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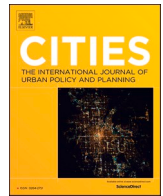
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Unleashing or domesticating the vitality of citizens' initiatives? The paradoxical relationship between governments and citizens' initiatives in the energy transition

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ABSTRACT

In their quest to create vital cities, West European city governments stimulate citizens to self-organize in citizens' initiatives. This trend is accompanied by conflicting scientific and governmental discourses: on the one hand, citizens' initiatives are praised for giving 'power to the people', on the other hand, citizens' initiatives are understood as mere 'tools' to roll-out government policies. By adopting a critical-constructive perspective, this study sets out to better understand the paradoxical attitudes of local governments toward the potential of CIs for stimulating urban vitality. We do so by uncovering patterns that explain the opening and closing of spaces for citizens to develop their initiatives. To this end, we conducted an in-depth case study into the relation between the local government and citizens initiatives in the energy transition in Rotterdam (the Netherlands). Our findings reveal that a configuration of different explanatory mechanisms leads to the 'domestication' of initiatives, which jeopardizes their unique transformative potential that can contribute to the vitality of cities.

1. Introduction

Past decades, local governments in West European cities have experimented with various democratic innovations to engage citizens in public policy decision-making and implementation (Elstub & Escobar, 2019). One such innovation – that can be found for example in the United Kingdom and the Netherlands – is about citizens doing public tasks or providing public services themselves, giving them direct influence over their living environment (Dekker, 2019; Igalla, Edelenbos, & Van Meerkerk, 2020; Newman & Tonkens, 2011). Via these citizens' or community initiatives (CIs), involved citizens organize themselves to collectively mobilize capacities and resources to define and carry out actions aimed at providing public goods or services for their community (Duijn, Van Buuren, Edelenbos, Van Popering-Verkerk, & Van Meerkerk, 2019).

Although CIs are essentially self-organized and, at their core, independent from the government (Bakker, Denters, Oude Vrielink, & Klok, 2012), in practice, when citizens self-organize in initiatives, this is never completely independent from the government. Nederhand, Bekkers, and Voorberg (2016) show that self-organization evolves in the shadow of

hierarchy. A certain level of cooperation with the government is required, for example to obtain financial support, information, social and institutional contacts or legitimacy. Therefore, to stimulate CIs, governments create 'invited spaces', i.e., institutional, legal, organizational, political and policy spaces for citizens to establish their initiatives (cf., Cornwall, 2004; Visser, Van Popering-Verkerk, & Van Buuren, 2021).

The self-organizing capacity of citizens can be seen as an important indicator of urban vitalism (Nederhand, 2021). Therefore, many governments welcome these initiatives as they contribute to the vitality of cities (Molenaar, Hölscher, Loorbach, & Verlinde, 2021). This trend toward giving space to self-organizing citizens is often described as 'smaller government, bigger society', denoting that governments are taking a step back in favor of CIs (Igalla et al., 2020; Kisby, 2010). Following this line of reasoning, creating invited spaces for CIs is understood and praised as a democratizing force, giving 'power to the people' (Van der Schoor & Scholtens, 2015).

However, several scholars have warned that "...what might be presented as increased autonomy, a chance to govern oneself, can also be seen as a reconfiguration of rationalities so that the self-interest of the

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sector aligns with the interest of the state seeking to mobilize a reserve army of support effectively and on its own terms” (Morison, 2000, p. 129). Trommel (2009) alludes to a similar tendency toward, what he calls, ‘greedy governance’. This notion is also echoed in analyses of British bottom-up energy initiatives, wherein CIs appear to be treated as nothing more than ‘tools’ for governments (Eadson, 2016). Following this line of reasoning, inviting CIs can be understood and critiqued as a form of disguised reproduction (or even reinforcement) and the reconfiguration of state power, thereby eroding the transformative potential of CIs (Aiken, 2016, 2019).

Governments themselves use opposing discourses when it comes to their relation to CIs, which reflect the diverse scientific understandings of the trend. On the one hand, we see that citizens are stimulated to take initiative based on an ideal of giving ‘power to the people’ (Middlemiss, 2011; Van der Schoor & Scholtens, 2015); on the other hand, CIs are used as mere tools and controlled as a way to roll-out government policies (Aiken, 2012, 2019; Cuppen, 2018). In the former, governmental actions to encourage CIs can be seen as productive for the vitality of cities, while in the latter their actions can easily frustrate this. How can these seemingly contradictory attitudes both be true at the same time?

In this study, we adopt a vitality perspective to better understand the paradoxical attitudes of local governments toward CIs. Through this lens of vitalism, we see the city as a relational endeavor, that involves complex social processes in which ways of thinking, valuing and acting are actively constructed (Fraser, Kember, & Lury, 2005; Healey, 1997). The vitality perspective is thus characterized by a process orientation (Nederhand, 2021), that entails a focus on and explicit appreciation of the ongoing and dynamic nature of social phenomena.

Given the relational ontology, cities are understood as lived entities where both life-worlds and system world come together (Nederhand, 2021). To better understand the relation between governments and CIs, we focus on CIs (understood as part of the lifeworld of citizens) in the highly institutionalized energy sector (understood as system world). It is in this highly institutionalized context that we can best study what mechanisms support or may jeopardize a relation between governments and CIs that contributes to the vitality of cities.

CIs involved in urban energy transitions are on the rise (Proka, Hisschemöller, & Loorbach, 2018). They play an important role in urban energy transitions, striving to achieve diverse low-carbon goals (Aiken, 2019). Citizens, for example, invest together in solar panels for their homes or start a cooperative to realize a wind turbine. In this way, citizens are not only consumers of energy, but also producers; they become ‘prosumers’ (Wittmayer et al., 2019). CIs in the energy transition are celebrated for their potential to empower communities via local ownership, and to accelerate the meeting of governmental sustainability goals by increasing social acceptance (Middlemiss, 2011; Van der Schoor & Scholtens, 2015).

Moreover, CIs have a unique transformative potential that can contribute to the vitality of cities. Since CIs originate in the life-worlds of citizens, CIs are able to address issues that matter to citizens, in a way that matters to them (Hoppe, Graf, Warbroek, Lammers, & Lepping, 2015). As such, CIs are characterized by integrated, multi-faceted approaches – combining different issues and (policy) domains – for dealing with societal problems, as opposed to the fragmented and specialized approaches of the system world (Duijn & Van Popering-Verkerk, 2018; Hoppe et al., 2015). Related to this, CIs have the potential to transform the dominant energy system; providing alternatives and bringing about a change in institutions, and the formal and informal (explicit or implicit) rules of the game that shape the behavior of its key actors (Proka, Hisschemöller, & Loorbach, 2018).

The aim of our study is to better understand the paradoxical attitudes of local governments toward the potential of CIs for stimulating urban vitality. We do so by uncovering patterns that explain the opening and closing of spaces for citizens to develop their initiatives. Therefore, we conducted an in-depth case study into the energy transition in Rotterdam. The vitality lens, with a focus on process and social dynamics,

enabled us to identify how, where, when and why spaces for CIs are opened or closed.

In the next section, we discuss a broad range of literature on community self-organization and governmentality to better understand the paradoxical relationship between governments and citizens’ initiatives in the energy transition. In this literature, we distinguish a critical and a constructive perspective. We combine these in a critical-constructive perspective, that informs the analysis of our empirical data. In the third section, we explain our case selection and the methods employed, while the fourth and fifth sections contain the analysis. Finally, we end the paper with our conclusions and reflect on the implications of our findings for the vitality of cities.

2. Theoretical framework

2.1. Critical perspective

The critical perspective is influenced by governmentality theory – originated with Foucault (1979) and since then further developed by a range of scholars – and departs from the notion that state power is produced through a range of sites and alliances at a distance from, and beyond, the state (Dean, 2010; Swyngedouw, 2005). Rather than directly regulating, the state governs at ‘arm’s length’ (Durose, Justice, & Skelcher, 2015); its governing is not achieved via encroaching on individual liberties or coercive control, but through a complex and subtle diffusion of techniques where individuals or communities govern their own conduct; for example, active practices of community self-management and behavioral self-regulation are encouraged (Aiken, 2012; Lister, 2015; Rose, 1999).

In this regard, scholars point to the *contradictory institutional processes* that characterize contemporary governance. The emphasis here is on how decentralization obscures the reality of the recentralization of political control, which drives centrally determined scopes of participation and self-organization (Newman, 2001; Taylor, 2007). A key insight is that forms of power beyond the government can sustain governments’ power more effectively than its own institutions (Taylor, 2007).

Other authors also point to *boundary definitions* - rules of how, what, where and when CIs can act – that governments impose on CIs, thereby making sure that CIs’ actions are aligned with governmental interests (Aiken, 2019; Cornwall, 2004; Eriksson, 2018). As an example, CIs are often subjected to rigorous controls requiring formalization, quantification, financialization and proof of effectivity (Aiken, 2016). The literature here points to governments employing CIs as mere ‘policy objects’, or as ‘tools’ for use in an ‘instrumental and strategic’ or ‘goal-oriented’ manner to engage, mobilize and responsabilize citizens to act in ways that benefit the energy transition (Aiken, 2016; Chatterton, 2016; Eadson, 2016). Citizens are made responsible for tasks previously assigned to governments (Clarke, 2005; Lowndes & Pratchett, 2011; Rose, 1999); they are not only responsabilized to take care of their own well-being, but to that of their community as well (Verloo, 2017). This is echoed in the notion of ‘government through community’ (Lister, 2015), which is a way for governments to define and shape communities in order to encourage certain types of participation and behavior.

Another critical stream of literature concentrates on the tendency of governments to return to ‘business as usual’ and take back control, often prompted by a traditional *sense of responsibility* to take care of the public interest (Tonkens & Duyvendak, 2003). One of the ways this is achieved is through co-optation, i.e., the process by which either a group subsumes or acculturates a smaller or weaker group or, similarly, one group gains convert from another by replicating some of its elements without adopting its entire program or ideals (Cooke & Kothari, 2001; Jones, 2003). For example, Webb, Hawkey, and Tingey (2016) show that urban community energy initiatives are susceptible to co-optation for green branding, by either governments or private parties, that in fact continue their ‘business as usual’ while using a link with local initiatives to represent their activities as sustainable and community-minded.

2.2. Constructive perspective

Next to the critical perspective, we find a more positive or constructive perspective on the relationship between governments and CIs. These studies emphasize that governments realize they cannot solve contemporary wicked problems like lowering carbon emissions on their own. They recognize that systemic change is required and therefore they aim to involve CIs. Several authors demonstrate that governments today – driven by this *awareness of mutual dependencies* – often take on more modest or enabling roles in relation to CIs (e.g., [Duijn & Van Popering-Verkerk, 2018](#); [Grotenbreg, 2019](#); [Van Putten, 2020](#)). According to these authors, governments aim not to discipline, but to facilitate and strengthen CIs, for example, by creating learning communities or by providing support in the form of funding, data, or useful social connections ([Hoppe et al., 2015](#); [Nederhand et al., 2016](#)).

Furthermore, some studies highlight the opportunities that arise for citizens to exercise power when spaces for CIs opened to them. These citizens are not ‘passive dupes’, easily disciplined into the direction and ways of working envisioned by governments. On the contrary, when spaces for CIs are created, they form new opportunity structures that citizens cleverly use to *insert their own interests* and promote different agendas (e.g., [Rosol, 2010, 2012](#); [Taylor, 2007](#)). In other words, citizens do not simply ‘accept’ the role governments assign to them and instead create their own ([Rosol, 2010, 2012](#)).

Others argue that spaces for CIs provide meaningful *opportunities for social learning* to occur (e.g., [Hasanov & Zuidema, 2018](#); [Sørensen & Torfing, 2018](#); [Taylor, 2007](#); [Visser, Van Popering & Van Buuren, 2021](#)). Such learning processes between governments and citizens, and among citizens themselves, enable a gradual but fundamental change in the ways governments and CIs interact. Hoppe and colleagues show that when local energy initiatives and local governments collaboratively experiment and innovate, both learn how CIs can best be supported ([Hoppe et al., 2015](#)). In addition, new social connections arise, fostering the transformative potential of CIs ([Proka et al., 2018](#); [Taylor, 2007](#)).

2.3. Toward a critical-constructive perspective

In our research, we synergize both perspectives described above and thus adopt a critical-constructive perspective. This is because the critical and constructive perspectives, although different, are not necessarily mutually exclusive, with both highlighting the diffusion of governments’ power throughout civil society. These viewpoints do, however, vary in the extent they concentrate on power and agency. The critical position is often criticized for its structuralist tendencies, treating power predominantly as a reified resource of a monolithic state, with little sensitivity to heterogeneity, resistance and agency. The constructive perspective, meanwhile, is often criticized as naive because of its focus on diversity, change and agency without any acknowledgement of the enduring structures of domination and (governmental) power that are in place (cf. [Bevir, 2011](#)). Consequently, we theorize that the two perspectives can enrich one another, taking as our point of departure the notion that both can be true at the same time, i.e., governmental power is reproduced in creating space for CIs while also allowing for the possibility of CIs to exercise power (cf. [Taylor, 2007](#)).

Employing the theory discussed above, we dissect different *possible explanatory mechanisms* for the opening or closing of spaces for CIs (see [Table 1](#)). Based on the theory, we expect that contradictory institutional processes, boundary definitions and a sense of responsibility will lead to the closing of spaces, while awareness of mutual dependencies, self-organizing capacities and social-learning processes will result in their opening. Nevertheless, how these mechanisms actually play out in practice remains unclear.

We therefore scrutinize empirically how, where, when and why spaces are opened or closed to CIs, using the mechanisms as sensitizing concepts without, a priori, taking for granted whether they are the cause of such opening or closing.

Table 1

Explanatory mechanisms derived from theory, functioning as sensitizing concepts.

Critical perspective – closing spaces to CIs	Description
Contradictory institutional processes	Constant process of both the decentralization of responsibilities to communities combined with the recentralization of political power.
Boundary definitions	Governments steer CIs by setting the rules concerning how, where, when and on what they can act.
Sense of responsibility	Governments return to business as usual.
Constructive perspective – opening up spaces to CIs	Description
Awareness of mutual dependencies	Governments realize they cannot solve contemporary wicked problems alone.
Self-organizing capacities	Citizens or communities are able to insert their own interests and agendas.
Social-learning processes	Opportunities for mutual social learning are recognized.

3. Method and data

In this article we discuss insights gained from our in-depth case study of the energy transition in Rotterdam (see case description below). The case study approach is employed here instrumentally, i.e., we seek to enhance our understanding of the relationship between the city’s government and specific CIs via more explanatory inquiries about ‘why’, ‘what’, ‘when’ and ‘how’ ([Crowe et al., 2011](#); [Flyvbjerg, 2006](#)). Within this method, this case has been selected as it can be considered an extreme case ([Yin, 2009](#)), which tends to provide the most information about the mechanisms underlying a phenomenon of interest ([Flyvbjerg, 2006](#)). The city government of Rotterdam is one of the frontrunners in the energy transition in the Netherlands, with an ambitious target. Moreover, the city government is very active in stimulating CIs via various policy programs and the city is characterized by the presence of a large number of CIs ([Rekenkamer Rotterdam, 2020](#)).

3.1. Case description: Rotterdam’s energy transition

The Netherlands faces a major challenge in the transition to a sustainable energy system. Most houses are heated by natural gas, and the delivery of natural gas is a privatized market, only the gas infrastructure is owned by public companies. A specific feature of the Dutch energy transition is its focus on reducing natural gas consumption due to the adverse effects of gas mining in the northern part of the country ([Bakema, Parra, & McCann, 2018](#); [Rijksoverheid, 2018](#)). In recent years, the Dutch government has been actively encouraging alternatives to natural gas for cooking and heating. In the privatized market, they do not have direct influence on these alternatives. Therefore, they are currently developing legislation and collaborate closely with homeowners and social housing associations to encourage them to shift to (more sustainable) alternatives to natural gas. One of the frontrunners in this transition is Rotterdam, the Netherlands’ second-largest city.

The city government of Rotterdam has selected five neighborhoods as pilot areas for experimenting with approaches to the transition to sustainable heating. In 2019, the city council agreed to (prepare to) disconnect 10,000 households from the gas network by 2030 ([Bokhove et al., 2018](#)), as well as to co-address related social, economic and physical issues as part of an integrated approach (see [Appendix A](#) for a summary per pilot area). The diverse pilot areas are considered to be an opportunity to not only learn about how to make the energy transition work in different contexts, but also to engage citizens in the energy transition process. For citizens, transitioning to an alternative energy source is voluntary, but possible only at specific points in time.

Given the size of the undertaking, tendering procedures must be followed whereby a ‘concession’ to deliver and exploit the energy

infrastructure is granted to one supplier. Some neighborhoods already have such a ‘concession’, while a process to this end is ongoing in others. The city-level plan and the neighborhood-level derivatives both emphasize the need for citizen engagement in the form of CIs (Minkman, Visser, Van Buuren, & Van-Popering, 2020).

3.2. Unit of analysis: citizen initiatives

The units of analysis in our case study (Crowe et al., 2011; Gerring, 2004) are CIs. In that sense, we could speak of multiple studies nested within the single case of Rotterdam’s energy transition. We studied all five CIs that were known to the pilot area’s municipal project team and that are actively and explicitly involved in the energy transition in the pilot areas. These five CIs showcase the broad variety of initiatives that aim to contribute to the energy transition. They range from initiatives from ‘expert citizens’ to ‘everyday makers’ (Bang, 2005), from initiatives in a developing phase to already in the phase of execution and form small to large-scale (see Section 4).

Conform the case study approach, we studied the CIs in their real-life context using multiple methods for collecting data (Yin, 2009): document analyses, (participative) observations, in-depth interviews and focus groups. This allowed us to triangulate the data (Flick, 2007). Data was collected from July 2019 to April 2020.¹ We conducted semi-structured interviews with key informants in the Rotterdam energy transition in this period: civil servants, the initiators of CIs, housing associations, energy companies, public-sector managers and an alderman. We also analyzed relevant documents such as (national and municipal) policy documents, marketing and communication strategies, reports from council meetings, (local) newspaper articles, information brochures and newsletters available to citizens, and neighborhood profiles. In addition, we observed various district council meetings, as well as meetings between civil servants and citizens, to get a better understanding of the interactions between civil servants and citizens. Finally, we organized several focus groups and held brief update sessions with the public-sector managers involved to discuss our preliminary results and interpretations, which allowed for respondent validation (Crowe et al., 2011). This longitudinal and multiple-method approach enabled us to acquire an in-depth understanding of the continuously changing dynamic between the local government and the five local CIs. Appendix B provides an overview of the data collection process. In the description and analysis of the cases, we use quote from the data. For each quote we indicate the organization to which the respondent belongs.

We analyzed and coded all the documents, transcriptions and reports using constant comparisons (Glaser & Strauss, 1967). The broad sensitizing concepts were used as heuristic tools that guided our analysis. This helped us to understand and code the data, identify meaningful similarities and differences, and develop theory (Blumer, 1954; Bowen, 2006). The first three authors did a first round of coding, assigning the sensitizing concepts to the data. All authors discussed the results of this coding round to ensure intercoder reliability (O’Connor & Joffe, 2020). A second round of assigning sub-codes to the data was performed. These sub-codes identify and give substance to the sensitizing concepts in more detail. They for example highlight *what* boundary definitions are set or *when* and *how* initiators were able to use their self-organizing capacities. The results of this second coding round were again discussed and codes were adapted where necessary.

Our coding approach can best be described as an iterative, circular process of moving back and forth between theory and data (Gerring, 2004); between sensitizing concepts derived from theory and unexpected dynamics and mechanisms that emerge from data. In doing this, we paid attention to the variations within and between the CI cases, focusing on their causes, effects and outcomes (Crowe et al., 2011).

Studying and comparing the five different CIs enabled us to make theoretical generalizations (Eisenhardt, 1989; Gerring, 2004), uncovering patterns and explanations that reveal the paradoxical attitudes of the local government toward the potential of CIs for stimulating urban vitality. Although the initiatives studied are all local to Rotterdam, they emerged from highly diverse neighborhoods. This means that patterns observed are more generalizable, at least within the Dutch urban context.

4. The cases and their invited spaces

In the five cases, the invited space for the CIs developed over time. In what follows, we examine how this occurred and provide a brief introduction to each case (see Table 2 for a summary).

4.1. Delfshaven Cooperative

The Delfshaven Cooperative is a CI that is funded by several partners, including the municipality and is involved in a variety of issues. One of these issues is the energy transition. The co-op supports the need for an energy transition while also stressing the importance of ensuring that the neighborhood community benefits.

The CI’s activities related to the energy transition started separate from the municipal process that was focused on district heating. The main message of the latter was the need to realize the energy transition using a bottom-up approach involving those in the local area. However, in reality, neighborhood organizations (including the CI in this case description) and citizens were simply informed about the decisions made and plans for district heating, with no room for exploring alternative options for energy production and consumption. The ideas developed by the CI about citizen-led energy initiatives were not discussed. This was due to a contract between the municipality and an energy company, as part of which the municipality agreed formally *not* to facilitate any options other than private district heating provided by this firm. Over time, the interactions and personal relationships between those involved in the CI and the municipality worsened. As they told us: “Many things were said, this led to distrust, there was no connection between those present and we all had different goals” (municipality); and “They were not transparent about their interests, and there was little trust” (CI).

This highlights a contradiction, whereby the municipal discourse stresses a bottom-up energy transition, but in practice the process for achieving this is centralized and separate from any involvement of the neighborhood. Boundaries were put in place by the municipality as part of this centralized approach, and these defined the matters in which (institutional) actors could, or could not, play a particular role. The demarcation of the municipal process, which occurred because of both the concession and the mutual distrust that was the result, led to the closing of the invited space for the CI with regard to the energy transition.

A few months later, the municipal professionals realized that the CI had an important role to play in the neighborhood and had strong political connections. This led to an exploration of whether relationships could be improved. Some new civil servants joined the team and the project leader participated in a training organized by the CI to become an ‘energy coach’. Since then, a more collaborative relationship has developed between the CI and the municipality, which is welcomed by both parties. The collaboration is particularly focused on the social opportunities that may arise from the energy transition. The municipality now supports the CI in its efforts to inform and educate the community, to organize community activities for buildings requiring renovation, and seek investment for installing solar panels on community buildings. The self-organizing capacities of the CI are thus recognized by the municipality, leading to a partial opening of the invited space. However, simultaneously, the municipality continued with its district heating plan in concert with a social-housing association and the private energy partner. The CI was still not part of this process.

¹ For practical reasons, one interview took place in December 2020.

Table 2
Summary of cases and invited spaces.

CI	Description of invited space mechanisms	Summary
1. Delfshaven Cooperative	<p>First closing because of:</p> <ul style="list-style-type: none"> the municipality's decision to opt for a formalized, centralized process, despite a bottom-up energy transition discourse. boundary definitions concerning actors and substance that determine who can participate and on what issues. <p>Later partly opening because of:</p> <ul style="list-style-type: none"> the strong, self-organizing capacities of the CI, which were recognized by the municipality. the continuation of the contradictory process relating to clear boundary definitions. 	<input checked="" type="checkbox"/> Institutional <input checked="" type="checkbox"/> Boundaries <input type="checkbox"/> Responsibility <input type="checkbox"/> Dependencies <input type="checkbox"/> Self-organizing <input type="checkbox"/> Social learning
2. Community Building Services Firm	<p>Simultaneously opening and closing because of:</p> <ul style="list-style-type: none"> the self-organizing capacities of the entrepreneur, which were the driving force at the start of the initiative (opening). boundary definitions (via centralized contracts) that determine who is a legitimate actor and lead to a focus on efficiency (closing). 	<input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Boundaries <input type="checkbox"/> Responsibility <input type="checkbox"/> Dependencies <input checked="" type="checkbox"/> Self-organizing <input type="checkbox"/> Social learning
3. Alex Energy	<p>Simultaneously opening and closing because of:</p> <ul style="list-style-type: none"> the recognition of opportunities for social-learning (opening). municipality doubts about the self-organizing capacities of the CI (closing). narrow boundaries on substance (closing). 	<input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Boundaries <input type="checkbox"/> Responsibility <input type="checkbox"/> Dependencies <input checked="" type="checkbox"/> Self-organizing <input checked="" type="checkbox"/> Social learning
4. Energy Cooperative Rozenburg	<p>Closing because of:</p> <ul style="list-style-type: none"> a sense of responsibility for, and the demarcation of, the concession procedure, leading to a focus on the internal process and no consideration of the community. 	<input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Boundaries <input checked="" type="checkbox"/> Responsibility <input checked="" type="checkbox"/> Dependencies <input type="checkbox"/> Self-organizing <input type="checkbox"/> Social learning
5. Neighborhood cookbook	<p>First opening because of:</p> <ul style="list-style-type: none"> the realization by the municipality that getting enough support for its plans makes it partially dependent on active neighborhood residents. clear boundary conditions that enabled the mobilization of budgets and a swift start of the initiative. <p>Later partly closing because of:</p> <ul style="list-style-type: none"> centralized budget and communication processes that hindered the execution of the initiative. the initiator's use of his self-organizing capacities to counter the (partial) closing of the invited space. 	<input checked="" type="checkbox"/> Institutional <input checked="" type="checkbox"/> Boundaries <input type="checkbox"/> Responsibility <input type="checkbox"/> Dependencies <input checked="" type="checkbox"/> Self-organizing <input type="checkbox"/> Social learning

4.2. Community building services firm

The community building services firm is established by a social entrepreneur. This initiative trains unemployed jobseekers in the neighborhood to install systems related to the energy transition, such as insulation and the connection to district heating (that the municipality wants to realize in this area). The initiative had contacted the municipality and the social-housing association to explore whether collaboration would be possible in the neighborhood's energy transition. The professionals from the municipality and the housing association were

enthusiastic and asked the initiative to insulate ten houses and to offer training to energy coaches in the area. The invited space was thus opened, with the self-organizing capacities of the social entrepreneur behind the CI as the driving force.

Nonetheless the goals of the community building services firm were to insulate significantly more than ten houses, to make the in-home changes required to district heating and, as a result, reduce unemployment in the area. However, neither the municipality nor the housing association wanted to further explore any large-scale collaboration, because of existing long-term contracts with a national building services firm and an agreement with an energy supplier that prohibited any cooperation with other (service) providers: *"We just can't give [the CI] more commissions"* (municipality); and *"We have so many houses to renovate, for that we need a bigger, well-established company"* (manager of the housing association). In this way, the centralized contracts ensured that the invited space was only open at the margins of the energy transition project, meaning that other parties could not make a more substantial impact.

4.3. Alex energy

Several residents interested in the energy transition, founded an energy co-op named Alex Energy (Alex refers to the name of the neighborhood). This co-op organizes various activities, such as the provision of free advice on insulation, training for energy coaches and other events to encourage more residents to get involved in the energy transition process. Alongside these activities, they had contacted the municipality to explore whether they could have a role in the heating solution designated for the area. The municipality and CI both identified opportunities for learning from and inspiring the other. The municipality responded by providing financial and commercial support for a large 'kick-off' event organized by Alex Energy. Thus, the opportunity for social learning was recognized. The CI received a lot of municipal support for its events and activities in the neighborhood, leading to the opening of the invited space.

Simultaneously, the municipality had reservations about involving the CI in the district's heating plan. There were several reasons for this. Some interviewees mentioned the narrow boundaries relating to the procedure for granting a concession to an energy supplier (which had not yet happened in this neighborhood, although multiple parties were interested): *"Because of the processes for the concession, I can't collaborate with the CI at this point, that's not allowed"* (municipality). The municipality also had doubts about the organizational capacity of the CI: *"Heating houses really differs from insulation and solar panels, you need a solid organization for that"* (municipality). According to the CI: *"The municipality doesn't want to talk to us, because they're only focused on meeting their own targets, they aren't used to working with new initiatives like us, so they find us annoying"*. Here, the invited space was not only opened, but also closed; the CI was permitted and supported to exist alongside the municipal process without being involved in it.

4.4. Energy Cooperative Rozenburg

In Rozenburg, several residents were interested in the energy transition and wanted to establish an energy co-op. They therefore contacted the municipality and the local social-housing association about their ideas. The latter was very enthusiastic and supported the CI. Together, they informed residents about their plans and contacted other CIs to learn from their experiences. The municipality, however, was too busy with (internal) problems in starting the pilot project and was instead developing plans to grant a concession to an energy company for district heating (which was not yet done for this neighborhood): *"The municipality is busy with its own process, to put it politely"* (CI); and *"As a municipality, we don't know what to do with the initiative yet"* (municipality). Consequently, there has been no collaboration with the co-op. The municipality felt responsible for the energy transition process and first

wanted to determine how to organize the formal procedure for granting the concession. This sense of responsibility and the boundaries of this formalized procedure produced an internal focus and led to Energy Cooperative Rozenburg being ignored, closing the invited space to the CI. The housing association has, however, attempted to compensate for this by strongly supporting the initiative and going ahead with its process alongside that of the municipality.

4.5. Neighborhood cookbook

A resident in one of the pilot areas wanted to produce a neighborhood cookbook to celebrate and bring together the diverse cultures in the neighborhood. Although this initiative had originally no connection to the energy transition, when the municipal project manager heard about the idea, she saw it as an opportunity to create enthusiasm for transitioning from cooking on gas to electricity. She therefore contacted the initiator to ask whether he would be willing to produce a cookbook in cooperation with the municipality. The manager was able to mobilize financial means from the project budget to finance the cookbook. Clear conditions were agreed: the initiator would create a recipe book with other residents to promote cooking only with electricity. The CI was responsible for providing the contents of the book and organizing the accompanying cooking sessions, while the municipality would finance the printing costs, hire an editor for final revisions and obtain the copyright.

The resident behind the CI was initially happy with the collaboration with the municipality. Although he “*didn’t care about the energy transition at all*” (CI), he saw it as an opportunity to get his book published and celebrate cultural diversity. The project manager realized that she needed the initiator in order to gain support for the municipality’s energy plans, opening up the space for the initiator to insert his own agenda. However, the invited space was partly closed again during the process, with the CI becoming bogged down in centralized budget processes; for example, the municipality was unable to contribute financially toward the purchase of the groceries required for cooking, meaning that the CI had to identify additional sources of support via different routes, causing frustration and delay. Moreover, the municipality’s editor wanted to revise the text substantially to make it fit with the municipal communication style. The initiator was not amused about this move and threatened to withdraw. In the end, after a struggle and mediation arranged by the project manager of the municipality, the editor agreed to a compromise and the book was published.

We summarized the cases in Table 2. For each case we describe the identified mechanisms that influenced the opening or closing of invited spaces. They are summarized using the sensitizing concepts.

5. Cross-case patterns

Following our examination of the individual cases, and the opening and closing of their invited spaces, we now present the results of our cross-case analysis. This involves the identification of patterns in the explanatory mechanisms derived from our theory, as well as what this means in practice for CIs.

5.1. Social learning

The first mechanism to explain the opening or closing of invited spaces to our five CIs is social learning. Those involved had multiple opportunities for this to occur, with different actors learning together and developing new skills and ideas. Social learning in our cases was identified as a mechanism for opening up invited spaces. However, this only occurred if the links between a CI and the municipality were well organized. The infrastructure for such social learning was largely absent in our cases. The invited space for Alex Energy, for instance, was slightly open at the start, motivated by a mutual desire to learn. Nonetheless, as time passed, the processes of the initiative and the municipality

developed in parallel and the attention for social learning vanished, resulting in the closing of the invited space. The case of the Delfshaven Cooperative demonstrates that it is never too late to develop the relationships required for social learning. Initially, social learning in this example took place separately; the municipality learned within its own process, while the CI did so alongside the municipality and with other partners in the neighborhood. The decision of the project manager of the municipality to participate in the CI’s ‘energy coach’ course improved the learning relationship. As a consequence, the parties started to understand and respect the other’s perspectives and activities, putting the CI in a better position within the municipal process and causing a partial reopening of the invited space.

Overall, examples of learning could be found in all the cases, but true social learning, based on the interactions of different institutional and non-institutional actors, was limited. It thus seems clear that a shared infrastructure for social learning is a necessary condition for the opening of invited spaces.

5.2. Self-organizing capacities

The second mechanism concerns self-organizing capacities. We found this mechanism in the cases of the Delfshaven Cooperative, the neighborhood cookbook, the community building services firm and Alex Energy. In the latter two cases, doubts at the municipality about the efficiency and ability of the relevant CI to self-organize led to the closing of invited spaces. In all these cases, the CIs had to utilize their capacities to stretch the boundaries of the invited space and ensure the incorporation of their own agenda. This was only successful for initiatives and activities that, at least to some degree, overlapped with the municipality’s agenda. Accordingly, CIs not only need a strong agenda that reflects their interests and demonstrates their capacities, but must also propose something that fits well enough within the municipality’s agenda. The capacities of the social entrepreneur who started the community building services firm, for instance, meant that she was able to insulate several houses and offer training to energy coaches. However, the agenda of this CI, combining the energy transition with the issues of unemployment, did not fit within the municipality’s agenda focused on realizing the heating district quickly and as cheaply as possible. As a result, the invited space was closed in relation to this part of the initiative.

In summary, self-organizing capacities can affect both the opening and closing of invited spaces. The key dynamic observed here is the need to strike a balance between linking CIs to existing agendas and plans on the one hand and, on the other, deviating from them by introducing alternative proposals.

5.3. Awareness of mutual dependencies

Our cases also underlined the importance of a third mechanism in relation to the opening and closing of invited spaces: awareness of mutual dependencies. Municipal policy documents revealed a strong appreciation that achieving the goals of the energy transition depends on citizens supporting them; for example, residents need to be willing to pay for some of the required investments and to move away from the use of natural gas for cooking and heating. Surprisingly, this awareness seemed to be missing in the implementation of the policy. In practice, the municipality materialized their dependency on citizens by only investing in communication and social marketing. Meanwhile, other dependencies (financial, acceptance of other technologies for cooking and heating, local knowledge) remain unacknowledged and, as a result, unaddressed.

This lack of awareness of mutual dependencies predominantly led to the closing of invited spaces to CIs, since the municipality assumed that they could succeed without help of CIs. In all the cases, the narrow construction of dependency put residents in the role of promotor or “*accomplice*” (member of the district council) of the municipality.

Citizens, both informal and formal neighborhood representatives, organized in initiatives or not, were rendered responsible for galvanizing other citizens and gaining the necessary support for the municipality's plans. They did not, however, have any opportunity to question these policies. The neighborhood cookbook, for example, was supported because it would encourage people to cook with electricity, positioning its creator as an 'ambassador' for the municipality's plans. Accordingly, despite a discourse of active citizenship and an initial apparent recognition of dependencies, residents were de facto primarily seen and treated as choosers and users (cf., Cornwall & Gaventa, 2000).

5.4. Boundary definitions

Boundary definitions proved to be extremely important for the opening and closing of invited spaces. The cases demonstrated that these definitions concerned two elements: actors and substance. Actor boundary definitions prescribe who is considered a legitimate actor and is thus allowed to participate in the process. Substantive versions, meanwhile, set out the kind of topics and alternative solutions that can be addressed as part of this process.

In all the cases it was clear that the issue of the substantive boundary was framed by the dominant actors – the municipality, housing associations and energy companies – who thus defined the contours of what was up for discussion. The issue was framed very early in the municipality's processes as a goal of connecting houses to a district heating system in a manner that was both "*feasible and affordable*". Accordingly, the choice of a district heating system that was the "*best possible alternative*" became an influential boundary definition determining which options could be considered. This discursive closure meant that the dominant knowledge, perspectives and opinions of local governments, housing associations and energy companies were legitimized, maintaining their hegemony.

In four of the cases, the actor boundary definitions led to the (partial) closing of invited spaces. In some, these boundaries were formalized; for instance, the municipality did not want to cooperate with the CI because this was not allowed in the concession it had already granted (as observed in the case of Delfshaven Cooperative) or there were centralized contracts in place that left no room for the involvement of a CI (in the case of the community building services firm). Even in the cases where formal boundary conditions were absent, for example because the concession had not yet been granted, informal boundary definitions were used to argue against the opening of spaces to CIs. This was the position in the neighborhoods that birthed Alex Energy and the Rozenburg Cooperative, where the municipality did not want to cooperate with the CI because of a concession procedure that had yet to start. In these cases, provisional boundary definitions were adopted that were guided by an excess of caution.

In short, both substantive and actor boundary definitions limit the opportunities for CIs to truly engage in discussions with municipalities about the energy transition, meaning that spaces are closed to them. In both boundary types, there is a focus on legal and contractual pre-conditions, making any openness to CIs impossible.

5.5. Sense of responsibility

In all cases we observed that – despite the ambitions and rhetoric – the municipality tended to return to 'business as usual', i.e. top-down controlled processes with a focus on technocratic solutions and efficiency. This was motivated by a 'paternalistic' vision; the municipality wanted to do what was best for its residents and assumed that it knew what this was. This fifth mechanism, then, is rooted in a perceived urgency to, affordably, move as many households as possible away from using natural gas at home.

This ultimately led to the rejection of the views and plans of the CIs. Contrary to claims in the literature that governmental control reflexes result in co-optation (Cooke & Kothari, 2001; Cornwall, 2004), in most

of our cases it led to initiatives being kept at bay. In the case of Energy Cooperative Rozenburg, the municipality first wanted to fully develop its own plan and, through this, offer residents a clear solution. The CI was not involved in developing the plan and was asked to wait with actions until the official policy was ready. Another example is found in the almost identical trajectories set up by Alex Energy and the municipality: instead of working with the CI by merging activities, the municipality continued along its own, controlled path.

This paternalistic sense of responsibility led to the closing of invited spaces. It generated a control reflex expressed in the municipality's focus on their own internal processes. In addition, this sense of responsibility triggered a focus on efficiency and manageability, leading to the doubts about the capacities of CIs, as discussed above.

5.6. Contradictory institutional processes

Finally, the influence of contradictory institutional processes was apparent as a sixth mechanism. In the municipality's discourse, the entire energy transition program is presented as a decentralized model, with the emphasis on a bottom-up approach and local communities taking the lead. In reality, however, this discursive framing of the municipal approach was in stark contrast to its implementation in practice. Paradoxically, power and control – for example, in the form of finance, concessions and contracts – were organized centrally. So, while, on paper, citizens are ascribed an active role and rendered responsible for the energy transition, our observations highlighted practices that reproduced the dominant power structures.

This dynamic was visible in all our cases. For example, the efforts of the CI that wanted to develop a community cookbook became bogged down in the centralized marketing strategy of the municipality. Meanwhile, other citizens who wanted to start an energy co-op and deliver sustainable heat to homes in their area (Alex Energy, Delfshaven Cooperative, Cooperative Rozenburg) found obstacles in the centralized concessions. This ultimately led to disappointment and frustration for the community initiators involved.

In short, the bottom-up discourse initially seems to open up spaces to CIs because of the active role ascribed to communities. However, when their plans are developed further, the CIs get stuck in the logic of a formalized, bureaucratic and centralized process.

5.7. Mechanisms as configurations

Often, an interplay of mechanisms explains why spaces are opened or closed to CIs. Moreover, some mechanisms do not just facilitate opening or closing, but may do both depending on which conditions are met. For example, the municipality questioned whether Alex Energy and the community building services firm were capable of contributing to policy targets, and the project managers and housing associations argued that established partners were better equipped to meet the challenges ahead. Consequently, this explanatory mechanism is connected to 'awareness of mutual dependencies' as well as 'self-organizing capacities.' A strong 'sense of responsibility', meanwhile, goes hand in hand with a lack of acknowledgement of the skills of citizens and a hesitancy to rely on them, resulting in CIs being dismissed as legitimate actors in the process.

Processes of social learning can help build mutual trust, improve the self-organizing capacities of CIs (especially when public authorities learn how to complement their resources and capacities), and lead to the detection and exploitation of mutual dependencies (Sørensen & Torfing, 2018). In our cases, such a social learning process was severely constrained and did not get the opportunity to mature. The institutional pressure to stick to predefined goals and act within the boundaries of what is formally allowed was simply too strong.

6. Conclusion and discussion

This research set out to better understand the paradoxical attitudes

of local governments toward the potential of CIs for stimulating urban vitality, by unraveling the mechanisms that explain the opening or closing of spaces to citizen initiatives in the energy transition. This was achieved via an in-depth case study conducted in Rotterdam, where the interactions between the local government and several CIs were monitored for nearly a year.

The image that arises is that of a municipality that attempts to restrict the invited space. This image is in sharp contrast to the rhetoric of this government emphasizing the opening of spaces for CIs. We observed that the interplay between the identified explanatory mechanisms led to the *domestication* of CIs: they are restricted to ensure that they fit the agenda of the municipality and do not interfere with or otherwise hinder its policy plans. In this way, the unique transformative potential of CIs to contribute to the vitality of cities is undermined. The municipality of Rotterdam makes the claim that there is an open invitation to citizens, but instead of unleashing CIs to help accelerate and broaden the energy transition in the city, the municipality keeps the leash very short.

Instead of a wide-open invitation to CIs to get involved, they are expected to maneuver a narrow invitational window created by the municipality. By restricting the invited space, CIs are tamed to fit within the fragmented mold of the system world, impeding CIs' potential to bring about institutional change via integrated approaches. Even if those involved in a CI are able to tread the narrow line between their own interests and fitting within the municipal agenda, they are nevertheless not really granted a seat at the decision-making table. Rather, they are 'allowed' to develop activities at the margins of the energy transition – like organizing social activities – without enabling CIs to fundamentally challenge the technical and financial aspects of the dominant energy system – like providing alternative energy sources or financial benefits for the community. The domestication of CIs leads to business as usual, with the government remaining in the driving seat. It is up to future research to empirically examine whether and how similar domesticating tendencies are visible beyond the energy domain and in different (non-)urban, (non-)Dutch contexts.

We uncovered some mechanisms that opened up the space to CIs. However, in all these instances, we also noted that the rather pragmatic and instrumental stance of the municipality toward CIs continued to dominate. When the municipality was aware of its dependency or was confident about the self-organizing capacity of a CI, and when the agenda of the CI was sufficiently congruent with the municipal agenda, the invited space was opened up. This openness can be fostered by a process of social learning in which there is a sense of reciprocity and mutual acknowledgement, for example by organizing 'community of practices' or by embedding academic research in the transition projects that produce learning infrastructures. Nonetheless, in our cases, even this kind of openness remained rather confined within the boundaries set by the municipality.

Regarding initiatives that fundamentally challenged the municipal process and plans, for example by proposing an alternative to the district heating system, the narrow boundary definitions closed the space available for their development. A key question arises from this: How much room do initiatives get to incorporate their own, alternative, agendas, perspectives, knowledge and ideas? In our cases, this space was very limited. Nonetheless, creators of CIs can, and do, try to expand that space using their strong self-organizing capacities. Over time, we saw a constant negotiation over the boundaries of the invited space, indicating that invited spaces are not simply 'given' but the results of ongoing, dynamic and social processes (Visser et al., 2021). However, to (re)vitalize cities, initiators have to be (come) powerful enough to not only enter the invited space, but to also claim it (Gaventa, 2006).

We identified at least two important factors behind the various mechanisms that lead to the closing of invited spaces. First, we observed a strong focus by the municipality on achieving policy goals that had received formal approval (a certain number of houses disconnected from the gas infrastructure within a particular time-frame). This led to a project-oriented and performance-driven approach, where the municipality sought to rely on strong, institutionalized partners instead of the rather informal CIs. As a result, the municipality fell back in their routines of a traditional performance-oriented management style, bureaucratic risk aversion and a focus on legality and legitimacy (Nederhand, Klijn, Van der Steen, & Van Twist, 2019). Moreover, a key aim was maintaining the focus strictly on the most efficient and simple solution, without complicating the process with other, more integrated and thus more complex, options propagated by CIs. This seriously limits the space for CIs and contributes to their domestication.

In this study, we interpreted the city as a vital entity, characterized by complex, dynamic social processes. By adopting a critical-constructive perspective, we are able to understand the seemingly contradictory attitudes of (city) governments toward CIs and the implications for the vitality of cities. Using explanatory mechanisms derived from both critical and constructive literature, enabled us to show how the municipality of Rotterdam stimulates CIs while simultaneously holds on to its position of power in determining the course of action taken for the energy transition.

The results of our research call for a nuance of the current popular discourse that the trend of stimulating CIs represents a democratizing force, shifting 'power to the people'. Our research shows that governments reproduce their power through the domestication of CIs. However, CIs do not simply accept their role as 'tool' of governments. They find ways to practice resistance and agency, trying to transform the system world by bringing in the life-worlds of citizens and via that to foster the vitality of cities as it is lived by citizens. Our study therewith highlights the value of a combining a critical and constructive perspective, instead of seeing them as contradictory and, therefore, mutually exclusive. Combining both perspectives better reflects the complex reality with a continuous configuration of power and agency in the relation between (city) governments and CIs.

CRedit authorship contribution statement

Vivian Visser: conceptualization, investigation, formal analysis, writing original draft, writing review and editing, validation.

Jitske van Popering-Verkerk: investigation, formal analysis, writing original draft, writing review and editing, validation, project administration.

Ellen Minkman: investigation, formal analysis, writing original draft, validation.

Arwin van Buuren: writing original draft, validation.

Declaration of competing interest

The authors declare no conflict of interest.

Data availability

The data that has been used is confidential.

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No.

Appendix A. Pilot area characteristics

	Bospolder-Tussendijken	Heindijk + Reyeroord	Pendrecht	Prinsenland-Het Lage Land	Rozenburg
Socio-economic context	Multi-cultural neighborhood with relatively low social and economic capital; strong social cohesion.	Old apartments and new low-rise buildings; average economic capital and slightly less than average social capital.	Multi-cultural and green neighborhood with low social, cultural and economic capital.	A green, yet increasingly urbanized, neighborhood with relatively high social, cultural and economic capital.	Village with relatively high social and economic capital; strong social cohesion.
Ownership of buildings	Mostly owned by a housing association.	Mix of private rentals, private property, and homes owned by the housing association.	Partly owned by a housing association, partly private property.	Partly owned by a housing association, partly private property.	Partly owned by a housing association, partly private property.
Concession granted for district heating ^a	Yes	Yes	Yes	No	No
Social, economic and physical issues co-addressed	<ul style="list-style-type: none"> • Unattractive real estate and outdoor space • Unsafe 	<ul style="list-style-type: none"> • Divide between old and new residents • Transforming the outdoor space 	<ul style="list-style-type: none"> • Poverty and unemployment • Unsafe 	<ul style="list-style-type: none"> • Divide between old and new residents • Mobility 	<ul style="list-style-type: none"> • Increasing unemployment • Aging population
Citizens' initiatives	<ul style="list-style-type: none"> • Delfshaven Cooperative • Community building services firm 	<ul style="list-style-type: none"> • Neighborhood cookbook 	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Alex Energy 	<ul style="list-style-type: none"> • Energy Cooperative Rozenburg

^a The right to provide district heating in this area has been granted to a single energy supplier.

Appendix B. Data collection

Interviews and observations - Delfshaven Cooperative and the community building services firm	
9 July 2019	Observation of district council meeting
30 August 2019	Project manager of municipality
3 October 2019	Project manager of municipality
13 November 2019	Neighborhood manager of municipality
18 February 2020	Managers of housing association
19 February 2020	Manager of energy company
20 April 2020	Initiator of the Delfshaven Cooperative
16 June 2020	Project manager of municipality
Interviews and observations - Alex Energy	
16 July 2019	Observation of district council meeting
12 November 2019	Project manager of municipality
15 November 2019	Neighborhood manager of municipality
10 January 2020	Initiator of Alex Energy
3 February 2020	Observation of Alex Energy meeting
19 June 2020	Project manager of municipality
Interviews and observations - Energy Cooperative Rozenburg	
17 September 2019	Project manager of municipality
8 October 2019	Neighborhood manager of municipality
12 November 2019	Observation of district council meeting
3 February 2020	Manager of housing association
28 February 2020	Initiator of the Energy Cooperative Rozenburg
17 June 2020	Project manager of municipality
Interviews and observations - neighborhood cookbook	
20 September 2019	Project manager of municipality
16 October 2019	Neighborhood manager of municipality
25 November 2019	Observation of home visits
14 December 2021	Initiator Neighborhood cookbook

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