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Social Inclusion (ISSN: 2183–2803)
2022, Volume 10, Issue 3, Pages 273–283
https://doi.org/10.17645/si.v10i3.5322

Article

"We Don't Meet [Any]where Else, Just Here": Spatiality of Social Capital in Urban Allotments

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Submitted: 28 January 2022 | Accepted: 27 June 2022 | Published: 20 September 2022

Abstract
Unlike many other types of urban micro-publics, allotment gardens provide a spatial opportunity for everyday social contact and encounters between heterogeneous user groups who share a common interest. While these micro-publics have an evidenced capacity for generating social capital, scholars have questioned the extent to which social capital accessed within the allotment garden transcends its physical boundary—and thus the relevance of the micro-public for social integration by fostering resource transfers between socially-distant members of the population. In this article, we investigate for whom and to what extent social ties and resources accessed within the garden extend beyond its physical boundary and into other domains of urban life (i.e., scaling resource transfers) in Vantaa, the most multicultural city in Finland. Utilizing a mixed-methods approach, we integrated crisp-set qualitative comparative analysis and thematic analysis to explore which configurations of gardener characteristics relate to different resource transfers. We found that although new contacts—including boundary-crossing contacts—were formed within the micro-public, they evidenced little potential for scaling resource transfers across social difference, and in some cases even sparked intergroup tensions. These findings illustrate that despite the common interest shared by individuals within this micro-public, contact between different groups alone is not necessarily sufficient to foster positive social encounters, scaling or otherwise. To improve scaling resource transfers and, more broadly, deepen social connections formed within the micro-public network, facilitated intercultural dialogue by relevant institutions is needed.

Keywords
allotment garden; micro-public; resource transfer; segregation; social capital; social mixing

Issue
This article is part of the issue "On the Role of Space, Place, and Social Networks in Social Participation" edited by Gil Viry (University of Edinburgh), Christoph van Dülmen (Thünen Institute of Rural Studies), Marion Maisonobe (CNRS), and Andreas Klärner (Thünen Institute of Rural Studies).

1. Introduction

In Finnish cities, urban growth has been significant in recent decades, increasing from 50% to 84.9% since the 1970s (Vantaan kaupunki, 2021). The Helsinki Capital Region (HCR), in particular, has also witnessed a steep increase in immigrant population since 1990. It is now home to 55% of all foreign-language speaking residents in Finland (City of Vantaa, 2018). Combined, these trends have contributed to more ethnically diverse urban populations, resulting in spatial changes to neighborhoods' socio-demographic structure and social dynamics (Laitinen et al., 2016). This has included the clustering of indicators of disadvantage—such as high unemployment and low education and income—in neighborhoods with high proportions of foreign-language speaking residents (Vilkama et al., 2014). The growing dissimilarity and segregation between neighborhoods hinders

migrant social integration into the majority society and challenges Nordic ideals of egalitarianism and justice (Tunström et al., 2016). For these reasons, and that immigration is likely to increase due to national policies (Rotkirch, 2021), the prevention of urban residential segregation is an important priority for HCR municipalities, particularly Vantaa (City of Vantaa, 2018)—the case region of this study, which is situated on the outskirts of Helsinki.

To prevent socio-spatial polarization and associated spatial accumulation of social problems, social mixing policies have been implemented in the Finnish housing sector since the 1970s. Like similar programs in other European countries (Münch, 2010), they are based on the premise that spatial proximity of groups with different socio-economic or ethnic backgrounds leads to social proximity, helping disadvantaged groups build beneficial social ties and exchange resources across other social and ethnic groups. Initially intended to mix income groups, the focus later extended to ethnic groups to aid their integration into society (Dhalmann, 2013). Whilst tenure mix has been successful in distributing population groups in Finnish cities, the capacity of social mixing policies to prevent neighbors from living different realities, and promote their social relations, remains unclear (Vaattovaara et al., 2018). Indeed, several European studies indicate there are minimal interactions between advantaged and disadvantaged groups sharing the same neighborhood (Kleinhans, 2004).

Furthermore, whereas social mixing policies focus predominantly on the neighborhood level, several scholars point to the significance of specific places within the neighborhood to promote intergroup contacts and resource transfer. Among few network studies paying attention to migration processes, Hans and Hanhörster (2020) point to newcomers' lack of locally embedded social networks and emphasize the subsequent significance of more "informal" ways of gaining access to certain kinds of resources—through interaction with other residents in semi-public spaces. Amin (2002) points to the importance of "local micro-publics of everyday interaction," such as sports or music clubs, theater groups, or urban gardens, in facilitating meaningful encounters. Given the combination of joint interests and less formal social and power relations present, urban allotment gardens (UAGs) in particular can play a significant role as micro-publics for newcomers' resource access and integration into society (Christensen et al., 2019).

As the fastest growing and most multicultural city in Finland, increased residential segregation between Vantaa neighborhoods has been particularly visible over the last 20 years (Vilkama et al., 2014). The City of Vantaa is nearing the completion of a new city master plan, committing to zone 15 new land parcels as UAGs. Preliminary interviews with stakeholders revealed not only significant interest from ethnic minority groups to gain access to allotment plots, but also a desire from UAG managers for them to be more inclusive. This suggests the City of Vantaa is uniquely situated to explore the coordination of green infrastructure planning with multicultural affairs objectives. However, previous research questioning the role of UAGs in constructing social capital—that is, the aggregate resources of a person being tied to membership in social networks—has pointed to reinforced rather than challenged boundaries between different social and ethnic groups (Blokland, 2008). Hence, the question arises whether, and under which conditions, UAGs can promote the formation of social capital between diverse groups that also transcends the physical boundary of the UAG.

This research aims to investigate social interactions and resource exchange in UAGs in Vantaa, specifically whether or not, to what extent, and for whom social capital accessed within the UAG "scales out" into other domains of urban life. We understand "scaling out" as a social process with core spatial implications involving a transfer of resources between individuals, which subsequently supports upward social mobility. The spatial element of this resource transfer, however, is integral to the process. The micro-public facilitates contact between members of the community, and thus opportunities to access the aggregate resources held and formed by the community (i.e., the network's social capital). If resources supporting upward social mobility accessed within the UAG are transferred between individuals within the network, the process inevitably engages social and spatial domains that extend outside the physical boundary of the micro-public (i.e., employment, housing, education). With such contact comes the potential for resource transfers to support integration and multiculturalism. Going forward, Section 2 discusses social mixing policies as well as social capital and underlying theories, and more recent academic critiques and alternatives. Section 3 outline's the case's context as well as the methods used for data construction and analysis. Lastly, the results of this research are presented and discussed in Section 4. The study is concluded in Section 5.

2. Contradictions in Research and Practice: Social Mixing Policy, Resource Transfer, and Integration

Despite quite successful social mixing policies in place since the 1970s (Vaattovaara et al., 2018) social disadvantage (e.g., unemployment, decreasing income levels) has been concentrating since the economic downturn in the early 1990s in certain Finnish neighborhoods (Bernelius & Vaattovaara, 2016), often those with increasing shares of migrant population. Even though ethnic residential segregation in Finland remains moderate compared to other Nordic capital regions (Tunström et al., 2016), the increasing trend reflects a rise in social inequalities and a decline in equity related to education (Bernelius & Vaattovaara, 2016) and housing (Vaattovaara et al., 2018).

To counteract increasing levels of socio-spatial polarization (Bernelius & Vilkama, 2019; Musterd et al., 2017;

Skifter Andersen, 2019), the promotion of resident mixing in neighborhoods has become a central dimension of urban development programs in many European countries (Münch, 2010). Social mixing policies are a reaction to the potential negative effects of residential segregation and the concentration of poverty through so-called "context effects," arguing that living in deprived urban neighborhoods can negatively impact inhabitants' access to resources, lead to stigmatization and discrimination, and limit their upward social mobility (Andersson & Malmberg, 2018; Galster et al., 2010; Hedman & Galster, 2013; van Ham & Manley, 2012). In this way, network inequality is linked to place, assuming that people in poor neighborhoods are excluded from resource-rich networks since they do not encounter better-off residents (Nast & Blokland, 2014). Social mixing policies are thus linked to the hope that mixed neighborhoods promote social interaction and resource exchange between different social and ethnic groups, from which disadvantaged residents can benefit. Therefore, they are linked tightly to theories on social capital (Bourdieu, 1986; Lin, 2001). The network-based transfer of resources for generating social capital is classified into "bonding" and "bridging" (social ties within and between distinct groups, respectively; see Putnam, 2001). In some studies, the transfer of resources with divergent functions is assigned to these different types of contacts: Bonding ties are associated with support in coping with everyday life ("getting by"), whereas bridging is associated with the transfer of resources supporting upward social mobility ("getting ahead"; see de Souza Briggs, 1997). Residents' social interactions might thus enable the exchange of getting by and getting ahead resources in the form of information, small and large help, or emotional support, which can particularly assist socially disadvantaged groups in managing their own daily lives or even support their upward social mobility.

Aside from the intention to promote social interaction and resource transfer, social mixing attempts aim for the potential of everyday low-level interactions of people with diverse backgrounds to improve mutual understanding and community cohesion, as pointed to by previous research (Amin, 2002; Nast & Blokland, 2014). They are thus linked to the preservation of socially stable resident structures and the attempt to counteract the feared threat to social cohesion caused by social and spatial segregation.

However, whereas the potential of social mixing remains high on the agenda in policy and urban planning, it is increasingly questioned in research. First, social mixing policies are based on social capital approaches, which are more and more criticized for "blaming the victims" and ignoring structural inequality by assuming that certain groups have a deficit of social capital, that simply having contact with well-resourced groups will solve their issues and combat inequality (Nast & Blokland, 2014; Small, 2009). Second, research points to resource-rich middle-class households' tendencies of closure and disassociation in mixed neighborhoods (Blokland & van Eijk, 2010; Frank, 2013; Savage et al., 2005; Watt, 2009; Weck & Hanhörster, 2015), indicating little or no evidence that mixed tenure produces "bridging" social capital or a "role model" effect (Allen et al., 2005). Even if spatial proximity leads to intergroup contacts, they may be nothing more than "illusory" (Wood & Landry, 2008, p. 92) and offer little potential for resource transfer (Amin & Thrift, 2002). This similarly applies to ethnic mixing (Musterd, 2003) and its role in the social integration of migrants. In this article, we follow the understanding of integration outlined by Ager and Strang (2008), who define four key themes and 10 core domains shaping the concept of integration. According to their understanding, "processes of social connection within and between groups" represent only one of those four themes. Thus, although the focus of our research is on social interactions and resource exchange, we acknowledge that social capital is an important but not the only part contributing to successful integration—which challenges a common policy assumption that "integration and social cohesion can be achieved through social connection alone" (Ager & Strang, 2008, p. 186). Third, some scholars even warn against idealistic ideas of cohesiveness and connectivity through (enforced) spatial proximity of groups that are culturally and socially alien to each other. Encounters with difference may foster conflicts, intolerance, and prejudice rather than promoting tolerance and understanding (Valentine, 2008).

Since mixing policies at the neighborhood level might not be sufficient to promote meaningful intergroup encounters and resource transfer, Amin (2002) points to the importance of "local micro-publics of everyday interaction" in facilitating those. These micro-publics, such as sports or music clubs, theater groups, or urban gardens, bring together people with different backgrounds and enable meaningful encounters by allowing them to break out of fixed patterns of social interaction. As semi-public, partly institutionalized micro-publics that include (in)formal rules, UAGs bring people of different (social or ethnic) backgrounds together over a common interest and enable the bridging of group-related boundaries.

3. Methodological Approach

The purpose of this mixed-methods study was to describe and interpret the spatiality of social encounters within the case micro-public network. Two data construction methods—semi-structured interviews and a name generator survey—were integrated to construct data on the social and network circumstances during which social capital scales (or not) outside of the UAG network. Following data construction, two methods for data reduction and analysis—crisp-set qualitative comparative analysis (csQCA) and thematic analysis (TA)—were employed to explore causal relationships between these circumstances. Combined, this mixed-method

design integrates and balances the qualitative benefits of case-specific detail and social nuance (the data constructed during the semi-structured interviews and later analyzed during iterations of TA) with the quantitative benefit of systematic comparison (the data constructed during the name generator survey and later analyzed by csQCA; see Cox et al., 2021).

3.1. Micro-Public Context: The UAGs of Vantaa, Finland

Vantaa's greenspace network currently includes 15 UAGs, zoned by city planners in the city's master plan. The land for each UAG is leased by the City of Vantaa via short-term contracts to a neighborhood association that independently manages the garden and is thus responsible for developing, disseminating, and enforcing the cultivation guidelines for their particular UAG. Typically, these associations are led by a group of neighborhood volunteers, who then lease single plots to individual gardeners. As such, the network's governance structure is characterized by three levels of regulation: municipal, association, and plot level. The practical implications of this decentralized governance structure include: (a) significant variation in the levels of social organization between associations; (b) discrepancies in the availability and accessibility of information provided to the public about each UAG, which is largely based on the resources available to the resident volunteers serving on the association leadership boards; and (c) an absence of aggregate member information on all individuals cultivating within the network, and thus, the resulting inability to quantify the demographic breakdown of gardeners in the network.

3.2. Data Construction: Semi-Structured Interviews and Name Generator Survey

Ten rigorous data construction sessions were conducted on-site between May and July 2021. When selecting our sample, we targeted individuals related to the bounded UAG network of Vantaa. Given the absence of aggregate network population data, we employed the non-probability quota method to construct our sample. This provides the key function of producing a sample comprised of select characteristics that mirror their distribution in the overall population, without first needing to identify each individual member (Blaikie & Priest, 2019). To do so, a set of relevant selection categories were first defined including gender, age structure, and mother tongue. The number of participants recruited from each category was determined based on their proportion within the municipality. Thus, the target ratio of key characteristics within our sample was defined as 50% women, 50% men, 80% with Finnish national mother tongue, 20% with foreign mother tongue, 65% of working age, and 35% of non-working age. Our target ratio was achieved for gender and mother tongue, but slightly overrepresents the proportion of retired residents within the municipality's population. This can be explained by, likely, a greater proportion of retired individuals active in the UAGs than those residing in the municipality. Here it is of note that the decentralized nature of the micro-public network, compounded by the ongoing Covid-19 crisis, resulted in steep challenges in gaining access to participants for this study. The resulting sample included 12 egos, who elicited the name of 92 alters. Detailed social attribute data for these egos are provided in Table 1.

Table 1. Social attributes of the research participants.

Ego	Social attributes						Number of alters	
	Age	Gender	Employment status	Education	Duration at plot (years)	Mother tongue	Bonding	Bridging
1 + 2	70–79	W; M	Retired; retired	Master's; High school	36	Finnish	9	1
3	40–49	M	Employed	Bachelor's	5	Finnish	10	1
4 + 5	60–69	W; M	Retired; retired	Masters; Master's	42	Finnish	4	4
6	50–59	W	Employed	Comprehensive	11	Finnish	6	1
7	60–69	M	Retired	Master's	<1	Finnish	5	1
8	70–79	W	Retired	Master's	6	Finnish	5	2
9	40–49	M	Unemployed	Vocational school	3	not-Finnish	9	4
10	18–29	W	Employed; student	Bachelor's	2	Finnish	8	2
11	40–49	M	Employed	Master's	<1	not-Finnish	7	6
12	70–79	W	Retired	Bachelor's	20	Finnish	9	0

Note: Two of the 10 sessions were constructed as pair interviews in which both participants contributed to the interview and one to the name generator survey.

Each session was comprised of an in-depth semi-structured interview and a structured name generator survey, lasting from 45 minutes to 3.5 hours (half in English, half in Finnish). The former focused on participants' social encounters within their UAG; within the latter, the interviewer led the participant through a name generator survey, where the participant (ego) was asked to identify specific people (alters) with whom they have exchanged certain resources. The types of resources inquired about (Table 2) stem from previous research on networks of exchange within UAGs (Resler & Hagolani-Albov, 2021) and resource transfers at the neighborhood scale (Hans & Hanhörster, 2020; Weck & Hanhörster, 2015). For each alter named by the ego, socio-demographic characteristics were recorded using the ego's free recall from memory.

3.3. Data Reduction and Analysis: CsQCA and TA

Following construction, these data were reduced and analyzed using csQCA and TA. CsQCA is a set-theoretic analytic technique that was explicitly designed to uncover complex causal regularities among small samples ranging from five to 50 (Cox et al., 2021; Ragin, 2014), which is particularly useful in situations where it is not possible to identify every member of a population such as ours. Additionally, unlike the correlational analyses conventionally used in quantitative social science, csQCA can identify asymmetrical set-theoretic relationships among variables—meaning, csQCA provides the added value of testing for the presence of a cause (condition) and presence of the effect (outcome) separately from the absence of a cause and the absence of the effect (Ragin, 2014), which correlational analysis can not. As such, the technique is able to systematically investigate situations in which multiple combinations of conditions may produce the same outcome, or conversely, when the same condition may affect the outcome differently, depending on how it intersects with other conditions (Sehring et al., 2013). In the context of this study, this "assumption of multi-causality" (Cox et al., 2021) translates to combinations of social attributes that together have led to a scaling outcome in the UAG, while on their own, or in another combination, might have resulted in a different outcome. Stated plainly, csQCA is well suited for situations in which "who you are" matters. To protect the anonymity of research participants, potential links between the egos' alters were excluded from the analysis.

Following the 6-stage procedure outlined by Rihoux and Ragin (2009), we conducted the csQCA using the TOSMANA software and accompanying qualitative comparative analysis add-in for Excel (Cronqvist, 2019). The procedure begins by first defining the outcomes of interest and identifying the context-specific social and network characteristics (i.e., conditions) relevant to these outcomes (step 1 was to build a dichotomous data table). Derived from our research questions, our two outcomes of interest were defined as: (a) *the scaling outcome*—where social encounters originating within the micro-public led to resource transfers that transcend the physical boundary of the garden (typically, "getting-ahead" resources)—and (b) *the non-scaling outcome*—the former's logical opposite. In the case of the UAGs of Vantaa, four conditions were identified using theoretical and substantive reasoning: two sourced from social capital theory ("DIVERSE" and "LARGE") and two sourced from our TA codebook ("ARRIVAL" and "EST").

The first of these conditions relates to the gardeners' migration background ("ARRIVAL"). Previous integration research conducted in Finland has illustrated that UAGs can promote migrants' self-confidence and independence and create opportunities for social interaction; however, they also pointed to intercultural differences regarding the preferences and use of urban nature between immigrants and autochthonous Finns (Leikkilä et al., 2013). The latter's preference for less interaction might therefore challenge the role of UAGs for resource transfer and integration in Vantaa. Against this background, this study is particularly interested in analyzing to what extent social ties in the UAGs are created within and between social groups (autochthonous Finns and gardeners with a late-stage arrival background).

The second condition structuring the csQCA relates to the duration of time a gardener has spent tending their plot. Given the cold climate and high latitude of Vantaa, gardening activities are distinctly seasonal, resulting in temporally concentrated social encounters. It is generally understood that the most important features of social capital—trust and norms of reciprocity—emerge from repeated and regular interactions bounded in time and space (Bridger & Alter, 2006). For this reason, the second condition necessary for exploring social capital in this context—established plot ("EST")—is useful to distinguish between gardeners who had experienced a full season or more at their plot and those who had not, with the former having had greater opportunities for repeated, regular interactions with others.

The third selected condition refers to the diversity of the gardeners' social networks accessed through the UAG ("DIVERSE"). This is based on scientific debates about social capital (Bourdieu, 1986)—defined as resources, such as knowledge, information, capabilities, or economic capital (being tied to access to social networks; see van Eijk, 2010)—and the related transfer of those resources. The disposable social capital of a person is strongly tied to the resources of the network members and the diversity of network relationships. As mentioned, while this network-based transfer of resources is classified into "bonding" and "bridging" (Putnam, 2001), some studies also classify the transferred resources according to their level of support ("getting by" or "getting ahead"; see de Souza Briggs, 1997). Thus, we assume that gardeners with more bridging ties in their UAG social network will have access to greater disposable social capital and "getting ahead" resources. In our case, social ties

were operationalized as bonding when the ego and alter shared the same code for the condition "ARRIVAL" and as bridging when they did not. While similar methods of operationalizing the bonding-bridging dichotomy have been critiqued for ignoring the power positions of individuals within ethnic communities (Sommer & Gamper, 2021), we employed the method given how this study was not directly interested in power dynamics within and between migrant communities, but rather, with the overarching context of social integration.

Lastly, the disposable social capital of a person is strongly tied to the size of their network, highlighting the fourth condition included in our csQCA ("LARGE"). According to Bourdieu (1986), the volume of social capital possessed by an individual depends on the size of the network of connections they can effectively mobilize, and on the volume of the capital (economic, cultural, or social) possessed by each of those to whom they are connected. Thus, the size of an individual's UAG social network is tied to network diversity in our case micro-public network.

Once identified, the raw values for each of these conditions were then dichotomized into the Boolean algebraic binary language of 0 and 1. For example, before dichotomization, raw data for the condition "EST" appeared in the number of months or years that an ego had tended their plot. After dichotomization, however, egos who had tended their plot for longer than one complete season were assigned the condition code [1], implying the presence of the condition. Egos who had not tended their plot for longer than one complete season were assigned the condition code [0], implying the condition's absence. This process was applied to each of the four conditions, whereby each was coded so that their presence could be theoretically associated with a positive outcome (Table 3). Thus, if an ego had the value [1] for each condition, it would be theoretically assumed their outcome would also be [1] (i.e., one or more scaling outcomes were observed). Once dichotomized, all egos with the same binary sequence of condition codes and outcomes were grouped (thus step 2 was to construct the truth table).

The truth table allowed us to investigate and resolve any cases in which the same configuration of conditions resulted in different outcomes (thus step 3 was to resolve contradictory configurations). Once all contradictions were resolved, we proceeded with csQCA's key operation in TOSMANA (step 4: Boolean minimization). This process uses Boolean minimization algorithms to reduce long complex expressions into their most parsimonious form (Rihoux & Ragin, 2009). We performed this operation four times: once for each outcome, both with the observed configurations and with all possible configurations (thus step 5: consideration of logical remainders). Together, these steps resulted in a list of configurations of conditions (i.e., minimal formulas) that are both "necessary and sufficient" in leading to the scaling and non-scaling outcomes (Rihoux & Ragin, 2009). The final stage of the procedure (step 6: interpretation), marked a key point of intersection between our csQCA and TA. This stage of the csQCA was assisted by an iterative series of 1st and 2nd cycle coding strategies, performed in the computer-assisted qualitative data analysis software (CAQDAS) Atlas.ti. The resulting TA codebook bookended the csQCA analysis process by (a) identifying the four relevant conditions and their thresholds before initiating the software-aided components of the csQCA procedure, as well as, at the end of the procedure, (b) to validate, interpret, and illustrate the csQCA minimal formulas (see the following sections for a further discussion of this interpretation).

4. Results and Discussion

As outlined in the previous section, we employed the mixed methods approach of csQCA integrated with TA to explore status and network conditions related to our two outcomes of interest. Table 2 outlines all observed instances of a resource transfer between contacts formed within the micro-public, scaling or otherwise.

4.1. The Scaling Outcome

To what extent did the social capital constructed within the UAG "scale out" into other domains of urban life? To answer this question, we first synthesized raw data from the name generator survey to identify instances when social ties accessed within the micro-public led to a "getting-ahead" resource transfer that transcended the boundary of the UAG. In total, 7/48 such instances were observed—14.6% of all observed encounters. However, only two of them occurred between bridging ties (resources transferred from an autochthonous Finnish gardener to a gardener who arrived in Finland later in life). One instance involved practical support with language translation, the other with searching for housing. The five remaining scaling encounters included resource transfer between co-ethnic contacts, namely, practical support or place-based information.

After identifying these instances, we were able to explore the causal regularities between social conditions that explain the scaling outcome (using the csQCA procedure). Six unique configurations of conditions (i.e., pathways) emerged, three for each outcome (see Appendix A in the Supplementary File). These pathways illustrate the key findings to the second half of our research question: for whom? The causal regularities pinpointed by the Boolean minimization process found that the three following configurations of conditions were sufficient for scaling social capital out of the UAG into other domains of urban life: for (a) egos who have both a diverse and a large UAG social network, (b) egos with a diverse UAG social network and an established plot, and (c) egos who have both a large UAG social network and an established plot. Examples of "getting-ahead" resources exchanged in this case network included assistance

Table 2. Observed resource transfers with contacts formed in the micro-public.

Direction of exchange	"Getting-by" resources exchanged			"Getting-ahead" resources exchanged		
	Garden-related advice	Allotment harvest	Gardening tools/resources	Help with searching for housing	Covid-19 related assistance	Help navigating an administrative issue[a]
# of alters given to	20	11	10	3	4	3
# of alters received from	19	14	8	4	4	1

Note: [a]Examples elicited by participants included assistance with voting in municipal elections, filing taxes, language translation, and searching for employment.

navigating a tax issue, assistance with language translation, and support with searching for housing—thus highlighting three other domains of urban life to which these social resources spread: housing, health, and employment (Ager & Strang, 2008).

But what can these minimal formulas, or pathways, tell us about the spatiality of resource transfers within the micro-public? First, while certain participants in our sample share the same configuration of conditions, the narrative behind how those conditions intersect within the micro-public varies greatly. This is where the TA's pattern codebook aids our interpretation of the csQCA's minimal formulas. For example, interviewees 4 + 5 and 9 share three of the four conditions associated with the scaling outcome; however, one case arrived in Finland at a later stage in life and the other did not. This brings into question the (ir)relevance of the condition "ARRIVAL" in the csQCA's minimal formulas. Its absence in either formula implies that it is not consistently sufficient in explaining either scaling outcome in any of the configuration sets. Therefore, from the csQCA alone we can assume that whether a gardener arrived in Finland at a later stage in life does not independently constrain or enable their participation in scaling resource transfers.

The pattern codebook constructed from in-depth interview transcripts and field notes, however, depicts this data story differently. One key pattern constructed during the TA was the barrier to entry to this micro-public network present for residents who do not speak Finnish, and particularly, for those who are unfamiliar with this type of public space. As a late-stage arrival gardener, interviewee 11 shares their experience with this pattern: "Even though I was living [in Finland] from the year 2007, I didn't know that something like this exists until…like 2016. I hadn't heard anything about this from anyone." The decentralized governance structure of the UAG network outlined in Section 3.1 plays an additional role in perpetuating this entry barrier for migrant gardeners. In describing their experience with obtaining a plot, interviewee 11 continues:

> The problem comes in the beginning stage when I first [emailed the association] in English and the reply came saying: "*En puhu englantia*," I don't speak English. Speaking the language helps a little bit, to get it, but after that, it's not [a big barrier].

These illustrative quotes highlight a pattern of experiences shared by late-stage arrival gardeners in the network. While "ARRIVAL" may not be a relevant condition for our outcome of interest once a gardener is already an active member of the network, the language barrier experienced by many late-stage arrival residents poses a clear obstacle in gaining entry into the community itself, and thus also, to the aggregate resources held and formed by the community's members. This key discrepancy demonstrates the failure of csQCA to alone untangle social nuances embedded within urban cases, and thus, evidences the importance of a mixed-methods approach. Our integration of TA within stages one and six of the csQCA displays a novel possibility for retaining the benefits of the csQCA's systematic comparison while

Table 3. Truth table.

Ego(s)	Condition codes				Outcome codes
	ARRIVAL = Ego didn't arrive in Finland at a later stage in life	DIVERSE = Ego's garden network has 2+ bridging ties	LARGE = Ego's garden network has 5+ ties	EST = Ego has tended plot >1 season	
11	0	1	0	0	[0]
9	0	1	1	1	[1]
1 + 2; 3; 6; 8; 12	1	0	0	1	[0]
7; 10	1	0	1	0	[0]
4 + 5	1	1	1	1	[1]

Notes: The remaining 10 theoretically possible configurations for which we have no observed cases are excluded from the truth table. Condition codes: 1 = presence of condition, 0 = absence of condition. Outcome code: [1] = one or more scaling ties were observed, [0] = one or more scaling ties weren't observed.

leveraging TA as a mechanism for results-testing and case context interrogation in future mixed methods research.

4.2. The Non-Scaling Outcome

The scaling outcome was thus the minority outcome of observed resource transfers. For whom were social encounters within the micro-public *not* associated with resource transfers that scaled out of the UAG? Most observed resource transfers (85.4%, or 41/48 instances) were spatially contained within the boundary of the UAG. As outlined in Appendix A in Supplementary File, the minimal formula for the non-scaling outcome is the logical opposite of the scaling outcome. This means that the observed cases of the non-scaling outcome can also be reduced to three pathways. More than any other type of resource transfer, interviewees characterized their encounters in the UAGs as spontaneous, casual discussions on place-specific topics of conversation. Interviewee 7 explains this as "some discussion and some small talk [like] asking [if there] are…any special things growing this year, and this kind of thing." Dissimilarly to the scaling outcome, the majority of observed cases of the non-scaling outcome occurred between two autochthonous Finnish gardeners. Though the non-probability quota sampling method employed to construct our sample eliminates the possibility of concluding the representativeness of the sample, the configuration of conditions shown in Table 3 shared by half of our participants suggests this to be a commonly held set of conditions within the micro-public.

An emergent consideration arose during stage six of the csQCA regarding the network condition "DIVERSE." Though initially shadowed during the software-aided stages of the csQCA, a clear pattern of intergroup tension within the micro-public was constructed during the TA. The most prominently cited example of such tension, mentioned by 7/12 participants, relates to the purpose of the space itself. From their perspective as an autochthonous Finn, interviewee 12 explains:

> Asian people…they use quite a lot of water, and also too much fertilizers. It's professional….They sell probably all the products that they are [growing] here. And that's actually not the idea. Also, there is one from Turkey and Iraqis who are really professionals….It's a very big issue and it gets worse now.

Similar statements of frustration regarding how the (in)formal rules and normative behavior expectations within the micro-public are understood differently between individuals from different social, and particularly ethnic backgrounds, were expressed by the majority of the interviewed sample. From their perspective as a late-stage arrival gardener, interviewee 9 explains:

> [A fellow migrant friend] told me that it's not just coming here and going, we also need to talk to others. Because, otherwise, they may think something bad about us. Because if something is gone from their field, they may think that maybe I have taken it….So I learned that from him. And now I at least try to say hi.

Though unplanned for within the original research design, this emergent pattern of intergroup tension mirrors the findings of previous research highlighting the potential of face-to-face contact across social cleavage in urban public spaces to harden prejudices and foster intolerance (Blokland, 2008). Importantly, this pattern highlights a second key finding of this study; though the UAG micro-public creates opportunities for social encounters across difference, spatial proximity is alone insufficient in fostering *positive* encounters.

5. Conclusion

This article examines the potential of a local micro-public network of UAGs in promoting intergroup contacts and resource transfers between UAG community members. Specifically, whether or not, to what extent, and for whom, social capital accessed in the garden scales out to other urban domains. To do so, we used a name generator survey to determine how many, of what nature, and between whom, instances of resource transfer occurred, and integrated csQCA and TA to explore which configurations of gardener background and network conditions were related to different social capital scaling outcomes. We observed only a small number of scaling resource transfers and identified two characteristics of a gardener's social network—size and diversity—as well as the duration of time a gardener has tended their plot, which influences that gardener's potential for these transfers. Specifically, three configurations of these characteristics were associated with the scaling outcome: gardeners with both diverse and large UAG social networks; gardeners with diverse networks who have tended their plot longer than one growing season; and gardeners with large networks who have tended their plot longer than one growing season. The TA revealed further nuance to these findings, including barriers to obtaining a garden plot for minority groups (negating their opportunity to access resources) and intergroup tensions between gardeners of different social groups. This also exposed an inability of the csQCA method alone to fully make sense of the social circumstances that enable scaling resource transfers.

Combined, the three configurations of conditions associated with the scaling outcome represent promising entry points for future intervention seeking to improve resource transfers and social relations in the case of micro-public networks. In the case of Vantaa, this translates to applied research, policy, and grassroots action working to increase the size and diversity of gardener social networks, as well as the security of UAG land tenure. Several specific policies and action recommendations were constructed by research participants during the process of data collection itself. Gardeners and

association leadership members recommend (a) focused efforts to address the key hesitancies preventing new gardeners from taking up a plot, such as the steep initial investment in new knowledge, labor, tools, and resources, which may manifest as programs to encourage co-tending a plot or the creation of shared tool and resource libraries; (b) longer and more secure land tenure contracts with the City; and (c) increased municipal support with the UAG's communal maintenance and landscaping work, which is currently delegated to the volunteers who make up the UAG's association leadership boards—for example, embedding a paid position for this work in Vantaa's Youth Summer Job Program (*Nuorten kesätyöseteli*). While tailored to the context of the Vantaa UAG network, these recommendations highlight not only the added value of the qualitative interview data in interpreting the csQCA's configurations of conditions but also in constructing stakeholder recommendations for future action. Each of these potential interventions stands to be supported by joint collaboration and action between the historically siloed urban planning and multicultural affairs departments at the municipal level, as well as via improved opportunities for deliberative processes along the stakeholder power hierarchy.

At best, these findings suggest that though new contacts—including boundary-crossing contacts—are formed within the micro-public of UAGs, they evidence little potential for scaling resource transfers across social distance. At worst, these findings evidence the potential for encounters within the micro-public to foster intergroup tension and intolerance, thus reproducing challenges between social, and particularly, ethnic groups. Together these findings reinforce the critique against the implicit assumption behind many social mixing programs: spatial proximity and frequent everyday encounters across social difference—despite the common interest shared by individuals within the case micro-public—are not alone sufficient to foster positive social encounters, scaling or otherwise. They also highlight the potential for further research into deliberative processes to address power hierarchies and cultural misunderstandings, as well as additional policies and practices to remove barriers for minority groups in accessing the micro-public.

Thus, while the overarching research points to the micro-public scale—rather than the neighborhood scale—in drawing people together, the results from this study highlight the potential for intergroup tension within micro-publics when no moderator is present. We chose UAGs as our case micro-public in this study, based on the assumption that the threshold to access UAGs is lower than other micro-publics, but we found they too had socially-selective barriers regarding who can access the spaces. Methodologically, this "invisible fence" was only revealed when the interview data were integrated with data from the name generator survey. In combination with our theoretical approach, these results imply that while micro-publics may bring socially-diverse urban residents together, it's critical for future research to consider which micro-publics bring which social groups together, and what potential barriers raise the threshold for accessing the spaces.

Acknowledgments

We would like to sincerely thank the academic editors of this thematic issue, Gil Viry, Christoph van Dülmen, Marion Maisonobe, and Andreas Klärner, as well as the two anonymous reviewers for their valuable and helpful comments on earlier drafts of this article. We would also like to thank the City of Vantaa for collaborating in the early stages of this research, particularly Laura Muukka, Tiina Kristiansson, and Henrik Lönnqvist. Further, we also disclose receipt of the following financial support for the research, authorship, and/or publication of this article: Suburban Program 2020–2022 (Lähiöohjelma), grant number VN/12050/2019-YM-1, and the cities in the Helsinki Capital Region, that partially funded the research positions of SC and IRL via Urbaria.

Conflict of Interests

The authors declare no conflict of interests.

Supplementary Material

Supplementary material for this article is available online in the format provided by the author (unedited).

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