

Social sustainability for whom? Developing an analytical approach through a tripartite collaboration

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Abstract

Purpose – Social sustainability is a concept frequently referred to in public debates concerning how to construct the governance of future societies. The interpretations of its meaning, however, are ambiguous, and practices often dubious. Confronting top-down technocratic governance structures, this paper aims to argue for for tripartite collaborations between residents, higher education institutions (HEIs) and local government, as an approach toward social sustainability that involves residents' interests in local governance.

Design/methodology/approach – This study argues that a specific time-spatial method of analysis can benefit the co-creation of knowledge as it passes through the spectrum of resident–HEI–local government. It provides a way for resident perceptions to become structured knowledge that originates from the residents, effectively engendering a bottom-up governance structure.

Findings – This study shows how to include residents in policymaking and implementation processes as co-creators of knowledge, and thereby displays the possibility of examining knowledge and competence within municipal projects for social sustainability.

Originality/value – The model developed in this study can be used as a methodological instrument to analyze and expand resident participation in local social sustainability work. It thereby provides a toolbox for inclusive policymaking and strategies.

Keywords Work-integrated learning, Social sustainability, Tripartite collaboration, Time-spatial method of analysis, Co-creation of knowledge, Governance

Paper type Research paper

Introduction

Since the launching of the Brundtland Report *Our Common Future* (1987), sustainable development has become a widespread motto that “is increasingly being presented as a



pathway to all that is good and desirable in society” (Holden *et al.*, 2014, p. 130). In contemporary Sweden, the concept of social sustainability – as a part of *Agenda 2030* – has become an idiom of public discourse, and both public and private actors appear to allow it to permeate their daily activities. However, Ström *et al.* (2017, p. 5) suggest that the importance of social sustainability is downplayed in Swedish urban planning, and thereby it runs the risk of being just another catchphrase should it neglect to (actually) be socially sustainable.

Set in a larger context, this can be related to conflicting understandings and illustrations of how, and through which processes, social sustainability becomes a part of urban planning and development: bottom-up or top-down and the possibilities (and possible advantages) of combining the two. There are many examples of how resident participation has been used and developed and how this has led to bottom-up perspectives being included in urban development (Arnstein, 1969; Forrester, 1988; Innes, 1989; Smith, 2009; Healey, 2010; Hajer, 2011; Brandellero and Niutta, 2023). This shows the possibilities of including resident perspectives both in large- and small-scale urban planning projects and the possibility for them to co-exist with the often inevitable top-down perspective. This article aims to add to the growing list of methods for ensuring real and not-just-token resident participation when striving for social sustainability in urban development.

Because there is also the other side. Despite benevolently expressed intentions to include “the people” in participatory processes that stand to foster a social sustainability that is truly socially sustainable, the development toward such a political reality can be constrained by top-down technocratic organizational structures that continuously institutionalize the concentration of both policymaking and implementation to a rarefied elite (Hajer, 2003; Levine, 2017; Hanson, 2018; Tam, 2018; Anciano and Piper, 2019). This “technocracy” is largely preceded by a positivist research philosophy that materializes in methods applied to problem-solving that seek to generalize the particularities of social life, commonly by means of “aggregated data sets that are used to suggest and implement general sustainable development policies and strategies of an instrumental character” (Assmo, 2015, p. 17). So, while recognizing the possibilities for bottom-up perspectives, it is equally important to recognize the problems that top-down structures may inflict. Therefore, at the same time as developing a method to ensure the presence of bottom-up perspectives, this article recognizes that to do so, the method must be able to deal with and co-exist with the simultaneous existence of top-down logic and structures.

The particularities of social life are complex to an extent that stretches beyond perceptions of universality (Scoones and Thompson, 1994; Hajer, 2003; Humphreys and Stober, 2014). Thus, rather than seeking to generalize the particular – and rather than reinforcing institutionalized top-down policy implementation processes – a holistic perspective that takes the specific needs and prerequisites of the individual into account appears more likely to support social sustainability in becoming progressively socially sustainable.

Understanding social sustainability in this way is an approach that would presumably be facilitated by collaborations in some form. This article argues that collaboration lies at the center of the development of social sustainability. Specifically, the aim is to argue for work-integrated learning (WIL) and a particularly elaborated time-spatial method (see Assmo and Wihlborg, 2016; Wihlborg and Assmo, 2014; Assmo, 2015; Karlsson *et al.*, 2022) as useful tools in the strive toward social sustainability. This should be understood as connected with – as well as adding a proposed model of analytical practice to – other research in the field of co-creation of knowledge and learning as a tool to understand and develop social sustainability in local contexts, such as Beers *et al.* (2003), Edwards (2009), Benn *et al.* (2013), Ropes *et al.* (2020), Brandi and Thomassen (2021) and Olafsen *et al.* (2021).

In Sweden, municipalities are encouraged to collaborate with actors from the surrounding community on sustainability development (SoU, 2019). At the same time,

Swedish higher education institutions (HEIs) are mandated by the Swedish Higher Education Act to collaborate with the surrounding society. Related to this context, the specific research question of this article is how a method for a tripartite collaboration between a municipality, its residents and a HEI toward social sustainability can be developed and used. To further contribute to the field, this question includes how WIL and a time-spatial perspective can be used to create a base for resident participation and further tripartite collaborations emanating from a learning process involving perspectives from different stakeholders. In the article, we use a project in Trollhättan municipality, Sweden, as an illustrative example. However, it is not this example in itself that is the focal point of the discussion, but the model of creating resident participation and the method of analysis developed in congruence with it.

Seeking to create a foundation for the continued discussion, the focus is now turned toward theories of resident participation and what the possibilities of WIL are in this context, including WIL as a method of workplace learning through the co-creation of knowledge.

Conceptual discussion of resident participation and work-integrated learning as collaborative forms of knowledge creation

Democracy as resident participation in collaborative governance processes is by no means a revolutionary idea. It dates back to the early times of Athenian democracy. It was Rousseau, however, followed by J.S Mill and G.D.H Cole, who initially theorized its importance for the sustainability of democracy (Wolfe, 1985, p. 371). More recently, however, Docherty *et al.* (2001, p. 2225) have suggested that:

The current ascendancy of citizen participation in urban governance can be seen as a response by governments and citizens to a simultaneous crisis of confidence in the ability of the state and the market to create socially cohesive and economically successful cities. The roles of the state and the market need to be complemented, it is argued, by citizen participation beyond the ballot box.

Thus, in a practical sense, citizen participation has over the past fifty years materialized, for example, in the form of “assisting to reveal or resolve controversial town planning issues and for tackling the complex problems of urban decline [. . .] as a necessary component of public service delivery at local level, with models of participation varying from customer complaints procedures through consultation to consumer control of services” (Docherty *et al.*, 2001, p. 2226). With participation taking this form, as “governance evolved to the co-creation and co-production with the active help of citizens and partner organisations” (Correia *et al.*, 2023, p. 1), it is argued that the democratization of governance is evolving and that the empowerment of the populace is increasing.

Yet, the suggested benefits of participatory governance have also been called into question. Koch (2013, p. 2978) points out that its potential benefits are facing challenges such as “social selectivity”, i.e. participation is commonly a consequence of social features such as “education, wealth, gender and language skills”, and issues of the transformation of outputs, as “there are fundamental gaps between the way public administrations comprehend local issues and the way citizens perceive and articulate local problems”. Similarly, Hanson (2018, p. 158) claims that “rather than empowering residents” participatory processes can restrain the empowerment they seek to engender as the participatory prerequisites, for example unrealistic levels of attendance and other “bureaucratic barriers”, run the risk of being close to impossible to achieve and manage, whereas Levine (2017, pp. 1155–1156) proposes that the idea of residents’ influence through participation in political processes is predominantly illusory. Especially so when society’s lower strata are invited to participate. Officially applauding resident participation, representatives of the authorities tend to resort to

abstract idealizations of communality when resident interests are in discord with what the authorities have *de facto* decided upon in advance, hence making “residents appear empowered as members of “the community”, but in effect have little influence”.

So, participatory democratic processes appear to be low-functioning and hamstrung by the “top-down” technocratic institutionalism that they seek to challenge and reform. [Monno and Khakee \(2012, p. 98\)](#) suggest that at the local level, authorities “prefer to restrict participation to information and consultation without any assurance that citizens’ concerns and ideas shall be taken into account” and “that local authorities are willing to support participatory activities as long as they do not result in vehement opposition to or obstruction of political decisions”. [Anciano and Piper \(2019, p. 12\)](#) highlight an even harsher version. Rather than an increasing distribution of political influence among the populace, there has been an “increasing concentration of urban power in the hands of a few political and business elites”. This alliance has further fostered a situation where the relationships between elected and electee are characterized by “patronage, clientelism, prebendalism, and neopatrimonialism” (2019, p. 13).

Does all of this indicate that resident participation is doomed to be a failed endeavor? Not necessarily, since the prospect of engendering fruitful public participation is commonly dependent on how such processes are organized ([Casula Vifell and Soneryd, 2012, p. 18](#); [Koch, 2013, p. 2989](#)). The organization of participatory governance can be structured in several ways, for example through workshops ([Correia et al., 2023, p. 3](#)), randomly selected assemblies ([Smith, 2009, p. 72](#)) or consensus conferences ([Koch, 2013, p. 2981](#)).

[Holden \(2012\)](#) illustrates how participatory municipal governance – to a higher degree than regional and national governance – can be organized around the concept of social sustainability. In her study, participatory governance and social sustainability are intertwined concepts that function as “process-oriented” and “outcome-based”. Social sustainability, it is said, “becomes a practice of maintenance, the establishment of social arrangements that enable democratic politics to remain in balance” (2012, pp. 531–532).

Such an understanding of governance gives residents a voice that brings them closer to government, which increases the potential for bottom-up socio-political development to materialize. It contains the potential to become “co-production [...] between government agencies [...] and citizens” ([Geurtz and Van de Wijdeven, 2010, p. 533](#)), which in turn suggests a potential for actors within both spheres to develop and harmonize their goals through “participation in practices and action where knowledge is acquired by social activities” ([Du Chatenier et al., 2009, p. 352](#)). So with regards to a collaboration on the relationship between residents and municipal governmental institutions: “How is local democratic rule experienced? Ask the residents of the city” ([Anciano and Piper, 2019, p. 20](#)).

This can be done in several ways. With regard to academic involvement in participatory processes, there exist such research approaches as Participatory Action Research (see, for example, [Eklund Karlsson et al., 2019](#)) and Community-Engaged Teaching and Learning (see, for example, [Willness et al., 2023](#)). WIL represents another such approach.

WIL can be understood as a pedagogical philosophy, a pedagogical method and a field of study. As a pedagogical philosophy, it understands the integration of theoretical and practical knowledge as creating more advanced forms of knowledge, which create a focus on collaboration and co-creation. As pedagogical methods, WIL is understood as specific practices used in higher education, also focusing on the integration of theory and practice represented by “various forms of experiential and practice-based learning, including internships, cooperative education, work placements, clinical practise, and industry-based and community-based projects” ([Zegwaard et al., 2002, p. 2](#)). As a field of study, WIL is

understood as research on such practices, but also on wider contexts of learning and knowledge processes.

Historically, the understanding of WIL has been quite narrow. For example, *The International Journal of Work-Integrated Learning* (2022) places a strong emphasis on the presence of higher education students in their definition, proposing that “defining elements [...] must involve three stakeholders: the student, the university, and the workplace/community”. In this article, however, we argue that learning as a work-integrated activity extends beyond the pedagogy of student learning.

At University West (UW), Sweden, the definition is wider and includes all three aspects mentioned above. Here, WIL as a field of study is exemplified in the following way:

[...] learning is understood in its broadest sense and includes change and socialization processes linked to knowledge and competence. There is a focus on working life and learning conditions, organization, processes, content, forms and consequences. Research in this subject area includes, but is not limited to, work in transition, the relationship between education and work, as well as social conditions for learning through working. The focus of one's studies can be on individuals, groups, organizations, mechanisms, or structures (University West, 2022, p. 1).

Collaboration lies implicit within the content of both above-presented definitions and is a core facet of WIL activities (see, for example, Cameron *et al.*, 2020; Venville *et al.*, 2021). Yet, within UW's definition, a further possibility to use WIL as a professional research approach for collaborations within working life is opened. It is made possible to bypass the university student as a stakeholder and undertake, for example, collaborative community-based projects as knowledge-creation processes. This is how it is understood in this article. We illustrate how WIL, as a form of co-creation and collaboration, can be used to qualitatively enhance resident participation in municipal governance. This illustration is also an example of a learning process in a working life environment.

As our interest lies in the reinforcement of residents' voices through bottom-up approaches within participatory governance, we have seen that there are many obstacles that can potentially stand in the way. However, organizing participatory governance with a WIL approach, with a HEI collaboratively examining its processes and development, is one potential way of making participatory governance socially sustainable. That being said, there is a need for methods that allow the voices of the residents to be transformed into structured suggestions for the authorities to work with. This is our subsequent concern.

A time-spatial method of analysis

Context and method of data collection

Projects concerning social sustainability commonly address social challenges of different kinds. Thus, they seek to foster social change (Nyseth *et al.*, 2019, p. 9). Social challenges, however, present themselves in different contexts in time and space. It is important, therefore, to take into consideration “[...] that (social) development needs to be framed, filled with content, and interpreted from time to time and place to place” (Boström, 2012, p. 11).

An example of a contemporary social challenge that draws frequent attention is segregation. It is also what lies at the foundation of the example in this article. Trollhättan Municipality (TM) one of Sweden's most segregated communities (Börjesson, 2018). This situation is one that the municipal authorities take seriously and seek to address. The principles that guide the striving for a more integrated community are manifest in TM's four-point social sustainability strategy (Trollhättans Stad, 2022, p. 7):

Trollhättan is a viable community, where residents' parity, psychological and material welfare, and gender equality facilitate a balanced development of the community.

Residents feel involved, have equal opportunities regarding education, employment, and have an acceptable economic situation.

Trollhättan has an including disposition, where the community's institutions adjust in accord with the requirements and prerequisites of the residents, aiming to negate exclusion and discrimination.

All people have equal value, with equal opportunities to be collaborators of societal development, regardless of gender, gender identity or expression, ethnic or religious inheritance, functional disabilities or variations, sexual orientation or age.

Inherent in these formulations is a holistic disposition where segregation is understood as a challenge that affects the community "as a whole" (Trollhättans Stad, 2021). As such, it is critical to explore how different districts relate to, and are affected by, one another. Differences and similarities between districts can be made identifiable, and thus the knowledge of constraints and possibilities to work toward a less segregated and more socially sustainable community is increased. It is therefore of interest to explore perceptions and manifestations of segregation in areas that appear to be comparatively integrated as well as those that have been established as segregated.

TM's work toward a socially sustainable community is also guided by collaboration (Trollhättans Stad, 2022, p. 12). The example that is used in the analysis below was a collaborative project between TM, UW and residents of what statistically appeared to be a well-integrated district within the municipality called Innovatum–Norra Skoftebyn–Pettersberg (INSP). However, the project, which culminated in a report (Karlsson *et al.*, 2022), sought to reach beyond such a statistical generality. Instead, it aimed to grasp the particularities of the residents' individual perceptions of their day-to-day existence within the district and explore if and how perceptions and manifestations of *integration* corresponded to the statistical facts. Specifically, it aimed for "increased knowledge and understanding regarding the residents' expectations on specific housing areas and their surroundings, and residents' identities in relation to these" (Karlsson *et al.*, 2022, p. 10). To get there, in-depth interviews were conducted with ten residents of the district. To come into contact with suitable residents for participation in the project, we launched public advertisements online and in the physical spaces of the municipality, inviting applications from all residents within the district. Having obtained the submitted applications, our selectees were derived from the aim to have as much of a diversified representation as possible, based on characteristics such as age, gender and background. All participants partook based on informed consent.

In the short run, the project sought to strengthen TM's collaboration with its residents by addressing contemporary segregation issues in the municipality's physical spaces. In the long run, "the increased knowledge on local identities, and the significance of the physical spaces', might be used within the development of a realizable vision for TM as a diversified community" (Karlsson *et al.*, 2022, p. 10). This raised the question of how to attain this knowledge and make it intelligible.

Method of analysis

The method of analysis used within the project was a time-spatial framework elaborated from Assmo's (2015) and Assmo and Wihlberg's (2014; 2016) development of Hågerstrand's (1975; 1980; 1985, 1991; 2009) time-geography. This development is concerned with sustainable development in the broad sense, i.e. economic, environmental and social sustainability. For the purposes of this article, though, the focus lies on the social.

For the sake of clarity, the role of the time-spatial method should be understood in three senses in this article. Firstly, it is what we propose as a means of change through the co-creation of knowledge and learning from different perspectives. It is thus what we propose as a knowledge-creating learning tool for social sustainability. Secondly, it is a method of content analysis that we use in our illustrative example. It was the method used to analyze data in the collaborative project, and thereby, it is also the method of analysis in the example of how the method was used in the project. Thirdly, this means that the method is a combination of a method of co-creating for social sustainability and a method of content analysis.

The time-spatial method challenges several contemporary practices regarding sustainable development. On the one hand, it challenges the practice of working with the three development pillars as separate entities, recognizing instead the beneficial prospects for development within their integrated nature (Wihlborg and Assmo, 2014). On the other hand, it challenges prevailing top-down practices such as those “[...] of a techno-economic, sectorial-oriented character”, resulting in policies and strategies of a general or even universal character”, marshalling instead the idea that “[...] a more genuinely integrated sustainable approach must [...] have a more all-embracing or interwoven perspective, which focuses on the local level, understanding the time-space interactions and constraints for the people concerned” (Assmo, 2015, p. 15).

It follows that local spaces are simultaneously seen as physical and social units of analysis. Largely, this resonates with methods of analysis such as *space syntax* (see, for example, Legeby *et al.*, 2015) where relationships between spatial-physical and social phenomena are central. Crucially, however, the *space syntax* and *time-spatial* methods diverge in terms of data collection, where the former focuses more on the quantitative and the latter on the qualitative.

Attempting to capture and understand complex realities, the time-spatial method seeks to arrive at a holistic perspective based on individual experiences. This holistic perspective is analogous to a drama played out at the theatre, and contains three integrated dimensions (Hägerstrand, 1985; Lenntorp, 1999; Assmo, 2015):

The stage: the natural and physical environment where the drama is being played out, for example, a neighborhood with features such as lakes, rivers, buildings, streets, street lighting, plumbing and electrical grids, bus stations and playgrounds.

The actors: the people who act on stage, such as the residents of the neighborhood.

The manuscript: formal and informal institutions that dictate how the actors act on stage, for example, physical and politico-economic structures, laws, rules and norms within the community where the neighborhood is located.

This complex interwoven drama creates constraints on and possibilities for the individuals' activities, and it is in relation to these constraints and possibilities that the time-spatial method has its analytical utility; only by analyzing and understanding the constraints of any given time-spatial situation can the possibilities be identified. Constraints take precedence here, as the identification of possibilities is commonly related to their presence. Similar to the “theatrical drama”, there are three integrated dimensions of time-spatial constraints that interact to greater and lesser extents:

Constraints of capability are first and foremost related to the individual's physical, but also include mental, cognitive and intellectual prerequisites. These might include age, gender, language or education.

Constraints of coupling decrease the individual’s capacity to collaborate with others, both individually and collectively. They might be restricted in social connections at the workplace or during leisure hours.

Constraints of authority can be constituted as external sources of power, commonly in the form of formal constraints (laws and rules), but also as informal structures such as culture and norms, which affect attitudes and values.

From this outlook, constraints and possibilities are identifiable in relation to hierarchical structures within communities, institutionalized as formal laws and rules as well as informal social codes, norms and traditions, which construct the structures of societies and influence people’s lives (Assmo and Wihlborg, 2016). From the individual’s point of view, the constraints of authority, both formal and informal, relate to structures of power, such as the relations between the individual and governmental agencies and the norms within the individual–family–kin spectrum. Having said that, we recognize that there are instances where constraints can have enabling functions in participatory governance by constructing steering ramifications (Koch, 2013, p. 2979). However, this function is not the focus of this article.

Constraints of authority are neither fixed nor universal. They are always particular, and “structured and accepted in a time-spatial setting” (Assmo, 2015, p. 22). They can be seen as *pockets of local order* within which the three types of constraints are themselves constrained by human action. It is the dynamics of human actions that disallow the pockets of local order to become static, specifically “based on people’s aims and ambitions and management of the constraints” (Assmo and Wihlborg, 2016, p. 88). The constraints condition people’s day-to-day activities, yet at the same time, those activities serve to transform the norms and the structures within that space into new constraints.

The time-spatial method is a tool that allows for analyses concerning the individual’s cognitive, physical, natural and social, constraints and possibilities in their everyday existence. It follows that it makes possible the potential of conducting an analysis with regard to the particularities inherent in the interplay between human action and formal and informal structures in time and space. To clarify, a time-spatial analytical framework is presented here (Table 1).

Example of Innovatum–Norra Skoftebyn–Pettersberg

In the following, we illustrate how this was done in the project with a focus on constraints of authority. That is not to say that the constraints of capability and coupling are of less

The holistic perspective	Individual level	Social level	Authoritative level
	Constraints of capability	Constraints of coupling	Constraints of authority
The individual perspective			
The stage			
The natural and physical environment			
The Actors			
The residents of the area under inquiry			
The manuscript			
Formal/informal structures within the area under inquiry			

Source: Authors’ own work

Table 1.
Time-spatial
analytical framework

importance, but rather that the authoritative level constitutes the clearest example in this context because the constraints of authority relate more clearly to a community's power structures.

A collaborative community-based project, based on the co-creation of knowledge between the residents, the HEI and the municipality, can possibly transform a constraint of authority into an authoritative possibility, as there is potential to qualitatively enhance resident participation in municipal governance. This is how WIL functioned in the project as an approach to transferring knowledge between individual participants as well as the collective stakeholders. Through the project's activities, the possibility to reflect on different perspectives was given. In these reflections, the combination of theoretical assumptions and practical experiences was the driving principle. This inaugurated a continuous learning process within and between participating stakeholders as well as between stakeholders and individuals. The combination of WIL and the time-spatial method as a tool also created possibilities for a continued process of learning and co-creation of knowledge after the formal project has ended.

Examples of the analytical strategy

In terms of how constraints of authority are manifested within the physical environment, housing is a highly relevant factor. Certainly so in the Swedish context, the municipalities, firstly, are the authority for the planning and permission of any housing construction developments. Secondly, they are commonly owners of substantial amounts of land, which further influences decisions on what can be built and where. Thirdly, they benefit from the mandatory "municipal property fee", and fourthly, they own and manage the public municipal housing companies, which frequently are the main actors on the local housing market and enable them to construct, own and manage apartment buildings with homes for rent (Jonsson, 2019, pp. 16–17). The repercussions of these circumstances were pointed out in the project:

When families move apart, it is often the case that they wish to remain in Skoftebyn for the children's sake. It is difficult, however, to get hold of vacant condominium- or rental apartments (Karlsson *et al.*, 2022, p. 20).

This exemplifies the constraints of authority. But not only does this quote constitute an authoritative time-spatial example, it is also compatible with top-down technocratic institutionalism, and it illustrates, at least in connection to housing policy implementation, the consequences of urban power in the hands of a political elite. Popular demand does not appear to be sufficiently considered in housing implementation processes. The implications of the lack of apartment buildings were a common theme throughout the project and were referred to in the presence of informal power structures as well as the formal one displayed above:

Maybe, because I as a single parent feel that I stand out in comparison to traditional family norms and am trying to compensate for that. [...] Every neighborhood has something which signifies affiliation (Karlsson *et al.*, 2022, p. 21).

From a time-spatial perspective, what becomes clear here is the intertwined relationship between the different dimensions. The lack of apartment buildings engenders constraints on authority both in relation to the physical environment and the prevailing norms within the neighborhood. What distinguishes them is that the authoritative source for the former is formal, whereas it is informal for the latter. Obviously, this creates constraints on coupling for the residents of the neighborhood. The constraint of authority, which is physically

manifested as the lack of apartment buildings, has fostered a new constraint, a norm that makes residents accommodated in apartments experience a lack of sense of being included. They are not treated the same as those accommodated in detached houses.

The intertwined relationship between the dimensions reveals itself in different ways in different instances. Regarding experienced security deficiencies in the environment surrounding municipal youth enterprises, the constraints of authority take form in relation to perceived physical safety:

Something very concrete, of which I in fact have e-mailed the municipality, is the traffic security outside N3 [the municipal youth cultural center] where the children run across the street, yet there is no pedestrian crossing in place. So, I had a little e-mail conversation with [...] the department at city hall that oversee traffic issues [...] and they argued that a pedestrian crossing is a deceptive security, that it makes the children feel safe, and hence that they do not watch carefully the traffic around them (Karlsson *et al.*, 2022, p. 22).

This is a typical example of top-down technocratic institutionalism. That a genuine concern for safety is easily dismissed adds strength to Levine's (2017) proposition that residents influence through participation in political processes is predominantly illusionary. The constraint of authority does again emanate from a constraint within the physical environment, but it manifests itself in its full form within the communication between the resident and the authorities, which in its own way is even more striking as it puts on display a demeanor that risks impairing the trust between the resident and the formal authority.

It may seem that no time-spatial possibilities were identified in the INSP district during the project. But based on the information that the informants shared, the relationship between the residents and the authorities is not always perceived as tense. With regard to possibilities, the dimensions of the time-spatial method manifest similarly to the way in which they were illustrated to be intertwined regarding constraints:

We have not had a meeting to proceed with the issue, but I have noticed that they have put up [parking] signs, you know [...] from 06 to 17:30, so that is in place. I am very happy about that (Karlsson *et al.*, 2022, p. 22).

So there do exist examples of functioning communication between the residents and the authorities. And perhaps oddly, this specific line of communication took place with the same department at city hall as was referred to above, as both utterances concern matters of traffic. It is perhaps not a participatory event to make too much out of. After all, as was seen with Monno and Khakee (2012), local authorities are willing to support participatory activities as long as they do not result in opposition to or obstruction of political decisions. A matter as mundane as a parking sign does seem to qualify under such conditions. Time-spatially, it is a constraint of authority relating to the physical environment, which is the underlying cause of communication between residents and the formal authorities, yet here it developed into a possibility instead of engendering a further constraint. Possibilities can be identified as well when residents band together as an informal authority under the banner of civil society. Again, it is a constraint of authority concerning the physical environment that puts in motion the event identified as a time-spatial possibility:

There is this group on Facebook, "*Skoftebybor diskuterar slussarna*" I believe that it is called, and it has a very clear position because [...] there is talk that it is 30-40 houses that are going to be torn down [...] It is a very active group [...] the issue is truly engaging and those involved are to the most part affected [...] The discussions have waivered back and forth regarding how the communication between the municipality and the [national] Transport Administration have taken place, if there might have been miscommunications (Karlsson *et al.*, 2022, p. 22).

The constraint of authority identified here is the construction of new locks for the traffic in the canal, which floats alongside the INSP district. The time-spatial possibility that is suggested lies within the participatory attitude that the civil society stakeholder displays in relation to the formal authorities. Importantly, it appears as if the residents' concerns are taken seriously by the formal authorities, as the preliminary planning process is suggested to be thoroughly scrutinized by both municipal and national authorities. The participation appears to be fruitful, to some extent.

A time-spatial possibility was also identified in relation to an instance of civic engagement that concerned the social environment. On their own initiative, a group of local women organized host events for newly arrived refugee women with the aim of aiding them in their integration process:

Any system collapses were very far away, at least from our lives. And so, I got engaged with six-seven friends in hosting [...] those who arrived here during the spring of 2015. We were six or seven women that met up with a group of six or seven women, or girls, from Syria and Palestine, and someone from Iran [...] At some point we all met up at my place, at other times we were at somebody else's place. So, from time to time, we do make attempts to integrate even in Skoftebyn (Karlsson *et al.*, 2022, p. 22).

The civic engagement displayed here resonates with empowerment and self-led social inclusion. Additionally, it is an initiative that harmonizes well with TM's social sustainability strategy. Seen from a time-spatial perspective, it is a possibility of authority related to the residents of the neighborhood, as they transformed themselves into an informal authority that strived for increased integration.

It has now been exemplified what type of knowledge the time-spatial method extracted from the residents, specifically in relation to constraints of authority. But what knowledge came out as the end product? In other words, what did the knowledge look like after it had passed from the resident to the HEI, and then from the HEI to the TM? What type of knowledge was the time-spatial method capable of producing within the confines of this specific collaborative project? Seeking to increase social sustainability within TM and, by extension, to develop a realizable vision of TM – based on the findings from the INSP district – as a diverse community, the time-spatial method derived the following suggestions for TM to work with (Karlsson *et al.*, 2022, p. 25):

Increase the demographic heterogeneity to facilitate the progress of a diverse community for everyone.

Increase the knowledge of informal norms that affect the residents' possibilities and identities, and the attitudes towards together with expectations of different housing areas.

Develop the possibilities for changing accommodations within an (diverse) area and cater for particular needs to make a housing career by supplying a broad supply of rental – and condominium apartments as well as detached – and semi-detached houses.

Make the area more vibrant, with more restaurants, coffee shops, shops and stores that foster movement and activities both in the day and at night-time.

Develop a positive local identity and a sense of belonging which fosters responsibility and safety.

Through schools and recreational activities develop possibilities for children and adolescents from different ethnic backgrounds to foster relationships.

Develop channels of communication regarding recreational activities for children and adolescents.

In this way, the knowledge has been transformed from individual experiences into a structured set of recommendations relating to the authoritative dimensions of life within the community. This result does incorporate the ideas of participation, collaboration and transformation, and does fall within the confines of the idea that everyone has the capacity to construct knowledge through communication and interaction with each other. The result is also compatible with the highlighted assumptions of WIL, as connections between work and learning have been examined in relation to a collaborative community-based project focusing on resident participation in the co-creation of knowledge. Through the collaborative use of the time-spatial method of analysis, the method also became an instrument of collaborative and collective learning.

Returning to the analytical framework, we can see that regarding the authoritative time-spatial level, which is the one that has been used as an example, the results can be derived from the different dimensions that take form within all three dimensions within the holistic perspective, i.e. the stage, the actors and the manuscript. The results also suggested that there exist both authoritative constraints and possibilities within the district. Turning to the stage, time-spatial constraints were identified in relation to housing (especially condominium and rental apartments) and a lack of pedestrian crossings outside the youth center, whereas time-spatial possibilities were identified in relation to the installation of parking signs.

What is interesting is how time-spatial constraints transform into possibilities. We have seen that a constraint that emanated from the dimension of the stage transformed into a time-spatial possibility within the dimension of the actors in relation to the construction of new locks in the nearby canal. Furthermore, a time-spatial possibility was generated from the dimension of the actors into the dimension of the manuscript as a group of women, through civic engagement, turned themselves into an informal authority.

Conclusions and contribution

This article argues that collaboration lies at the center of the development of social sustainability, and more specifically, for WIL and the time-spatial method as useful tools in the strive toward it. In this, we are tying into current academic discussions on the co-creation of knowledge in relation to participatory municipal governance and citizen participation and how social sustainability has both procedural and substantive aspects. The general objective of the field is to study examples and show the importance of participation and co-creation for further democratization of governance and the possibilities for bottom-up processes. This article shares this general ambition and suggests one possible way forward. By using WIL, it shows how the co-creation of knowledge can play an important part in such processes, and through the time-spatial perspective, a method of analysis is suggested.

The time-spatial method of analysis represents one way in which knowledge can be transformed from individual perceptions into structured suggestions for municipal development, both in relation to possibilities and constraints existing within the community that have not previously been directly discussed in the literature. The method constitutes one possible way to challenge strict top-down technocratic organizational structures and, consequently, to challenge institutionalized concentrations of policymaking. It offers a way of permitting residents to participate in governance processes at the initial stage as a bottom-up approach. However, it also shows how a simple dualism between bottom-up and top-down perspectives can be misleading. Rather, what is shown in this article is that bottom-up perspectives are a prerequisite for the participation of, and dialogue between, all stakeholders, including those structurally representing a top-down perspective, in projects

of common concern. It shows a possible way to make the power relations included in policymaking more equal.

Furthermore, WIL as a method for learning processes has been shown to be useful for participatory municipal governance by allowing a HEI to partake in the form of an analytical mediator within the dialogue between residents and a governmental institution. This shows that WIL can facilitate the possibility of examining the connections between work and learning within community-based projects as knowledge-creation processes. This is of significance because to foster social sustainability that is factually socially sustainable, examinations of change and socialization processes related to knowledge and competence play an integral part in the prospects for its progress. Tripartite governance collaborations between residents, HEIs and municipalities – influenced by WIL and time-spatial assumptions – can thus contain the capacity to increase resident influence within social sustainability processes. This demands that the conditions for a collective learning process and the co-creation of knowledge are there. One way of creating such conditions is through WIL and the time-spatial method proposed and illustrated in this article.

To properly evaluate the capacity of the model and method, however, more collaborative projects and further research in different contexts to see how WIL processes and the time-spatial method play out locally would be both encouraged and needed.

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