the context of the energy transition. The framework suggests five types of conflicts: distributional, procedural, land use, identity, and energy source conflicts. However, since the energy source conflict type is not pertinent to our analysis of redesign RwLs, we have adapted these conflict types to our specific context, the mobility transition. This also implied redefining the identity conflicts at the neighbourhood level instead of the municipality and regional level (see table 1).

Case description and method

To enhance our understanding of different conflicts of redesign RwLs, we focus on a case study in Berlin: the redesign RwL of the Lausitzer Platz in 2020. The case study has been chosen for its typical characteristics of an RwL, including its activities and participation formats. In addition, RwLs are often initiated by a collaboration between local actors, administration, and scientific actors, which in this case leads to the authors' familiarity with the case (see box 1, p. 74).

Within the RwL, an intersection with three access roads (see figure 1, p. 74) was transformed into a car-free square for five weeks. The specific intersection was suggested by the district councillor. As the transformation of the crossroad had been discussed over several years, and several activities and discussion forums had taken place, it seemed like a reasonable place to test the redesign within a RwL and then make a final decision. The initiators aimed at gathering knowledge to support the rede-



BOX 1: The case study**name:** *City square Rwl***location:** Berlin**aim:** transforming a car-dominated intersection into a square for active mobility, leisure, and urban green space**intervention:** 26 parking lots removed, activities for citizens introduced**time period:** five weeks in autumn 2020**initiators:** a local civil society organisation, the district administration, and a research group (including the authors of this article)**FIGURE 1:** Map of the city square location.

sign's permanent implementation. During the period of the Rwl, several activities were offered to the residents to use the square. These activities included building seating furniture, a flea market, a party, community breakfast, gardens, and games for children.

Additionally, several types of participation were carried out, mainly to integrate the ideas and needs of the residents. Focus was placed not on the question *if* a temporary redesign should take place but rather *how* it takes place. The intention was for residents to take over the space and co-create activities. The participation formats included information letters at front doors at the redesign's inception, followed by weekly updates on activities and further steps. This information was also public at an information board. At that board, residents could give feedback and bring in their own ideas. With the same intention, public assemblies were held on the city square. Children were integrated in the process with a focus group workshop. Last, a household survey was conducted. The survey showed that half of the residents accepted the redesign, and the other half was critical of it (Jarass et al. 2021). As it is interesting for initiators of transformation projects to understand the critical and ambivalent voices, we aim to gain insights into their perspectives.

Interviewing critical individuals is not easy, as it requires sensitivity and flexibility. Ideally, interviewees develop trust in the interviewer and share valuable thoughts, perceptions, and feelings of their own, which they would be not willing to share in a

more formal setting. Thus, in-depth interviews seem to be a suitable method to create a trusting atmosphere and simultaneously to be able to react flexibly to emerging issues. Furthermore, in-depth interviews are often used in research on conflictual issues (Brounéus 2011).

From July to October 2022, 25 residents were interviewed. The small sample size resulted from challenges in finding critical and ambivalent citizens who were willing to talk to us. The average duration of the interviews was one hour (outliers: 15 and 120 minutes).

The interviewer recruited residents on the square by posing an initial question about the attitude towards the city square. Only people who stated a critical or ambivalent attitude were asked for an in-depth interview. The sample has more males (14) than females (11). The respondents' age ranged from 35 to 80 (mean age: 55 years). For an anonymised description of the sample see the online supplement².

The interviews were digitally recorded, fully transcribed, and analysed with the software *MaxQDA* following Gläser and Laudel's (2009) qualitative content analysis. Firstly, the data were coded deductively based on the four conflict types: distributional conflicts, procedural conflicts, space-use conflicts, and identity conflicts. In a second step, the coders looked at the conflict types and inductively identified different subcategories.

Results: Uncovering conflicts

Our analysis has confirmed the four conflict types of Becker's et al. (2014) framework. However, we have found and conceptualised space-use conflicts as a subcategory of distributional conflicts because the use of the space is also about distribution.³ In other words, it touches the question of who benefits or loses from the newly distributed space. However, space is an important component in the transport transition, which is why we continue to name the conflict type as such. The conflict types become apparent through different arguments and interrelated issues (figure 3, p. 76). The focus of the following analysis is to describe the different issues of the conflict types.

Procedural conflicts

Procedural conflict issues can be linked to three stages of the Rwl process: 1. before the Rwl process, 2. during the participation process, and 3. within the actual decision-making process which guides the Rwl's planning, implementation, and eventually consolidation. However, the stages should not be regarded as rigidly consecutive and independent of each other. Rather, the conflict issues of the respective stages were influenced by the previous.

² <https://doi.org/10.14512/gaia.33.S1.11.suppl>

³ Cf. Jung and Wendtland (2024, in this issue) who also frame space issues in urban mobility experiments as problems of redistribution.

Conflict issues before the RwL

A major conflict issue reported by interviewees was the lack of information. In particular they referred to general unawareness about the city square's redesign (interviewees 4, 12, 15) and to poor timing and traceability of information given (8, 11, 12, 13, 15, 22). Interviewees also felt that the information was not transparent (15, 17). Concerning the lack of transparency interviewee 2 recalls: "At some point, there were notes posted about the experiment, information drop by drop. I thought, maybe the others have information, but maybe I don't" (this citation, as all the following ones, has been translated by the authors). Within this quote, a tone of insecurity and frustration becomes apparent. This perceived lack of information and transparency was a bad starting point for the further process.

Conflict issues during the participation process of the RwL

Concerning the actual process, respondents (4, 5, 7) criticised the accessibility of the events. For them, the events took part during their work time. During the events, interviewees felt that the facilitators were not neutral. Three respondents missed support in the formulation of own interests and ideas on for designing the RwL and the traffic routing around the square (2, 7, 20). More generally, some would have liked assistance to develop legal and practical competencies for local planning processes to better engage with this and future processes (4, 18, 20). According to some respondents, participants of the assemblies were unequally assembled, and speech unequally distributed (2, 10, 17). Thus, some felt that their perspectives were considered less relevant and less desired in the process than others. In this context, interviewee 20 elaborates on their own, rather ambivalent stance: "I had the impression that if you were not 100% in favour of this redesigned

place, you had a hard time. You were immediately labelled as a narrow-minded driver who could not cope with change". Overall, respondents perceived a lack of opportunities to express their own opinions, fears, and criticisms around the redesign (2, 7, 8, 15, 17) and saw reduced possibilities to bring in their own ideas and knowledge for co-creating the process (6, 17, 22).

However, the negative experiences of the process were not perceived as unsolvable. Improving the process, interview 6 recalls, would improve the perception of the redesign: "I think there are still many possibilities of how and where we can get involved. Then, we could also identify better with the process and the result."

Conflict issues in the decision-making process

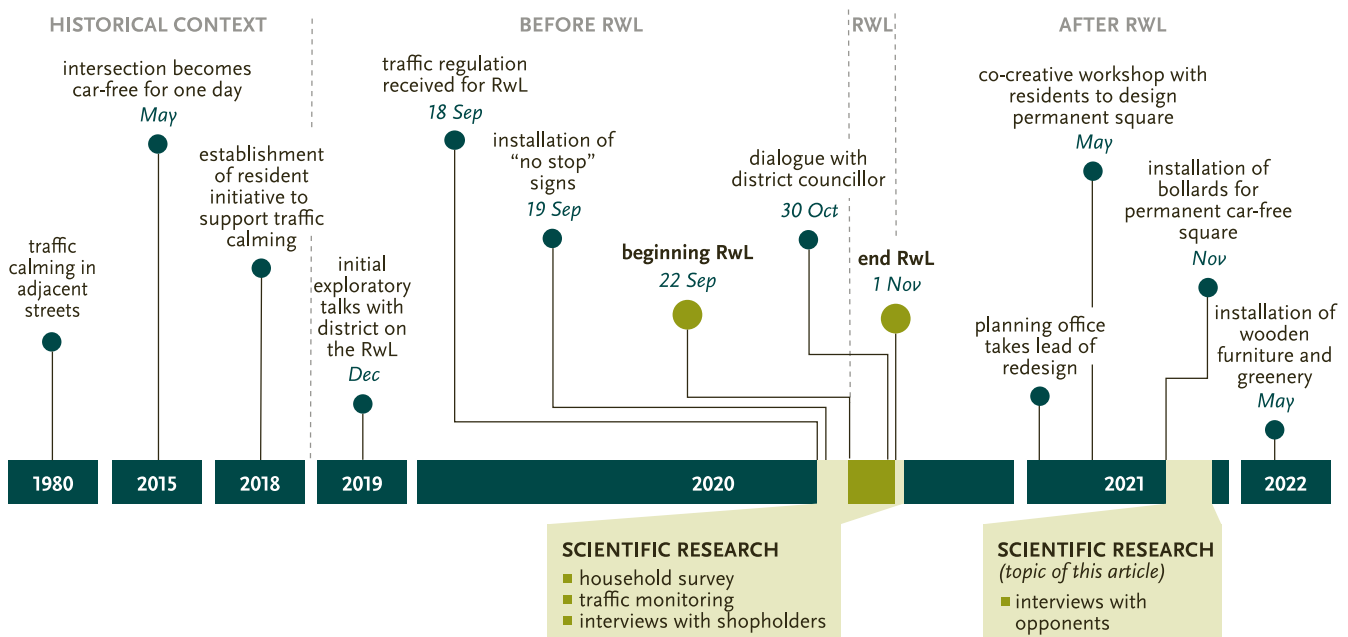
Most of the interviewees criticized a lack of openness in the decision-making process. They highlighted that the initiators of the RwL had already made most decisions (1, 2, 12), disregarding input from residents, such as their ideas for delivery zones (15). This absence of consideration led to a significant lack of trust in the initiators (1, 10, 13, 18, 21). Additionally, interviewees expressed doubts about the process's reliability, indicating uncertainty about how the RwL and its participatory elements would contribute to other local government processes. Rather than focusing on an RwL in the neighbourhood, respondents desired a final solution for the long-term redesign of the square (5, 12, 16).

Distributional conflicts

Distributional conflicts mainly revolved around diverging preferences on how to use the square and the consequences of this use. Other distributional conflicts arose around the specific design of the square and the economic costs.

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FIGURE 2: Timeline of the City square RwL: integration in a longer period of time. RwL = real-world laboratory.



Space-use conflicts

Some interviewees wanted a playground or a local recreation site with urban green space and unpaved ground (4, 17). Others argued that a redesign was not necessary at all as there were enough public spaces in the neighbourhood. One interviewee expressed a desire for increased green space facilitated by the RwL. However, due to the specific implementation of the redesign, the person was critical yet demonstrated openness to the

customers or felt overburdened by changing existing business structures, for example, delivery practices (1, 13, 15). In the context of negative consequences for businesses, the value of self-enhancement became clear, because they also feared to have increasing delivery costs. This self-enhancement was emphasized by interviewee 20 as the following: “[I] think about my own butt [first]” (20). In addition, some interviewees perceived it as unfair that people with a lot of money could afford several cars, taking

At the same time, it might be helpful to deal with distributional conflicts transparently and to co-create solutions with residents. Maintaining dialogue with ambivalent and critical voices is crucial, yet positive and quiet voices should not be disregarded.

change (5). Contrarily interviewee 12 recalled that there was no need for a redesign: “[The redesign of the square] is not a priority here at all, we have the Lietzensee, the Kläre-Bloch-Platz. It’s not that children can’t play here or that people can’t sit down and relax”. This quote shows that the interviewee is interested in maintaining the status quo (see also 12, 13, 15). Similar observations existed for the use of the square for parking. Interviewees who already struggled to find parking lots were against the redesign (11, 15). Others had a more open-minded stance, because “now there’s [room for] a cargo bike, we think that’s good” (5).

Additional space-use conflicts occurred because the redesigned square was used for hanging out, chatting, and playing. Noise, interviewees argued, came from children playing (1, 2, 23, 24) and people drinking at night (1, 2, 5, 7, 11). “Party tourism” led to littering (1). The perceived increase in noise and littering was accompanied by a sense of concern. Among other things, this concern resulted for some interviewees in the desire to preserve the square as it was.

Specific square design

Further distributional conflict issues emerged from the specific design of the RwL and relate to aesthetic, accessibility, and safety issues. One person disagreed with, for example, the choice of non-weatherproof seating options without backrests (15). Another example is the structural implementation with bollards, after the period of the RwL (11, 13, 15, 17). Interviewees perceived the provisional character with bollards as aesthetically unpleasant (12, 15, 17). This dissatisfaction with the specific design let residents reclaim the old status quo. Moreover, the interviewees highlighted that safe access to the public space was missing for children (1, 5). The RwL neither increased the accessibility of the public space for mobility impaired people nor did it so for children (7, 15).

Economic concerns

Due to the lack of parking spaces and delivery zones, interviewed residents owning businesses at the square were afraid to lose

up more public parking spaces than others, and being able to afford parking spaces in garages. Another argument of economic concern was the cost of the redesign itself. Against the background of other global and local problems, as for example Berlin’s public infrastructure, the aesthetically unappealing redesign was argued to be too expensive (2, 4, 7, 22).

Identity conflicts

Based on our sample, identity conflicts seemed, on the one hand, to be independent of the specific square design and the RwL process and, on the other hand, to emerge or worsen during the RwL.

Interpersonal and -group conflicts

Conflicts occurred between individuals as well as between groups involved in the city square. One identified conflict arose with a neighbourhood initiative. The initiative was actively involved in the redesign of another square in the area and had already initiated attempts to redesign the square prior to the RwL. Interviewees 3 and 8 reported on interpersonal conflicts with the management of the initiative due to their dominant personalities. Indications of intergroup conflicts occurred between cyclists and car drivers and between businesses perceived to benefit and those perceived to lose. Car drivers and perceived-as-losing businesses seemed to have a strong value of conservation and to be afraid of gentrification (12, 13). Though primarily described here as group conflicts, similar issues also became apparent between individuals. Furthermore, some of the interviewees expressed a conflictual perspective and deeply rooted mistrust of local politicians (17). All of these conflicts appear to be partly rooted in previous frictions but were exacerbated during the RwL due to the perceived inequality of actors involved and lack of opportunities to criticize the process.

Intrapersonal conflicts

Indication of intrapersonal conflicts, describing interviewees’ conflicting social identities and related expectations and needs,

came along with three different sets of roles strengthening the emotional connection to car ownership: employee, leisure person, and caregiver. For instance, two interviewees pointed out to be in favour of less cars in urban areas. However, as employees, the respondents require a car and parking lots (12, 15). Another respondent welcomed more green spaces in the neighbourhood but sees no option to reach their weekend house without driving by car (20). A third intrapersonal conflict was related to care work: “Somehow you either have kids to cart around or I had an old mother. We are dependent on the car” (11); this was in direct conflict with being engaged in the design of meeting areas in the neighbourhood in their free time. All of these intrapersonal conflicts were about the use of the car and the resulting need for parking lots. Thus, interviewees seem to have balanced their contradicting expectations according to different social identities.

Discussion of identified conflicts

In line with our theoretical framework and similar to Becker et al. (2014), we found all four conflict types in the interview material: procedural, distributional, and identity conflicts. Space-use conflicts appear as a subcategory of distributional conflicts.

Most of the conflict issues are procedural and distributional ones. This observation is not exclusive to our redesign RwL. While Brovarone et al. (2023) stressed the importance of procedural and distributional conflicts on a governance level for success or failure of a pedestrianisation process, we have shown that these conflicts are also relevant factors influencing residents' perceptions and thus, their contributions to a redesign RwL for the mobility transition.

Furthermore, we have found different procedural issues which were perceived as contentious by the interviewees, and thus contributed to what we capture as a feeling of unfairness of the process. Most of these procedural conflict issues (except for trust) can also be found in Wachholz's (2020) and Goldschmidt's (2014) theoretical criteria for assessing the procedural fairness of a participation process.

In addition, a crucial point lies in the decision whether an RwL will be implemented within a neighbourhood or not. Not having the opportunity to vote on whether the project takes place resulted in residents questioning the legitimacy of the project and becoming reluctant to participate. Moreover, if residents perceive a lack of legitimacy or procedural fairness, they might perceive the outcome more negatively (e.g., Martin et al. 2022). In the context of our study, the outcome is the object of distributional conflicts. Therefore, distributional conflicts could potentially decrease if the procedural process was perceived more fairly. However, the perception of a fairer procedural process might also lead to increased disputes about distributional issues. This aspect warrants further investigation in subsequent studies.

Distributional conflicts surrounding space use have also been identified in other studies on pedestrianisation processes. According to Vitale Brovarone et al. (2023, p. 4) “contrasting perceptions

of what the ‘right to the street’ and the ‘good’ use of street space might entail led to a polarisation of positions and the resulting conflicts.” In our case study, the conflict over the use of the square also evolves around questions of the right to park versus recreation and leisure. Additionally, we identified distributional conflicts about the “good” design, including aesthetic, accessibility, and safety issues. All of the identified distributional issues have a great effect on conflicts, despite some of them being minor or subjective, for example, the aesthetics of the redesign RwL. This result underlines the need to define distributional conflicts in redesign projects more broadly (in contrast to the definition of distributional conflicts in the energy transition). They refer not only to economic costs, but also to any other negative issues accompanying the redesign of, for instance, a square and its use.

Indication of interpersonal conflicts between members of the neighbourhood initiative and local residents do not appear to be an isolated case of the RwL in question. For example, in an urban planning process in Ghent, residents perceived the initiators with their narrative of “urban sustainability” as very dominant, leading them to counter their narrative (van Wymeersch et al. 2019). Although our study did not explicitly delve into narratives (due to our chosen method), it is possible that narratives concerning urban sustainability and automobility might underpin not only interpersonal conflicts but also intergroup conflicts (between perceived winners and losers) and, ultimately, intrapersonal conflicts. In the case of the intrapersonal conflicts, it seems that the dominance of automobility and its infrastructure has influenced people's actual and perceived car dependency. This car dependency – with evidence for linkages to work, leisure or care obligations – might not be sufficiently addressed by the ecologically influenced narrative of urban sustainability (Van Wymeersch et al. 2019).

Limitations

The research design has some limitations in terms of the sample and the recruitment strategy. Firstly, the interviewees reached had a critical and ambivalent rather than an extremely negative attitude towards the city square. This illustrates that researching critical perspectives within RwL is faced with a fundamental methodological problem. Despite in-depth interviews being a promising method to address critical perspectives, there is a non-response bias. This bias might have led to the rather small sample size, which can partly be explained by a lack of trust in the initiators of the RwL. In fact, researchers in RwLs seem not to be regarded as neutral. Thus, further research around critical stances towards RwLs must also further develop the methodology in order to create spaces that make it possible to capture perspectives of even more critical people. Therefore, we do not claim a completeness of the identified conflict issues.

In addition, the delayed interviews made it difficult to clearly isolate the conflict issues of the redesign project. As reinforced by Vitale Brovarone et al. (2023), it is important to also consider temporal and social scales of planning processes in general and, in this context, also of evaluation research on the redesign RwL.



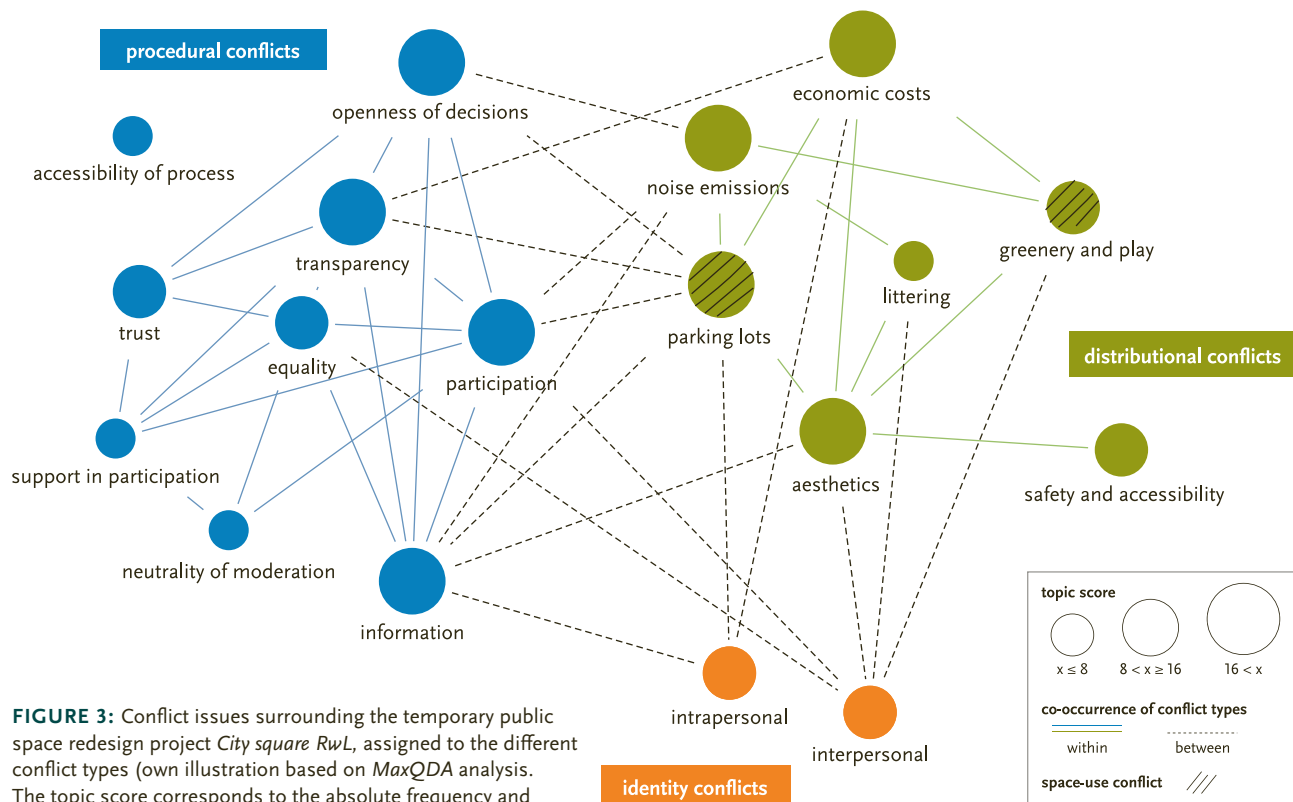


FIGURE 3: Conflict issues surrounding the temporary public space redesign project *City square RwL*, assigned to the different conflict types (own illustration based on *MaxQDA* analysis. The topic score corresponds to the absolute frequency and the co-occurrence depicts argumentative proximity of two conflicts). The positioning of the dots is due to clearness of arrangement; conflict issues with several co-occurrences have been put into a more central position.

Conclusion: Learnings for the future

Above all, the paper reveals an abundance of conflict issues and emphasizes the role of the process of a *RwL*. Perceived procedural unfairness significantly impacts the legitimacy of *RwL*, shaping its overall perception and outcomes. Future research could delve into the underlying reasons for the importance of perceived procedural fairness. *RwL* initiators should recognise the pivotal role of procedural fairness and critically reflect upon their dominance, neutrality and narratives while considering historical and local contexts. At the same time, it might be helpful to deal with distributional conflicts transparently and to co-create solutions with residents. Maintaining dialogue with ambivalent and critical voices is crucial, yet positive and quiet voices should not be disregarded.

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Author contribution: AK (with support of KG): development of analytical framework; AK (with support of KG): analysis and evaluation of empirical data of the case study; JJ: coordination of real-world experiment; JJ, AK: basis for the elaboration of the timeline; AK: drafting and writing of final manuscript; KG, JJ: reviewing and editing of final manuscript.

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