Exploring the catalytic power of temporary urbanism through a binary approach

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ABSTRACT

The temporary use of vacant spaces has become integrated into formal urban development practices. This paper seeks to explore the catalytic power of temporary urbanism for sustainable urban development by focusing on the tension between temporary and permanent and the dynamics through which temporary urbanism becomes catalytic. The case study focuses on a six-year experimental period of the Hiedanranta brownfield until the city started to build the area for a new residential district in Tampere, Finland. Rich details of temporary urbanism were achieved through interviews with 27 city developers and experimental participants. The analysis revealed three tracks of catalytic mechanisms of temporary urbanism emerging from the persistent tension between temporary and permanent. By demonstrating the origins of catalytic power, this research contributes to academic and practical interests to find productive relationships between temporary urbanism, planning and sustainability governance in cities.

1. Introduction

The temporary uses of derelict sites became common in the 1970s as a by-product of deindustrialization and urban and socioeconomic transformations (Andres, 2013). In contrast to conventional urban development emphasizing the ideals of continuity and long-term goals, the temporary uses were associated with crisis and failure (Bishop & Williams, 2012). However, as Lehtovuori and Ruoppila (2017) note, since the late 1990s, temporary uses have been endowed with positive connotations as catalysts of urban development (Oswalt et al., 2013) and as pioneers of economic and cultural regeneration (see also Haydn & Temel, 2006; Németh & Langhorst, 2014).

The term "catalyst" as a metaphoric description of the impact of temporary uses on urban development can be justified in several ways. First, temporary uses gain their motional energy from broader dynamics and thereby have intrinsic potential to become catalysts for urban development. Cities are never completed, but the cycles of redundancy and reuse are constant as the temporal and spatial fluctuations of capitalism, technological change, diversification of working and living and unleashed neoliberal globalization leave a large number of spaces vacant (Andres & Kraftl, 2021; Lehtovuori & Ruoppila, 2012;

Madanipour, 2018). Redevelopment of these vacant or underused buildings and places maintains the temporal cycle of urban spaces. Although temporariness is an integral part of cities, these wider processes, or "conditions of our time" (Madanipour, 2017, p. 176), have also given rise to a particular phenomenon of the temporary use of urban spaces to the extent that it has become a global trend (cf. the forms of urban regeneration in Bragaglia & Caruso, 2020, p. 10; Madanipour, 2018, p. 1094).

Second, temporary uses are harnessed as catalysts for specific purposes. They are deployed as "cheap, quick-fix and tailor-made solutions" to recover vacant areas (Bragaglia & Rossignolo, 2021, p. 370) and to respond to the changing needs and demands for urban space, especially in scenarios characterized by scarce public-private resources (Bragaglia & Caruso, 2020). Due to the flexible alternatives that temporary uses present for conventional development, and because of their positive effects on physical and social environments, they have become a part of the formal reimaginings of city spaces and are thus included in urban policies (Andres & Kraftl, 2021; Bragaglia & Rossignolo, 2021; Dubeaux & Cunningham Sabot, 2018; Haydn & Temel, 2006; Oswalt et al., 2013). Madanipour (2018) describes temporary uses as a desirable social trend and a branding exercise that generates the impression of

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experimentation and freshness. This trend has driven reflections on the management of the temporal cycles of urban development, where the temporary is understood as a tool for sequencing changes in periods of uncertainty (Andres & Kraftl, 2021; Madanipour, 2017, 2018). Despite the emphasis on flexibility and experimentation, these kinds of temporary interventions share the goal of a finished outcome (Andres & Kraftl, 2021).

In this paper, we examine the potential of the catalytic power of temporary uses for steering urban development towards sustainability. Sustainable urban development means balancing the development of the urban areas, protection of the environment and in order to support equity, engaging a wide range of actors in the urban sustainability agenda (Blackwood et al., 2014; Rydin, 2012; Trindade et al., 2017). Temporary uses help cities to become key locations for sustainability innovations and societal progress (Loorbach & Shiroyama, 2016). We mostly use the term "temporary urbanism," which is the closest counterpart to temporary uses in the research (Chang, 2021). Temporary urbanism means "processes, practices and policies of and for spatial adaptability, which allow the activation of spaces in perceived need of transformation" (Andres & Kraftl, 2021, p. 3). There are a few promising attempts in the research to theorize and categorize temporary urbanism embedded in the city, emphasizing the multiplicity of understandings and contextual and temporal features (see e.g., Andres & Kraftl, 2021; Bragaglia & Caruso, 2020; Bragaglia & Rossignolo, 2021; Madanipour, 2017). Although the catalytic power of temporary urbanism has been acknowledged already before (Oswalt et al., 2013), only the first steps have been taken to conceptualize it. It is unclear how the uncertainty and flexibility of temporary urbanism align with conventional planning practices seeking to regulate the future and ensure continuity. Despite the shared aim to rethink the relation between short-term and long-term goals, the previous studies have not approached the tension between the two as a source of catalytic power for sustainable urban development. By tackling this gap, our research makes conceptual and theoretical contributions to the urban studies field and complements the previous research on temporary urbanism.

We take a processual view to examine the mechanisms that make temporary urbanism catalytic. In our argumentation, the productive tension through which temporary urbanism becomes catalytic stems from the contradiction between the two opposites: temporary and permanent. This tension is constitutive of catalytic power, regardless of whether the temporary uses maturate under steering or develop spontaneously, or how strongly they are affected by broader urban dynamics. We use binary thinking (Elbow, 1993; Lewis, 2000) and a process perspective (Langley et al., 2013) to develop this idea further. Binary thinking — framing issues in terms of opposites — has a long tradition as the simplest strategy to classify and structure complex phenomena (Elbow, 1993; Lefstein et al., 2017). Although binaries tempt people to oversimplify, binary thinking can also serve to avoid hierarchical and one-sided perspectives, as well as encourage multiplicity and differences (Elbow, 1993). Our focus is on the latter aspect of binary thinking that uses the binary tension for productive purposes. We approach binary both as a subject of inquiry and as an analytical framework.

For an empirical demonstration, we focus on a single case, an urban living lab (ULL) in Tampere, Finland, where temporary uses have been developed for several years. This ULL is also a brownfield site, and temporary urbanism has played an important role in the opening and early development of the area towards a sustainable, mixed-use city district. Regarding sustainability governance, there is a growing strand of research focusing on the key sites of urban transition, such as ULLs, which are temporary by their nature. However, their catalytic power is generally not addressed from the aspect of temporariness but rather from that of innovation, for instance (Nesari et al., 2022). Further, the logic of urban planning has great difficulty tackling such power in useful ways (Pløger, 2021; Wolfram, 2018). Instead of focusing on the linear duration of temporary uses, we recognize that temporary urbanism is embedded in complex, multitemporal environments and defined through personal experiences and interpretations.

The first research question is empirical in nature, while the second is more theoretical. Based on the empirical findings from the case study, the second question contributes to the discussion on the broader implications of temporary urbanism.

> *In which ways does the binary between temporary and permanent shape the experiences and meanings related to temporary urbanism?*

> *How does the binary make temporary urbanism catalytic for urban development?*

First, we discuss the binary tensions in temporary urbanism and the theoretical approaches to binary. Then, we present the case study, the collection of research data and the application of narrative analysis methods. The results are presented in the form of narratives. The discussion focuses on the dynamic relationship between the two poles of binary, which is crucial for realizing catalytic potential. The final section summarizes the main findings and gives suggestions for future research.

2. Conceptual background

2.1. Binary tensions in temporary urbanism

The characteristics of temporary urbanism show up in the power relations along the axis between short- and long-term, and temporary and permanent (see Andres & Kraftl, 2021). The question about who has control over the transformation of urban space reveals the dominance of one side of the binary. Colomb (2012) argues that temporary uses inherently pave a path for profit-oriented urban development (see also Andres, 2013). In such situations, where temporary users find their role only as gap-fillers, keeping "vacant sites warm while development capital is cool," conflicts tend to emerge (Colomb, 2017, p. 157; Tonkiss, 2013, p. 318). As noted by Lehtovuori and Ruoppila (2017), the question of power boils down to two socio-cultural positions and practical interests, those of the planner/developer and those of the activist/user. Thus, the binary polarizes not only the ideas and interests, but the people too (see Lefstein et al., 2017; Lewis, 2000). Depending on the perspective, temporary uses can be viewed either as an instrumental tool of urban development and management, or as an intrinsically valuable process, which often has political and emancipatory connotations (Lehtovuori & Ruoppila, 2017).

To classify the diverse manifestations of temporary uses, Andres and Zhang (2020) identified three types of temporary urbanism. *Bottom-up* temporary urbanism takes place in the context of weak planning, where "no formal and planned transformation can occur" (Andres & Zhang, 2020, p. 3). Such temporary uses, which vary from squatting to community-led projects, are informal in their nature, and in the context of transition, they challenge formal arrangements. In contrast, *top-down* temporary urbanism is connected to the wider strategies of urban transformation and "planned and constructed by those who hold the power in decision-making" (Andres & Zhang, 2020, p. 3). The third type, *hybrid* temporary urbanism, highlights the complexity and variable nature of temporary urbanism and emphasizes the processes of bricolage and improvisation among the key stakeholders that blur the boundaries between the bottom-up and top-down approaches (Andres & Zhang, 2020, p. 3). The last two forms of temporary urbanism are increasingly seen as an important part of creative and socially responsible urban development (Lehtovuori & Ruoppila, 2017) while also reflecting local policies promoting cultural industries and the creative city (Colomb, 2017). Hybrid temporary urbanism offers a promising approach to loosen the tension between temporary users and urban planners.

Various multidimensional examples of temporary urbanism illustrate the binary between temporary and permanent, but they also cover several other binary tensions, such as bottom-up and top-down, informal and formal, unplanned and planned and amateur-led and professional-led (see also Bishop & Williams, 2012). However, time is the basic

constituent of temporary urbanism, and the binary between temporary and permanent is reflected, for instance, in the two concepts of time: Chronos and Kairos (Madanipour, 2017). Whereas Chronos is associated with the quantitative and regulated idea of time, Kairos is seen as un-regulated and qualitative time, and as "occasions" in which particular occurrences take place and possibilities open up. These two un-derstandings of time are interrelated, as Kairos is "the opening of discontinuity in a continuum" (Jordheim, 2007) of the slow and long-term temporality of Chronos (Madanipour, 2017). We conclude that the binary between the opposite poles of temporary and permanent creates the main source of tensions in temporary urbanism, and other binaries can be considered its variants or subordinates.

2.2. Theoretical approaches to binaries

Although the conceptualizations of binary vary, the following ele-ments characterize binaries and help in understanding how to make binary thinking productive. First, binary is not only based on opposing identities but also on the persistent tension between the two sides of the opposition. Second, the fixed relation between the two opposing sides shows that the aspects presented in opposition are interdependent (Lefstein et al., 2017). However, dominance by one side is argued to be always present in polar opposites (Elbow, 1993; Lefstein et al., 2017). Lastly, two opposing identities are seen to define the whole, which ex-cludes the existence of a "third" (Lefstein et al., 2017).

The tensions between two poles are a central concern in many pro-cess studies, where the idea of a productive binary has emerged from the attempt to trace the patterns of oscillation between two opposites that are likely to be productive and have catalyzing potential (Langley et al., 2013). Particularly valuable for our approach is that the process perspective generally understands the outcomes of a productive binary more as inputs that determine further activity rather than clearly defined endpoints (Langley et al., 2013; Rescher, 1996). Thus, process studies incorporate an understanding of causality as constituted through the chains of events rather than abstract correlations (Elbow, 1993). For example, binary tensions may trigger a change by encouraging the ac-tors to rethink polarities or recognize more complicated relationships and diversity. Pinned to processual dynamics, the practices and orga-nization of the binary need to be maintained to keep up the catalytic power (Langley et al., 2013).

As much as binary tensions may catalyze positive change, they can also hinder it by maintaining a false sense of order (Elbow, 1993; Lewis, 2000). Drawing from the criticism towards binary thinking as a research approach, the privilege of one over the other and the polarization of opposites may eliminate differences and diversity and conceal the de-gree of autonomy and performance of the dominated (Elbow, 1993; Lefstein et al., 2017). Even when people try to reverse the dominance, they end up privileging the other side of the polar opposition (Elbow, 1993). In other words, "the underdog is redefined as overdog, and we are still left with thinking in terms of dominance or hierarchy" (Elbow, 1993, p. 22).

In order to avoid becoming trapped within restrictive, reinforcing cycles of the binary, Elbow (1993) presents alternative ways to deal with binary and capture its potential. Instead of trying to overcome or resolve the binary, Elbow proposes five approaches: 1) choosing one side over the other, 2) working out a compromise, 3) denying the conflict, 4) affirming the two poles as equally true or important and 5) reframing the conflict (see Table 1). Lewis (2000),[1] in turn, presents managing binaries as a means of capturing their productive or catalytic potential. In the process studies literature, Lewis (2000) recognizes three interrelated

Table 1
Five approaches on how to deal with binaries.

Name of the approach	Definition of the approach
Either/or	Choosing one side that is better or more powerful than the other. This approach involves accepting the binary and arguing for the superiority of one side.
Synthesis	Finding a compromise that integrates the two sides or developing a term that transcends them.
Denial	Denying the opposition or conflict between the two sides.
Both/and	Affirming that both sides are equally important, correct and necessary, even if they are contradictory. This approach is based on duality and equality.
Reform	Reframing the binary so that it has new sides or new meanings.

Source: Elbow (1993), modified by authors.

ways in which researchers have aimed to manage binaries: acceptance, confrontation and transcendence. Acceptance refers to learning to live with a binary in order to avoid conflict. Accepting the binary enables discovering a link between the opposing forces and opens a framework for how to cope with binary (Vince & Broussine, 1996). Confrontation encourages the actors to identify and discuss the underlying logic of binary and thus construct a more accommodating understanding or practice of binary, which helps them to escape paralysis (Vince & Broussine, 1996). Finally, transcendence refers to the capacity to think paradoxically. It encourages critical self- and social reflection to reframe the general assumptions, learn from the existing tensions and develop a more complex understanding that better reflects the binary (Lewis, 2000).

Drawing on the above discussions, we will now summarize our approach regarding the mechanisms of temporary urbanism as sources of the catalytic power they hold for urban development. First, we agree with Madanipour (2017) that temporary urbanism should be understood through the dynamics of urban temporality as a multidimensional and multitemporal phenomenon, which has different meanings for different parties. Second, we link binary analysis with process research to gain access to the internal development of the catalytic force arising from binaries. We argue that the temporary-permanent tension can lead to the temporal emergence (Garud et al., 2015) of catalytic power. The cata-lyzing effect is a processual phenomenon having either a positive or negative direction. It takes place in favorable circumstances and gains its energy from the persistent tension between two contradictory poles and their simultaneous development (Langley et al., 2013), especially in situations where the dominating pole is restrained or the weaker pole is strengthened. As a result, the poles can reinforce each other, i.e., at a certain moment, the hidden interdependencies and interaction between the poles can actualize (Elbow, 1993; Lewis, 2000). Thus, the detri-mental tension between temporary and permanent that characterizes temporary urbanism is not unchangeable, and when challenged, it can unlock the potential for urban development (see Bragaglia & Caruso, 2020). Finally, and importantly, the catalyzing potential requires continuous efforts to maintain the tension between the two poles (Lewis, 2000; Smith & Lewis, 2011).

Similarly to the binary approach, dialectics describe the tension between opposing poles, but they propose to resolve the contradiction through their merger into a combined element, a synthesis, which stresses the similarities between the poles (Smith & Lewis, 2011). By neglecting the differences of the opposing poles, however, this integra-tion is short-lived. The need for their disparate qualities remains such that any synthesis gradually favors one pole over the other or spurs the emergence of new contradictory elements (Smith & Lewis, 2011). Thus, we recognize that although various concepts have been adopted to study the tensions, the binary approach allows us to address the catalytic power emerging from the persistent tension between two opposites and still maintain both. This simultaneity, even though it requires that one of the poles may dominate at certain times, maintains the potential of both

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[1] Instead of addressing binaries, Lewis (2000) and Smith and Lewis (2011) apply the concept of paradox, which has been more broadly used in organiza-tional studies. However, their understanding of paradoxes corresponds to bi-naries, the concept that we apply in this paper.

poles and thereby combines the benefits of short-term and long-term perspectives (Elbow, 1993; Lewis, 2000; Smith & Lewis, 2011).

To analyze the dynamics of binary, we have developed an analytical framework based on Elbow's (1993) alternative ways to approach the binary and its further academic applications (Lefstein et al., 2017). The framework (Table 1) identifies and names the binary approaches that are applied in this study. Combined with narrative analysis methods, it allows us to study temporary urbanism as a multidimensional and experiential phenomenon.

3. Methods

3.1. Qualitative case study on temporary urbanism in Hiedanranta ULL

As a single case study, our analysis on Hiedanranta builds on the methodological ability to capture situated specificity and to provide access to the rich details of temporary urbanism in a particular context. The case study approach is suitable for the creation of context-specific knowledge, as it explores the interdependencies between the actors and processes within particular social settings (e.g., Harrison et al., 2017). Thus, it also allows us to reveal the interpretational and socially constructed knowledge on temporary urbanism. To maximize the utility of information from a single case, we applied a critical case selection and chose a case with strategic importance to our research task (Flyvbjerg, 2006; Ruddin, 2006). In Hiedanranta, temporary urbanism has been applied as a catalyst for sustainable urban development, and, thus, it offers us a promising real-life case to analyze the catalytic potential of temporary urbanism.

The city of Tampere bought Hiedanranta, the former pulp mill and the surrounding industrial area of 90 ha near the city center, in 2014. As the third largest city in Finland, with a population of 245,000, Tampere is growing annually by nearly 3500 new inhabitants. The city aims to transform Hiedanranta from a brownfield into a dense, urban and attractive hub of western Tampere, offering 10,000 jobs and housing for 25,000 residents (Hiedanranta, 2022a). The sustainability goals of Hiedanranta are ambitious, and the area is planned to be CO2 negative, focusing on sustainable transport and logistics, a smart energy system, the circular economy and a green and blue infrastructure (Hiedanranta, 2022b). The actions towards this goal are aligned with a wider strategic framework of city strategies and a Sustainable Tampere 2030 programme (Smart Tampere, 2022).

A participatory and open-minded approach in developing Hiedanranta has been applied since 2015, when the city opened the area and started renting vacant spaces to entrepreneurs, companies, citizen associations, artists and cultural actors. Soon afterwards, the first experiments with universities and companies were launched. The operations were organized under the Hiedanranta Development programme, which was subdivided into three sectors: Planning, Innovative Hiedanranta and Temporary Hiedanranta. The planning consisted of organizing an international ideas competition and developing the Hiedanranta Master Plan and local detailed planning. Innovative Hiedanranta gathered experiments and projects that promote smart technology, sustainability and circular economy solutions. Temporary Hiedanranta included actions by citizens, businesses and communities to develop a vibrant, versatile and sustainable urban culture (Jussila, 2019; Korpinen & Pulkkinen, 2015; Tampere, 2022; Virkkala, 2016).

The Development programme was led by a project development director accompanied by a project manager and directed by a steering group, who worked in close collaboration with the director of city planning and architects. The programme was supported by a communications specialist and a private consulting firm that had a significant role in organizing temporary uses. Innovative Hiedanranta and Temporary Hiedanranta were run by project managers from in-house and external staff.

Our case study focuses on the experimental period of Hiedanranta in 2015–2020, which was characterized by intensive temporary activities before the detailed planning and construction began in the area. Illustrative for this period was that power and responsibilities were shared among multiple actors. Besides carrying out their professional roles, many actors were also personally committed to the development of the area.

3.2. Data collection

We conducted 27 thematic, semi-structured interviews with city developers and experimental participants in 2017–2021 (Table 2). We did not include universities and research projects in the latter group because they were less active in the debates over temporary uses in general. The artisans and members of cultural, leisure and social associations were professionals and entrepreneurs who made their living mostly in Hiedanranta. The businesses were start-ups developing sustainable technologies. The style of the interviews allowed the participants to pore over their ideas and bring in their own issues around the themes defined by the interviewer-researcher. Each interview, including one or two participants, lasted 1–2.5 h and was recorded and transcribed.

The following themes were first discussed with all the interviewees and afterwards applied to coordinate the interview data (Brinkmann, 2018): 1) motivations (working in Hiedanranta; personal development; the city's role as an enabler); 2) urban living lab (the operational environment; three developmental functions); 3) interaction and collaboration between the actors and 4) temporal tensions (shift from temporary to more permanent actions; the role of temporary uses in developing Hiedanranta).

Supplementary data included public planning documents, reports and websites of Hiedanranta, as well as qualitative data sets and results of our previous research in Hiedanranta (Kallio et al., 2021; Turku et al., 2022). This data was applied to define an institutional narrative of temporary uses in Hiedanranta, presented in Section 3.3. Also, it supported our contextual understanding of the interviews and the processual development of Hiedanranta considerably. Particularly, authors 1 and 2 had gained insider-knowledge of Hiedanranta by working in experimental research projects, facilitating citizen participation in collaboration with city developers and organizing events in Hiedanranta in their spare time. These experiences, accumulated through the period 2015–2020, enriched the research with an ethnographic orientation, although the primary methods were not ethnographic.

3.3. Narrative analysis and synthesis

To analyze the interview data, we applied narrative analysis because of its suitability for studying both processes (Langley, 1999) and binaries (Lewis, 2000). This approach rests on the premise that binaries, as narratives too, are recognizable and socially constructed through action and rhetoric to realize a motivation. Narrative analysis serves in reading complex processes, paying attention to under-noticed aspects that are often taken for granted and exposing multiple perspectives and interpretations that develop in everyday practices (Lewis, 2000). Compared to many other analysis methods, narrative analysis focuses on the entirety, integration and consequences of different elements of the story rather than its discursive or thematic parts (Chase, 2018; Wiles et al., 2005). In the analysis, we refer to the group categories presented

Table 2
The categorization of interviews.

City developers		Experimental participants	
City planners	2	Artisans	6
Development managers	3	Associations	5
Property managers	2	Businesses	4
Experts, advisors	5		
Total	12	Total	15

in Table 2 but do not compare the findings between groups. Instead, we address all the interviewees together and trace the nuances in wholeness.

We used Burke's Pentad (1969) as a research method to understand the story and identify the elements in the narratives: the act (what was done), the scene (where and when it was done), the agents (who did it), the agency (how they did it) and the purpose (why they did it). To understand the motivations behind the stories, all the terms had to be analyzed together, in relation to each other. Connected to place and time, the elements thus created a "meaningful whole" (Chase, 2018). As a result, we could connect interviewees' interpretations on temporary urbanism to the broader spatial and social contexts of which they are part, illustrate the plurality of interpretations and make sense of contrasting accounts. Finally, we analyzed each narrative from the perspective of the binary between temporary and permanent. In this step, we applied the analytical framework of alternative binary approaches (see Table 1 in Subsection 2.2). All the narratives presented in Section 4 are based on the researchers' interpretations of the interview data, not consciously produced by interviewees.

The analysis provided accurate descriptions of the narratives embedded in the processual development of the Hiedanranta ULL. To specify a reference point for the narratives, we applied the supplementary data to define an institutional narrative of temporary urbanism in Hiedanranta. Chase (2018) defines institutional narratives as stories embedded in the discourse and material produced by many different entities and organizations, such as official reports, speeches, websites and everyday talks.

We recognized an institutional narrative of temporary urbanism embedded in the planning documents, bulletins, social media and web pages of Hiedanranta. This institutional narrative was maintained especially via the web page called "Temporary Hiedanranta," which displayed information about the cultural actors and artisans working in the area, as well as the events taking place there. The definition of temporary uses was created by the city developers, and the cultural actors and artisans were given their roles as temporary users. For city developers, Temporary Hiedanranta presented one of the three subsections of the Hiedanranta Development programme. This division distinguished temporary users from formal development practices they were not part of. In the material produced and managed by the city, temporary uses were introduced to precede the conventional urban development of the area, which emphasized the risk of temporary uses being replaced when the plans for the area were ready and the construction started. This narrative corresponds to the arguments of Colomb (2012, 2017) describing how temporary uses activate and prepare a place for the arrival of development capital, prior to the construction. This definition of temporary uses also creates and maintains an unequal power position between temporary users and official city developers.

In the discussion section, we apply the synthetic strategy presented by Langley (1999) to draw theoretical interpretations from our results.

For this purpose, we transform the detailed narratives found in Hiedanranta into parallel tracks and examine their catalytic potential through binary-related mechanisms. During synthesization, we identified the dynamic relationships between actors, actions and temporal factors that create the most relevant connections between binary tensions and the potential catalytic force of temporary urbanism. In other words, synthetization is our methodological tool to find causal mechanisms (Hedström & Ylikoski, 2010) that make temporary urbanism catalytic for urban development.

4. Narratives of temporary urbanism

By applying narrative analysis methods to the data, we found diverse interpretations and understandings of temporary urbanism in Hiedanranta. In this section, we present our findings in a form of narratives. Table 3 summarizes the main components of each narrative. The first four rows specify the constructive elements of each narrative, following Burke's (1969) Pentad model. Each narrative produces a distinctive interpretation of the binary between temporary and permanent, presented on the last row. Burke's model provided us with a useful tool to search for the coherence and interconnectedness of elements in the interview data and build the narratives, rather than presenting conscious strategies applied by the interviewees.

The plurality and contingent origin of the narratives is our first major finding regarding the binary relations. In other words, the narratives cannot be divided between the interpretations of the experimental participants and the city developers. Instead of a dual origin, the experiences of urban temporariness are more diverse, and the interviewees shared partly the same interpretations. However, not every narrative reflects the experiences of all the interviewees. We recognized two of the narratives, enabling and marketing, in all the interviews, while the other two narratives, iteration and control, were more dispersed. In most interviews, we also recognized elements of several narratives. After Table 3, we focus on discussing each narrative from the particular approaches to the binary they present.

4.1. Narrative of marketing

The narrative of marketing addresses binary from the *both/and* approach and is motivated by the attraction that temporary uses create. This narrative brings together cultural, leisure and social associations, artisans and diverse city developers, who all benefit from temporary urbanism. Interestingly, despite temporary uses occurring within the frames of the formal development practices, the interviewees saw the relationship between temporary and more permanent as supporting, and even mutual. This approach affirms that both sides of the binary are equally important and need to support each other. For example, for the cultural actors, participating in events that the city organized in the area was a channel to present their expertise and products and gain publicity

Table 3
Narratives of temporary urbanism in Hiedanranta.

Components of narrative	Narratives			
	Marketing	Enabling	Iteration	Control
The scene where the narrative took place	Events, photos and newspaper articles	Urban living lab	Planning documents, project cycle	Fixed-term rental contract
The main actors	City developers, cultural actors	City developers, experimental participants	City developers, R&D actors	City developers, cultural actors
Ways in which the narrative manifested itself	Joint efforts, visitor count	Flexibility, allowance and innovations	Experimentations, tenures	Uncertainty, language
Motive behind the narrative	To boost attraction and visibility	To do something good with the vacant land in the early phases of its development	To adapt to projectification[a] in urban development	To prevent unwanted attachment to the area and unwanted uses
Approach to binary	Both/and	Synthesis	Reform	Either/or

[a] Referring to Torrens and von Wirth (2021), we define "projectification" as a phenomenon whereby project-based forms of organizing have become ubiquitous. It is an urban change process in which project-logic and short-termism are taken for granted, shaping the expectations for project-organization.

through media presentations. The city developers, in turn, used the positive publicity that the cultural actors created to support the marketing of the area. A city developer described the exchange values of the both/and approach to binary that culminated in marketing:

I don't want to think of it as automation, as always when the city organizes something in the area, experimental participants have to be there too. On some level, it is wrong, because participation is work too. But it is a bit contradictory because, at the same time, they profit from the publicity too and get support for their businesses. Where does the line go then … when is it marketing of the area and when is it marketing of the people working in the area? …

(Experts and advisors)

The basis for exchange was built into the rental contracts, which stated the requirement of the cultural actors to participate in developing the city district. Participation was defined as attending organizing events or meeting the demands of a yearly visitor count in activities. These formal demands to participate in the development of the area also created the expectations among the cultural actors, who saw that when giving their input to the area, they should also be able to profit from the development. Besides the marketing value, temporary urbanism allowed them to enjoy lower rents and apply for financial support from the city.

For the city developers, temporary uses were *necessary*, as the activities that the city could organize were insufficient to create the desired attraction to the area. One developer argued that "the starting point was that no one would be interested in what the city does," which explains why "the interesting" had to come from somewhere else. The city developers considered themselves fortunate that several cultural, leisure and social associations became interested in the Hiedanranta and settled in the area.

The mutual relationship that temporary urbanism created worked out better than the interviewees initially thought. Some associations had positively affected the image and reputation of the area much more than they were asked, or expected to do, according to the city developers. Also, they created the community feeling and social values that the city would not have been able to do in such a short time period. However, while the success of the binary came as a surprise to many, it also had some unintended consequences. Although the motivation behind the temporary uses was to create attraction to the developing area, their popularity actually hindered the publicity of other activities going on in the area. Some interviewees even perceived that the temporary uses had stolen the attention away from city planning and smart and sustainable businesses.

4.2. Narrative of enabling

In the narrative of enabling, temporary uses were motivated by the aim of creating opportunities for diverse actors and activities in the early phases of the brownfield redevelopment. We identified a *synthesis* approach to the binary associated with this narrative. Synthesis describes positive connotations attached to temporary uses, which weaken the polarization in the binary. We recognize the synthesis approach in the values, such as flexibility and sustainability, that the interviewees attached to temporary uses. Through these positive connotations, we saw the rise of the attractivity of temporary uses among both city developers and experimental participants. This attraction became so strong that it transcended the tension between temporary and permanent, which led to a fading dominance in the binary, and the continuity of temporary uses became a shared purpose among the interviewees. The following quote demonstrates the synthesis approach to the binary.

Well, in relation to Hiedanranta, it is the same message from the policymakers as from the experimental participants. I think they all share the idea that all in all, there is no real contradiction in Hiedanranta. The message from the decision-makers I see is that Hiedanranta should allow

the continuity for those experimental activities already emerging in the area, and possibly support them even more.

(Property managers)

To understand the synthesis approach to binary, we show how the shared value of temporary uses was developed and how it appeared to the different actors. The city developers in Hiedanranta, acknowledging the slowness of the brownfield redevelopment, decided to take advantage of it by "generating something good in the area." They thus opened the area in an early phase of redevelopment by inviting a wide range of citizen and community groups to offer their ideas on how to use the vacant industrial buildings. By addressing the emerging activities as temporary uses, the range of opportunities for new uses widened. This was mostly due to the temporary building permission that allowed the temporary use of former factory buildings and a change in their purpose from industrial uses (defined by zoning) to cultural spaces and ateliers.

For the experimental participants, temporariness equated to flexibility, which allowed for testing new ideas and being creative. The cultural actors and artisans recognized that due to temporary urbanism, getting permission to organize an event or start a community garden was relatively fast when the decisions were made by the Development programme rather than through the regular procedure within the city organization. This was supported by direct and personal communication with the developers of the area. The comment below describes temporary urbanism as an opportunity and illustrates the tension between enabling and restricting:

Temporariness has not really limited anything; more it has enabled things. Somehow like … maybe in the work of city developers, it has been more of a tolerant approach in that the developers have turned a blind eye to some things … which has been good! There haven't really been any problems in this area. In my opinion, controlling and restricting can, in general, bring more problems …

(Associations)

The narrative of enabling brought together a great number of temporary users. Although the institutional narrative made a distinction between the temporary promotion of urban culture and innovation, the smart and sustainable businesses that were interviewed actually identified themselves with temporariness. For them, temporary urbanism presented innovations for a sustainable future. As with the cultural actors, the entrepreneurs saw that temporary urbanism brought many advantages. It provided an opportunity to develop and test innovations on a district scale and co-learn in an urban living lab (see Turku et al., 2021).

4.3. Narrative of iteration

We recognize that the narrative of iteration addresses the binary from the approach of *reform*, by giving new meanings for temporary uses and redefining the poles of the binary. The narrative of iteration explains temporary uses as part of an iterative cycle of temporary projects that follow one another. For example, when the city took possession of the Hiedanranta area, temporary uses allowed developers to test diverse ideas and adapt to uncertainty at a time when the final plans for the area were not fixed. Testing and experimenting with different ideas permitted the developers to see what attracted the interests of citizens and businesses. Temporary urbanism as a framework for the opening of the area also encouraged small and low-cost interventions that were easy and quick to put into practice.

Well, the Temporary Hiedanranta, that was clearly a transition phase before the zoning of the area was ready. With temporary uses, the idea was to get some things going on, try and learn. And that happened too! There were many actors who came to experiment. Some of them stayed, some didn't.

(Businesses)

For the city developers, temporary urbanism presented an integral part of the formal development process, which was organized around projects and managed by temporary project developers. We recognize this as a projectification of urban planning practices (c.f. Torrens & von Wirth, 2021). While in the other narratives, the binary occurred between the city developers and especially the cultural actors and artisans, among other experimental participants, in this narrative, the poles were not fixed, and the actors representing the poles changed along with the development process. The experimental participants connected temporariness to the actors who used to work in Hiedanranta but who had already left the area, including some cultural actors and artists, numerous R&D projects and startups and several city developers. They saw the binary between temporary and permanent as occurring especially within the city organization, with which they were not involved. Due to the project-logic and short-termism of development, the interviewees saw that temporariness had become a continuous and defining state, and the transformation of Hiedanranta was characterized by the temporary.

> I am not sure if temporariness has disappeared anywhere. I guess it means that no one has a clear understanding of the outcome of the development and what is the desired future for this area. There are so many variables along the way that may change, so I don't know if temporariness is more like a permanent state of affairs … because until all the decisions are made, everything is kind of open …
>
> (Associations)

The interviewees' reactions to temporary urbanism as an iterative part of urban development varied. The city developers viewed temporariness as a neutral element of the development processes, whereas the experimental participants emphasized some negative effects. They expressed the frustration of working with constantly changing city developers and criticized the lack of continuity in research projects that they perceived as negatively affecting the development of the area and hindering its goals for sustainability. Besides the projectification of urban development, the cultural actors also connected temporary urbanism to electoral cycles, which they saw as causing changes in the city developers' attitudes and ambitions for the area.

The reform approach to binary also had some unexpected consequences, such as the cultural actors and artisans distancing themselves from the temporary urbanism. Thus, while the cultural actors and artisans did not identify themselves as temporary users, they developed plans based on the idea of permanence and continuity in Hiedanranta. This clashed with the perspective of the city developers, for whom temporary urbanism as a project phase covered all the activities and actors in Hiedanranta.

4.4. Narrative of control

The narrative of control is motivated by the aim to prevent the unwanted attachment of temporary users to the developing area and discourage unwanted and illegal activities in vacant buildings. We recognized the *either/or* approach to the binary in this narrative in that it was seen as rather stable, and the relationship between temporary cultural actors and artisans and city developers was inherently hierarchical. The experimental participants saw temporary urbanism as a means for the city developers to demonstrate their power over the cultural actors. This dominance was questioned by many temporary users, but it was seen as difficult, if not impossible, to challenge.

The dominance brought by the either/or approach to binary was accompanied by negative consequences for the cultural actors, such as stress, precarity and anxiousness about the future. The cultural actors thus experienced temporary urbanism as an oppressive measure against them. One artist described it as "cutting the wings of hope." Many concerns stemmed from uncertainty; in other words, despite the fact of its being temporary, the cultural actors were unsure about how long the temporariness would last. This uncertainty also negatively affected the

experimental actors' ability to plan their own future in the area. Being labeled as temporary users discouraged the cultural actors from investing their resources in Hiedanranta or making permanent improvements in their workspaces. Also, they saw that temporary urbanism decreased the interest of the city developers to improve the ateliers and workshops, and the temporary users were expected to be satisfied with what they got.

The either/or approach to binary not only influenced the ways the city treated temporary users but also shaped the expectations that other people placed on them. For example, the cultural actors and artisans saw that being labeled as temporary users decreased the interest in visiting them in Hiedanranta, attending their events and using their services. Indeed, temporary as a label created negative connotations, which demonstrates the power of language (Lewis, 2000).

From the perspective of the city developers, temporary uses were applied strategically to emphasize the transformative nature of Hiedanranta. On the one hand, some city developers argued for the importance of addressing temporary uses separately, not as a uniform group. This meant recognizing and supporting the most successful temporary uses, although the ways to measure the success were not clear. On the other hand, the interviewed city developers justified the demonstration of control by the difficulties they had experienced before.

> The concern, somehow justifiable, somehow I think maybe exaggerated, was that if we allowed an association to use a building, even for free because of its bad shape, what would happen if we wanted to build something else there, a really fancy building, where the association could not afford the rent?… How would we prevent them from chaining themselves to the plinth and refusing to leave? They might say, "No, we want to stay here"… I understood both sides; of course the demolition seriously irritates. But from the other point of view, we were all aware even from the very beginning that this may not last forever.
>
> (Experts and advisors)

Besides the control over temporary users, we recognized how temporary uses also played a secondary role in the city's ambitions to practice control in the area. A couple of interviewed city developers saw temporary uses as a tool to prevent unwanted uses of the area, such as vandalism and trespassing the abandoned buildings. The idea of control was based on having eyes on the area and keeping the place active and monitored at different times of the day.

The narrative analysis enabled us to expose the rich representations of temporary urbanism, including its nuances and ambiguity. To answer the first research question, we found that each narrative takes a distinct approach to the binary and thereby reflects differently the experiences and meanings of temporary urbanism. The denial approach (Table 1) did not strongly resonate in our data, and, thus, we did not apply it to the analysis. Most importantly, while the narratives reflect different attitudes to the binary between temporary and permanent, each of them holds simultaneous attention to both poles (with one exception, see Table 4) and thereby maintains the productive tension of the binary (Elbow, 1993; Lewis, 2000; Smith & Lewis, 2011). Each narrative is produced by a mix of actors who place themselves in relation to other actors in the area by defining who are the temporary users.

The binary approach enabled us to address the power relations between the actor groups, without predefining how the opposites of the binary should be interpreted. This brought visible the dynamic nature of temporary urbanism. In terms of urban development, we found that the process of temporary urbanism and the ULL development in Hiedanranta are driven by several, simultaneously occurring narratives. The ethnographic orientation helped us to recognize the simultaneity of narratives, and also their possible conflicts. The simultaneity and the clash between narratives will be further discussed in the next section, where we develop our argument of binary as a source of catalytic mechanisms.

Table 4
Mechanisms of the catalytic power of temporary urbanism uncovered by narratives.

	Narrative of marketing	Narrative of enabling	Narrative of iteration	Narrative of control
Dealing with the binary	Both/and	Synthesis	Reform	Either/or
	Acceptance	Transcendence	Confrontation	–
Shadow of the future	Hype	Attraction	Path creation	Selection
Actor relations	The duality between city developers and temporary users, formal relationship	Open for any actors who share the same values, personal relations	Limited to city organization and R&D actors, the constant change of actors related to two poles	The dominance of city developers over temporary users, fixed relationship
Factors maintaining attention to both poles of binary	Shared benefits become resources for activity	Attraction leads to self-reinforcing activities	Experimentations and projects elucidate future prospects	Stability and fixed relations lose the productive tension
Tempo	Punctual	Transformative	Sequential	Stagnant

5. Discussion

Using the findings of our empirical analysis, we answer the second research question by identifying the mechanisms that make temporary urbanism a catalyst for sustainable urban development. Table 4 presents the parallel tracks of the four narratives and explains their catalytic potential through binary-related mechanisms. These mechanisms include (1) the actors' attitudes to binary based on the approaches of Elbow (1993) and Lewis (2000), (2) the shadow of the future, describing the actors' future expectations that influence their perceptions and activities in present time (Garud et al., 2015; Ligthart et al., 2016), (3) the development of actor relations, (4) the factors that cause actors to hold simultaneous attention to both poles and thereby maintain the productive tension and (5) the tempo describing the processual dimension of a catalytic force (c.f. Langley et al., 2013). These mechanisms explain the catalytic force as effecting changes in the chain of events. Next, we will apply them in the context of urban development and planning.

Because the catalytic mechanisms work differently across the narratives, also the potential ways for managing the binary are different in order to keep the productive tension alive. First, in the narrative of marketing, the catalytic potential was harnessed by *acceptance* (Lewis, 2000) and operationalized through formal agreements and exchange. The shared benefits of marketing created a mutual interest to maintain and develop the binary relation. For sustainable urban development, this narrative demonstrates how temporary urbanism can support new ways of collaboration by creating partnerships across different operational sectors and organizational forms (Galdini, 2020).

Second, in the narrative of enabling, the catalytic potential was captured through *transcendence* (Lewis, 2000), which turned temporariness into attraction as "an opportune moment" (Madanipour, 2018, p. 1100). By redefining the temporary through flexibility and sustainability, and by loosening formal spatial control, temporary urbanism became an arena for innovating and experimenting (Madanipour, 2017, 2018). This presents a bottom-up approach to discovering the needs of a new city district and local, context-specific and pragmatic ways to respond to these (Németh & Langhorst, 2014).

Third, in the narrative of iteration, the catalytic potential was activated through *confrontation* (Lewis, 2000), which allowed the reconstruction of temporary urbanism as a response to the projectification of urban development (c.f. Torrens & von Wirth, 2021). For sustainable urban development, temporary urbanism allows for testing ideas and learning from successful initiatives, and it helps to manage an uncertain future and adapt to emerging challenges. These new logics may offer cultural actors and artisans a chance to develop their activities despite the constantly changing operational environment.

Finally, the narrative of control describes a dominant, rather stable binary, which does not allow the dynamic tension between the poles. This limits the catalytic potential of temporary urbanism, and, thus, this narrative does not correspond with the categories of Lewis (2000). However, due to the simultaneity of narratives, the narrative of control is important to maintain the tension between temporary and permanent when it is reduced in other narratives. Also, the narrative of control

illustrates the conscious selection of temporary users, which may further support the potential of other narratives and contribute to the pervasiveness of catalytic power in the total process of temporary urbanism (see Garud et al., 2015).

Once the binary between temporary and permanent is established and managed, temporary urbanism can be seen as a new method for building a sustainable urban future, perceived as improving the quality of life in a city, and put into practice in dialogue across and in-between professional urban developers and local actor groups. We do not take the stand that temporary uses should be captured for the benefit of a developer, but instead, as discussed above, harnessing the catalytic potential requires that the binary is redefined, and, in this way, each pole can reinforce itself through the binary tension (see Elbow, 1993; Langley et al., 2013). In other words, catalytic potential can be realized when temporary uses have the space to evolve and the power to nourish conventional urban development in unexpected ways. The results show how loosening the binary tension allows for alternative uses to emerge, which may reveal previously hidden needs for urban development and demonstrate new ways to think about and use urban space (cf. Pløger, 2021). Unlike conventional development practices, temporary urbanism provides an open-ended approach in which development is defined through the practices and occupation of a place. However, narrative analysis, especially the narrative of control, demonstrated to us how the binary can also become a negative catalyst, embedded in power issues.

We recognize a possible clash between the institutional narrative that addresses temporary urbanism through a linear lens and the other narratives that present the temporary as an interpretational, complex phenomenon. Conflict emerges when formal planning, often based on continuity, coherence and predictability (Pløger, 2021; Wolfram, 2018), does not adapt to allow for bottom-up processes or alternatives (Pløger, 2021). The contradiction of temporal logic has the potential to emerge in situations where broad ULL is applied as a temporary initial stage of building a new city district. This is especially so in situations where the weakened binary tension creates expectations of continuity for the experimental participants, but the city developers acting along the institutional narrative do not bend to respond to it.

6. Conclusion

In this paper, we have analyzed the binary between temporary and permanent. Theorizing the binary has enabled a more complex and nuanced understanding of temporary urbanism and its catalytic power for urban development. The approach required us to think paradoxically: work with the tensions and pay attention to the diversity of interpretations and their interconnectedness. Building the plurality and a broader understanding of temporary urbanism also required confronting the oversimplifications of the relationship between temporary users and city developers.

The main empirical finding of the paper is that challenging the dominant tension between temporary and permanent helps to make the binary productive, and thus temporary urbanism can be catalytic for sustainable urban development. This requires an approach in which the

binary is loosened, but a certain tension is constantly maintained between the opposite poles of temporary and permanent (Elbow, 1993; Langley et al., 2013; Smith & Lewis, 2011). Through narrative analysis, we recognized different approaches on how to deal with a binary in a productive way and, subsequently, how to apply these approaches in urban development practices. For developers, making the binary productive helps in finding both the short- and long-term benefits of temporary urbanism embedded in urban development. For experimental participants, the partnerships evolving from a productive binary opened new opportunities to develop their actions. Theoretically, we were able to break down the contextual mechanisms that make temporary urbanism catalytic. By specifying the different elements in the narratives and then identifying the mechanisms, we could demonstrate how the oscillation between the poles of temporary and permanent makes various tracks of temporary urbanism catalytic in different ways. One of the tracks was a counterforce that played a role in maintaining the tension between the poles. Besides addressing the complexity and plurality of the binary, the narrative analysis allowed us to be responsive to the experiences of actors and the local context.

We have identified the following opportunities for further studies. Despite the recognized importance of loosening the binary tension, exercising it and using "the temporary as a force in itself," the binary approach we developed collides with the logics of conventional planning practices, when uncertainty meets continuity. Another challenge lies in maintaining a dynamic relationship between the opposite poles of the binary, without one side taking over. A limitation of this study stems from our research data, which did not allow us to make a longitudinal analysis of the evolution of the narratives and how they informed each other. As this study discusses temporary urbanism in a Nordic country, Finland, similar research methods could be applied in other geographical contexts to improve the generalizability of findings. This could provide interesting findings also for urban sustainability research, for instance, from the perspective of urban transformative capacity (cf. Torrens & von Wirth, 2021).

Based on the analysis, there is no relevant reason for examining temporary urbanism as de-politicized, as some kind of win-win process for temporary users and city developers. Instead, the role of power and moral context is inevitably present, for instance, (i) in the hidden interdependencies and interaction between the opposite poles of the binary and (ii) in the struggles over the maturation of the processes of urban development under formal time constraints. Power plays an important role in the catalytic potential of temporary urbanism and also in the broader systemic logics of urban development in which temporary urbanism falls.

CRediT authorship contribution statement

Veera Turku: Conceptualization, Methodology, Investigation, Writing – original draft, Writing – review & editing. **Mikko Kyrönviita:** Conceptualization, Investigation, Writing – original draft, Writing – review & editing. **Ari Jokinen:** Conceptualization, Methodology, Writing – original draft. **Pekka Jokinen:** Conceptualization, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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