Co-Creating Safety and Security? Analyzing the multifaceted field of co-creation in Finland

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Abstract

Complexity is said to be on the rise in the security environment and co-creation has been proposed as one of the ways to respond to the situation. Through co-creation, complexity is addressed by a plurality of actors and actions, instead of by any single authority or recipe. Such an approach is the main premise of the Finnish Concept for Comprehensive Security. This article seeks to answer the question of how co-creation occurs as part of societal safety and security functions in Finland and what kind of challenges and problems are involved therein. The focus of the article is on the regional and local levels of action and on the public-sector / civil-society interface. The data informing the study are 31 small-group discussions that took place in so-called security cafés. The article uses the modified ladder of safety and security co-creation derived from previous research to provide its analytical framework. The ladder of co-creation proved to be a useful analytical tool to address the phenomenon and to illustrate the multifaceted and context-dependent nature of safety and security co-creation. Results indicate that at present co-creation within the safety and security functions in Finland seems to focus more on action-oriented co-production. Citizens as volunteers participate in the functions of producing safety and security, but talk-centered, planning-oriented, co-creation seems to be less common. The data also provide clear indications of the darker sides of co-creation. Co-creation may be symbolic and tokenistic in that it remains at a rhetorical level. The data also offer examples of co-contamination (the lowest level of the ladder of co-creation). These examples were related to the roles of spontaneous volunteers and emergent citizen groups.

Keywords: co-creation, safety, security, civil society, Finland

Introduction

Understanding and working under complexity has begun to be accepted as the *new normal* in public-sector leadership (Raisio and Lundström 2015; Doz et al. 2017). Co-creation has been suggested as one way to tackle this complexity. The premise of co-creation is that public authorities "tap into the experiences, resources, energies, and ideas of users, citizens, civil-society organizations, and private firms" (Torfing, Sørensen, and Røiseland 2019, 800). Complexity is then addressed by a plurality of actors, instead of any singular authority. In this article, co-creation is understood as a continuum of various modes of cooperation between public actors (politicians, public-sector managers, and front-line staff) and private actors (service users, voluntary groups of citizens, NGOs, and private firms, among others) running all the way from co-implementation to collaborative innovation, and not forgetting the possible negative aspects of co-creation.

As a modus operandi, co-creation has become familiar in the domains of safety and security (Degnegaard, Degnegaard, and Coughlan 2015; Eijk 2018). The growing interest in co-creation is also visible in Finland and is particularly evident in the Finnish Concept for Comprehensive Security. In *the Security Strategy for Society*, comprehensive security is defined as follows: "Comprehensive security is the Finnish cooperation-based preparedness model, in which the vital functions of society are jointly managed by the [public] authorities, business operators, [non-governmental] organisations and citizens" (Finnish Government 2017, 7). This comprehensive security model provides the context for this article, while the modified ladder of safety and security co-creation—in which co-production is considered a limited case of co-creation—provides its analytical framework. The aim is not to offer a simplistic or one-sided description but to highlight the multifaceted and context-dependent nature of safety and security co-creation and to expose its benefits and demerits.

The focus of the article is on the regional and local levels and on the public-sector/civil-society interface, which is a consequence of the research project on which this article is based. The project, implemented in 2017, aimed to analyze the role of non-governmental organizations (NGOs) in the context of comprehensive security. Eight ad hoc regional forums—known as security cafés—played a part in the associated extensive data gathering. A total of 188 people from the public sector and NGOs participated in the forums. The forums discussed the functionality of cooperation between NGOs and public authorities; the financing of NGOs; the extent and competence of NGOs; and the role of spontaneous volunteers and emergent citizen groups.

This article uses the data gathered from the forums (31 transcribed small-group discussions) and co-creation as a theoretical framework to answer the following research question: How does co-creation occur as part of societal safety and security functions? The task is divided into two sub-questions:

1. In what ways do the co-creation forms of safety and security described in practice (in the context of comprehensive security) match the diversity of co-creation types described in the literature (in relation to the ladder of safety and security co-creation)?
2. What kind of tensions—in the form of challenges and problems—are associated with co-creation of safety and security in both practical and theoretical terms?

The article begins with a review of the co-creation literature. After presenting the context, data, and methods, the observations of Finnish public authorities and NGO representatives at the regional and local level on co-creation practices and related challenges and problems are analyzed. Finally, a discussion section binds these results to the theoretical framework of the article. The conclusion section includes an outline of further potential research questions.

Defining Co-Creation

Co-Production versus Co-Creation

Co-production and co-creation are related concepts that have evolved alongside the three waves of public administration theory development (see Torfing, Sørensen and Røiseland 2019; Sorrentino, Sicilia and Howlett 2018). The classic *public administration* (PA) paradigm was characterized by an authoritarian public sector and asymmetric power relations. Since the 1980s, the *new public management* (NPM) paradigm has come to dominate discussion on the public sector. Advocates of NPM responded to the criticism of the previous PA paradigm by highlighting the role of citizens as consumers with exit and voice options. Finally, a more recent paradigm, *new public governance* (NPG), has emphasized, in contrast to the hierarchies of PA or the competition of NPM, a variety of collaborative arrangements between the different societal actors. Pestoff (2018) also identifies a fourth regime. In this communitarian regime, "the role of service users is to provide many public services by and for themselves, with little or no public support, sometimes alongside, but often instead of the professionals" (ibid., 32).

Both co-production and co-creation are hampered by definitional ambiguity. In a systematic literature review on these concepts, Voorberg, Bekkers, and Tummers (2014) concluded that the concepts of co-production and co-creation are largely used interchangeably; an approach that applies equally to their definitions and objectives. The definitions underline how citizens are valuable partners in public service delivery, even though those definitions might differ in terms of the level of the partnership. Objectives are related to issues such as securing more effectiveness, efficiency, and customer satisfaction, and increasing citizen involvement. However, as Voorberg, Bekkers, and Tummers (ibid.) point out, this interchangeability of the concepts raises questions of conceptual clarity.

The current study leans on the conceptual clarity provided by Torfing, Sørensen, and Røiseland (2019) whose study viewed co-production as a limited case of co-creation. As such, co-production takes place only between two types of actors, for example, between service providers and users (see Osborne, Radnor and Strokosch 2016; Nabatchi, Sancino and Sicilia 2017). In addition, co-production focuses merely on the co-implementation of pre-defined public services, and thus lacks the capacity for innovation and system transformation. Co-creation, in contrast, is defined as,

> a process through which two or more public and private actors attempt to solve a shared problem, challenge, or task through a constructive exchange of different kinds of knowledge, resources, competences, and ideas that enhance the production of public value in terms of visions, plans, policies, strategies, regulatory frameworks, or services, either through a continuous improvement of outputs or outcomes or through innovative step-changes that transform the understanding of the problem or task at hand and lead to new ways of solving it. (Torfing, Sørensen and Røiseland 2019, 802)

Co-creation is then not only about co-implementation, but also about co-initiation and co-design. Similarly, co-creation might involve a variety of actors instead of only two types. In the above definition, the term *public actors* refers to politicians, public-sector managers, and frontline staff, and the term *private actors* to service users, voluntary groups of citizens, NGOs, and private firms, among others.

To aid conceptual clarity, this article utilizes and develops *the ladder of (safety and security) co-creation*, originally developed by Torfing, Sørensen, and Røiseland (2019). The aim is to create a typology that considers different levels of co-creation, including co-production but also the darker sides of co-creation. This is because definitions of co-creation often highlight its innovative and transformational potential and view it in an overly positive light (Steen, Brandsen and Verschuere 2018).

The Ladder of Safety and Security Co-Creation

Various typologies are used to illustrate the interface between the public sector and civil society. One of the best known is *the ladder of public participation* developed by Arnstein (1969), which comprises eight levels of public participation; from manipulation and therapy all the way to delegated power and citizen control. Arnstein's typology was a product of its time and has since both been criticized and developed (see, e.g., Tritter and McCallum 2006; Hurlbert and Gupta 2015). Torfing, Sørensen and Røiseland (2019) point out how the notion of citizen control in the form of the self-government of the people, as idealized by Arnstein, has become antiquated. In response to an ever more complex operating environment, which calls for pluralism, instead of any such single actor strategy, Torfing, Sørensen and Røiseland present their own typology, the aforementioned *ladder of co-creation*.

The first level of the ladder concerns public authorities aiming "to empower citizens to enhance their capacity to master their own lives and encourage them to co-create the services they are offered by the public sector" (Torfing, Sørensen, and Røiseland 2019, 804). In the context of safety and security, this is strongly reflected in household and individual preparedness. Examples include developing family emergency plans, having a home emergency supply kit, and taking part in emergency-related training programs, such as first aid courses. Ideally, such preparedness would ease the burden on emergency services agencies, which could then focus on providing assistance to those individuals who are most in need (Schoch-Spana 2012). However, the challenge is the low level of preparedness, often evidenced by the individuals' focus on response to foreseeable crises and disasters, instead of seeing preparedness as an ongoing daily mission to prepare for unforeseeable situations too (see Kapucu 2008).

On the second rung of the ladder, citizens engage "in creating value for other citizens through voluntary work carried out in close cooperation with public employees and thereby improving existing services through continuous adjustments and the creation of synergies" (Torfing, Sørensen and Røiseland 2019, 804). Instead of being "pure client co-producers" these citizens are then "pure volunteers" with a strong focus on the public good and are not themselves direct beneficiaries of the co-production processes (Musso, Young, and Thom 2019, 475). In safety and security domains, this kind of value creation seems to take place particularly in the activity of NGOs, such as volunteer firefighter associations and local Red Cross and Red Crescent organizations (see Dostál 2015). The growing role of spontaneous volunteers and emergent citizens groups has also been highlighted (e.g., Scanlon, Helsloot, and Groenendaal 2014; McLennan, Whittaker, and Handmer 2016). One main challenge related to NGOs is volunteer sustainability. This is adversely affected by growing NGO regulation and bureaucratization as well as conflicts with family and work commitments (see Malinen and Mankkinen 2018; McLennan and Kruger 2019). Writing of challenges related to the management of spontaneous volunteers and emergent citizen groups, Harris et al. (2017, 353) highlight the involvement/exclusion paradox, defining it as "helpers wanting to be involved, juxtaposed with pressures for managers to exclude them".

The third level of co-creation takes place "when individual or organized groups of citizens provide input into the design of new tasks and solutions through crowdsourcing, focus-group interviews, written consultations, and public hearings that only allow a limited dialogue" (Torfing, Sørensen, and Røiseland 2019, 804–805). A well-known example of safety- and security-related crowdsourcing is the volunteering that took place to digitally aid the investigation of the downing of Malaysian Airlines flight MH17 in 2014 (Sienkiewicz 2015). As an example of a face-to-face event, in Chicago, consultative *beat meetings* are a mixture of focus-group interviews and public hearings. In these regular meetings, which are open to all, residents exchange information about local problems with the police

(Skogan 2016). Challenges cited relating to consultative processes include using co-creation as a tool with a merely legitimizing function (e.g., Virta and Branders 2016) or placating (Lee Jenni, Peterson, and Katz 2015).

On the fourth level, "public and private actors engage in a mutual dialogue at ad hoc meetings aimed at designing new and better solutions and coordinating their implementation" (Torfing, Sørensen and Røiseland 2019, 805). In relation to the previous level, events on this level of co-creation are more ad hoc, dialogic (even deliberative), and solution oriented. A good example is a multi-stakeholder summit on crime prevention, described by Degnegaard, Degnegaard, and Coughlan (2015). At the summit, 96 innovation professionals worked with the Danish police to specify new solutions to crime prevention challenges. Another example is a deliberative planning event that took place after Hurricane Katrina in 2006, and which was attended by over 2500 residents of New Orleans (see Wilson 2008). During the day-long event, participants received information, took part in facilitated small-group discussions, voiced their opinions on rebuilding efforts, and generated new solutions. The same challenges apply here as with the previous level.

Finally, the fifth level of co-creation is reached "when relevant and affected actors from the public and private sector participate in institutional arenas that facilitate collaborative innovation based on joint agenda-setting and problem definition, joint design and testing of new and untried solutions, and coordinated implementation drawing on public and private solutions" (Torfing, Sørensen and Røiseland 2019: 805). Co-creation then takes place with a range of stakeholders and at all stages of the process. In the domains of safety, and especially (national) security, such examples are rare. One potential example is a community-based disaster risk management project, described by McLennan (2018). In that three-year Australian *Be Ready* project, the aim was to have more local households prepared for bushfires. Various stakeholders participated in the project, including representatives

from the community association, volunteer fire brigades, and emergency management departments. There was also direct engagement with other community groups, residents, and private firms. A significant challenge, or even a barrier, to co-creation at this level is the fact that questions of national security, in contrast to bushfire preparedness, are not easily opened to co-creation (cf. Torfing, Sørensen, and Røiseland 2019).

The above-described ladder of co-creation is missing the negatively perceived levels present in Arnstein's (1969) model. The current research therefore attempts to make the typology more realistic by adding two more rungs to the ladder. The penultimate level depicts co-creation processes that are symbolic and tokenistic: These are processes where public authorities—consciously or unconsciously—involve citizens in co-creation processes that are inadequate and at their worst, mere illusions of participation (Virta and Branders 2016). Lee Jenni et al. (2015) provide an example of public participation efforts related to environmental decision-making on United States military land. The study identified strong rhetoric supporting two-way public participation, but the reality was about one-way communication, from military personnel to civilians.

The lowest level of the ladder is co-contamination. Williams, Kang, and Johnson (2016, 694) define co-contamination as "anything harmful or undesirable added to that which is wholesome or unadulterated, in turn, making that service, process or product dirty, dangerous and impure." In the event of co-contamination, public value is influenced negatively, although that can be a result of intentional or accidental actions. Police/community co-production and its "emergent 'dark' pathologies" can be used as an example (Brewer and Grabosky 2014, 146). The fatal shooting of Trayvon Martin by neighborhood watchman George Zimmerman in 2012 shows how public value diminished through the actions of a citizen co-producer; and how the impacts spread to society at large. In this case,

Zimmerman was not the lone contaminant, and the outcome was also influenced by underlying pathologies of police/community co-production (Williams, Kang, and Johnson 2016; Brewer and Grabosky 2014).

The modified ladder of co-creation is illustrated in Figure 1. The ladder has been divided into three sections. The first encompasses the dark side of co-creation that includes the two lowest level rungs, (1) co-contamination and (2) symbolic (and tokenistic) co-creation. The second section comprises forms of co-production, that is, co-implementation (3) for oneself and (4) for others. In contrast to ladder rung 3 where the case is more of a matter of individual empowerment, on ladder rung 4 public authorities start to work in closer cooperation with volunteers to implement services, ideally creating collective empowerment.

The last section encompasses co-creation as traditionally understood. The highest rungs are then co-design with (5) limited dialogue and (6) with robust dialogue, and (7) co-existence of co-initiation, co-design, and co-implementation. While on ladder rung 5 the case is more of a one-way communication—public actors wanting to obtain feedback from their stakeholders—on ladder rung 6, the aim is genuine two-way communication between the public and private actors, that is, joint solutions are sought. On ladder rung 7, the approach is most comprehensive and can extend as far as joint agenda-setting and problem definition. Ideally, the variety of stakeholders increases on the higher-level rungs. In addition, the higher the rung, the greater the potential for innovation. However, the ladder should not be understood as a hierarchical model.

***** Figure 1 about here *****

Even though for Torfing, Sørensen and Røiseland (2019, 805) the highest rung is "the ultimate goal of co-creation," in this article this is considered as context-dependent, in that the context determines what level is appropriate. As Vallance pointed out (2015, 1298), "the context should guide the decision-making process used." Moreover, as Blackman et al. stated (2017), the nature of the problems may change over time; for example, when a short-term rescue and relief operation evolves into a longer-term recovery activity. Consequently, when the complexity of the issue increases, a more participatory approach becomes necessary.

Context, data, and methods

Context

The guidelines for the Finnish Concept for Comprehensive Security are stated in the *Security Strategy for Society* (Finnish Government 2017), which lays out the general principles governing preparedness in Finnish society. Preparedness is based on the principle of comprehensive security in which the vital functions of society are jointly safeguarded by public authorities, business operators, NGOs, and citizens (see Figure 2). Vital functions such as defense capability, internal security, and the functional capacity of the population and services are defined in the strategy as being essential for the functioning of society and to be maintained in all situations. The foundation of security strategy is thus a collaboration between security actors working together at every level of society from municipalities to government, while still maintaining the clear responsibilities of public authorities. The approach is line with the idea of "a systems-based view of security policy" (Griffith 2018, 9).

Ideally comprehensive security can be understood as a cooperation model in which a broad group of actors share and analyze security information, prepare joint plans, and train and work together (Finnish Government 2017). Such systems are considered robust because all relevant actors recognize the

need to work together in a crisis (Salonius-Pasternak 2017). As Griffith (2018, 9) states, "comprehensive security planning in Finland is more than just political rhetoric."

**** Figure 2 about here *****

The *Security Strategy for Society* defines the different roles of the societal actors in co-creating safety and security (see Finnish Government 2017). Public administration, the authorities, universities, and research institutions are seen as having a central role in the drafting, steering, and development of preparedness legislation as well as in the implementation of the preparedness measures. The private sector has a key role in the process of ensuring the functioning of the Finnish economy and the associated infrastructure. NGOs are also considered to have an important role in the preparedness for crises. Their role includes providing services, coordinating the participation of volunteers in those activities supporting public authorities, and maintaining special expertise in such areas as contingency operations. In addition, the *Security Strategy for Society* highlights the role of active citizens. Its provisions stress that knowledge and skills possessed by individuals, alongside their security-oriented attitude, are the basis of a resilient society.

In the context described above; it seems increasingly relevant to understand the underlying logic of co-creation as part of the functioning of a resilient society. It can be inferred from the existing theory that co-creation does not appear by itself, nor is it always necessary, or even always desirable. Collaboration between several different actors with differing value creation logics involves a constant balancing of interests, needs, and possibilities that creates tensions that must be considered in everyday action (Valtonen 2010).

Data and methods

This study is based on a research project scrutinizing the role of NGOs in supporting public authorities' security functions (see Jalava et al. 2017). The project, implemented in 2017, focused on the activities under the control of the Finnish Ministry of the Interior and Ministry of Defence, and particularly examined perspectives on the functionality of the cooperation between NGOs and public authorities, in the context of comprehensive security. A large group of public authorities and representatives of NGOs at the national, regional, and local levels contributed to the research. However, because the focus of this article is on the local and regional levels, it uses only a portion of the material, excluding the interview data elicited from national level actors. The current study thus focuses on the data gathered through eight regional forums, which were called security cafés. Those security cafés convened between June and September 2017.

The research project included establishing eight security cafés in large cities and small towns in Finland. Those security cafés reflect the ideals of deliberative democracy (see Ryan and Smith 2014; Bächtiger et al. 2018) and are a combination of the more established citizens' jury and world café methods[i]. In previous projects, the security-café method was used to involve ordinary citizens in deliberations on issues related to the domains of safety and security (see Puustinen, Raisio and Valtonen, 2020). In the current study, the aim was to harvest the viewpoints of local and regional public authorities and NGO representatives.

Public authorities were asked to nominate both regional- and local-level representatives for the security cafés. Representatives of NGOs were sourced through key persons such as the heads of preparedness of the Finnish Red Cross and via associations' websites and social media channels. The aim was to achieve a heterogeneous group (e.g., by age and gender) of 25 participants for each security café. If in the course of the registration process it appeared that, for example, women were not signing

up, the contact persons were asked to convey the invitation particularly to women. Despite this positive action, the number of women participating in the security cafés was far lower than the number of men. Young people were also under-represented. Nevertheless, these challenges related to composition also reflect both the real composition and challenges of volunteering in the safety and security domains. The target of having 25 (or close to 25) participants was achieved in seven security cafés. The exception was the smallest municipality in terms of population (Enontekiö in northern Lapland, with a population of less than 2000). The composition of the security cafés was engineered so that the actors in the NGOs represented approximately two-thirds of the 188 participants (see Table 1).

**** Table 1 about here *****

The key objective of the recruitment process was to ensure that the final set of participants would reflect the idea of comprehensive security. The broad outline of participants' background organizations is described in Table 2. Representatives of public authorities ranged from those who provide so-called soft services (e.g., municipal management and hospital districts) to those providing so-called hard services (e.g., the police and defense forces) (see Sorrentino, Sicilia, and Howlett 2018). The security-café participants were mostly senior or middle management level, but there were also more junior ranked attendees including police patrol officers, among others. The NGO representatives were from primary response emergency management NGOs (e.g., Finnish Lifeboat Institution and volunteer firefighter associations), expanding support emergency management NGOs (e.g., The Martha Organization and the National Defence Training Association of Finland), and extending community NGOs (e.g., community associations and SámiSoster that represents the interests of the Sámi minority) (see Dynes 1970; McLennan and Kruger 2019). These participants were both NGO employees and volunteers.

***** Table 2 about here ******

The security cafés convened on weekday evenings and for three hours. Following the preliminaries, the participants were briefed on the theme of the evening. The participants were split in advance into three or four heterogeneous groups. Each group had an external facilitator who sought to ensure that no single participant dominated the discussions and that everyone was heard. Small-group discussions focusing on the themes of the research project lasted for two hours. Themes discussed included the cooperation between the NGOs and the public authorities in a particular municipality or region, including good/best practices of cooperation; specific regional features (e.g., floods, long distances, the Finnish archipelago, etc.) that affect safety- and security-related activities; the legal, ethical or other potential obstacles to cooperation; and the role of spontaneous volunteers and emergent citizen groups, which in Finland are often classified under the concept of the *fourth sector* (see Raisio et al. 2019).

Each of the 31 small-group discussions were recorded and transcribed verbatim, producing 1261 pages of single-spaced text. The data were analyzed using qualitative content analysis. Based on the theoretical framework of the study, the main categories for the coding process were formed around the seven levels of co-creation, as illustrated in Figure 1. The qualitative material was coded under these particular categories. Subsequently, each category was divided into subcategories as required. Two of the researchers were already familiar with the material in advance. One of them was responsible for the initial coding process. The other researcher took part in the review of the coding, reviewing the coding results independently. Subsequently, points of disagreement between the researchers were discussed, and co-creation practices raised by the security-café participants were transferred to another level of the ladder of co-creation when necessary.

The aim was not to quantify the data—which might have involved counting how many cases are found on each rung of the ladders—but to seek to qualitatively outline the multifaceted field of security and safety co-creation in Finland by offering interesting examples from each rung of the ladders. Where particularly relevant, for example in order not to overemphasize some cases, the number of comments is included when presenting the results. The participants in the security cafés agreed to the small-group discussions being recorded, but their anonymity is preserved by attaching only a public authority or an NGO label (in addition to the number of the security café, SC1–SC8) when using direct quotes. All quoted material from the study has been translated from Finnish into English.

Results

The results of the analysis are presented in the following three subsections. The first subsection presents aspects of *co-production* as perceived by the café participants (relating to ladder rungs 3 and 4, see Figure 1). It should be noted that co-production is understood here as a limited case of co-creation, highlighting the aspect of co-implementation. The second subsection covers the different aspects of broader *co-creation*, highlighting the aspects of co-initiation, and especially, co-design (ladder rungs 5, 6 and 7). The *dark side of co-creation* (ladder rungs 1 and 2) is dealt with in the last subsection.

Co-producing safety and security

Although the discussions in the small groups focused mainly on voluntary work carried out in close cooperation with public authorities (ladder rung 4), participants also raised the role of the individual citizen, that is, how one can enhance the capacity to master one's own life in the context of safety and security (ladder rung 3). Self-preparedness and being able to act in a crisis were seen as the responsi-

bility of every citizen. Issues mentioned included incipient fire suppression and having a home emergency supply kit; however, the security-café participants were skeptical of people's ability to act in real crisis situations, and concerns were raised that many people today lack everyday skills.

There was a clear contrast in perceptions of the issue between urban environments and rural areas. As one participant stated: "*inhabitants of the archipelago manage. They are used to being self-sufficient. They have it in their blood*" (SC8, public authority). Particularly in relation to urban environments, it was considered that "*people in Finland have gotten used to there being no need to be prepared, as nothing [bad] ever occurs*" (SC2, NGO), and if something takes place, then "*citizens have a strong expectation that [emergency management organizations] will come and, if necessary, help*" (SC2, public authority).

Café participants saw that the issue of self-preparedness could be positively influenced by, among other things, training provided by the NGOs. As a recent example, the *72h* preparedness concept[ii] was discussed. The 72h training was organized with various NGOs and is provided by local voluntary instructors, and aims to increase self-preparedness so that individuals, especially in an urban environment could survive for 72 hours unaided in a crisis situation. In addition, various software options were mentioned: The *112 Suomi* mobile application[iii], which aids in locating emergency calls, was particularly appreciated by the emergency management organizations: "*It has really made our work much easier. We immediately have the coordinates of the right place*" (SC4, public authority). All such training and applications were seen to have a positive impact on developing society's resilience. As one participant stated, "*The purpose of [this training] is that no matter what the situation, we [citizens] would then not be the first to shout out for help, but that maybe we can even give that help*" (SC6, NGO).

The contrast between urban and rural areas mentioned above is also reflected in the cooperation between public authorities and NGOs (ladder rung 4). This was seen most clearly in discussions that took place in the two security cafés implemented in the city with the largest population and the town with the smallest population. Participants in the latter café expressed strong concerns that, due to the trend for centralization, public authorities providing hard services are disappearing from the sparsely populated areas. This negatively affects, for example, response times: "*The geographic distances here are so enormous that a single emergency call can take us 500 kilometers*" (SC4, public authority). The diminishing presence of public authorities was consequently seen as one of the reasons for the increasing importance of NGOs. Café participants, however, emphasized that, due to public authorities' liability for official acts, most emergency- and security-related tasks cannot and should not be outsourced solely to volunteers: Public authorities should continue to lead statutory activities and preferably be as close to communities as possible, so that they retain sufficient local knowledge.

Because of the large number of public authorities, the level of volunteer support required in urban areas was considered to be far lower. As one participant in the security café in the largest city stated, "*there are so many public authorities here that their heads are knocking together, so they do not need much basic support*" (SC5, public authority). In addition, the participants felt the range of volunteers needed in an urban environment was more limited, so for example, for the rescue services, the main collaborators were volunteer fire brigades and for the Coast Guard, the volunteers of the Finnish Lifeboat Institution. In contrast, in more sparsely populated areas, a greater range of actors were involved, including community associations and area specific actors such as the reindeer-herders in Finnish Lapland. However, it should be noted that the above views are based on normal conditions. In more severe society-wide crises, volunteers were seen to play a more significant role in the urban environment too.

Regardless of geographic location, the security cafés were united in noting a strong concern about the decline in numbers of volunteers: "*One of the biggest risks, if you think 10 years ahead, is that we do not get new volunteers*" (SC1, public authority). The average age of volunteers is increasing, young people do not want to commit themselves to voluntary work like the previous generations did, although the actual number of available volunteers in any given situation is debatable. It was pointed out that many volunteers work in several different NGOs and this can give a false picture of the volunteer resources available in a crisis.

Café participants mentioned several ways in which the public authorities could influence increasing the number of volunteers as co-producers of safety and security. One central factor was that there would have to be enough actual opportunities to support public authorities in crises, and that volunteers would be given true responsibility: "*You would disappear too if there's nothing to do*" (SC1, NGO). In volunteer work, positive feedback from the public authorities can also have a significant impact: "*Volunteers are led by appreciation and not by criticism […] Sometimes just a basic 'thank you' is enough*" (SC6, NGO). Overall, there was a common understanding throughout the security cafés that if the role of volunteers is to be strengthened, their work should be supported more than at present. The state should then ensure adequate operating conditions for NGOs.

Despite the above concerns, the co-production of public authorities and NGOs was mainly perceived to be a positive. This was particularly the case for those NGOs established solely for safety and security purposes and that were therefore familiar to the public authorities. One of the strongest examples highlighted in the data was the long-lasting and mutually respectful cooperation between the Coast Guard and the volunteers of the Finnish Lifeboat Institution. Co-production is reflected, for example, in the audit system: The Coast Guard audits all volunteer units, so they know the existing capacity of the volunteers. As one café participant said: "*[The Coast Guard] really knows what we*

are able to do and who we are. We practice together and we complete many emergency tasks together. There can be no complaints about this, as the [cooperation] works extremely well" (SC5, NGO). In addition, contractual cooperation was perceived positively. This was especially the case between the fire and rescue departments and volunteer fire brigades: "*Well, I think it's good to have a clear contract that defines what the rescue service wants from us. We are preparing for it and we will do our best to fulfill the contract*" (SC6, NGO). Ideally, actions like this undertaken on a larger scale would reduce the general concern that public authorities cannot know the capacities of the volunteers well enough, and also that the volunteers are not sufficiently clear on what public authorities expect from them.

In addition to the discussion on the organized volunteers of the third sector, the café participants addressed the issue of the fourth sector comprising spontaneous volunteers and emergent citizen groups (see also Raisio et al. 2019). Such activity was described, for example, as "*pop-up volunteering*" (SC3, NGO). Traditional volunteer culture was seen to be changing in that people no longer want to commit themselves for long periods of time: "*I believe that quite a few of these 'wild and free' have a strong desire to help, but who do not want to commit themselves to anything*" (SC5, NGO). In addition, the growing role of technology was seen as an underlying factor in the perceived growth of the fourth sector. As one participant explained, "*people go to Facebook or to some other instant messaging groups and they organize themselves there… No organized association coordinates these activities*" (SC8, NGO). One often-mentioned example of fourth-sector activity was volunteers spontaneously converging at search sites and the emergence of unofficial search groups. As an example of scalability of the fourth sector, the European refugee crisis of 2015 was frequently raised.

Co-creating safety and security

The discussion on co-creation (ladder rungs 5, 6 and 7) was significantly overshadowed by the discussion on co-production (ladder rungs 3 and 4). Although this situation was certainly influenced by the topics chosen for the small-group discussions, there are also more fundamental reasons: One such related to the traditional division of work between public authorities and volunteers. As one participant stated, "*we make the plans ourselves. We do have cooperation, it is just that we do not need to include [NGOs] in the design [of the plans]*" (SC8, public authority). Similarly, various NGO representatives highlighted the action-oriented nature of co-production more strongly that the talk-centered nature of co-creation: "*If we just talk and talk, it is the same as doing nothing. After a while people get bored. So, being action-oriented is necessary here*" (SC1, NGO). However, these more traditional views were also challenged; for example, one café participant shared the following ambition, reflecting the ideals of co-creation: "*We should move from cooperation to [truly] 'working together.' When we, for example, train together, educate ourselves together, and plan together, then that is working together [instead of just cooperating]*" (SC8, NGO).

In addition, the café participants raised the challenges related to the time required to participate. First, the office hours kept by public authorities were seen to hinder the participation of volunteers, for example, in preparedness planning. The challenge was that while public authorities responsible for planning activities work mostly during the day, many volunteers would be able to participate only in the evenings and at weekends. There was seen to be friction in handling the issue: "*Someone should be able to flex in some direction, but who is it?*" (SC1, NGO). Secondly, the same challenge applies to employees and volunteers within NGOs. NGO employees were perceived to have better options to participate in different co-creation functions. This may lead to the voice of volunteers not being heard: "*The volunteers who do the actual work are absent*" (SC2, NGO).

Although co-creation practices did not dominate small-group discussions, café participants were nevertheless able to provide some examples of such practices. For example, on ladder rung 5, the potential of a traditional survey method was highlighted. Surveys dealing with welfare and safety and security issues were suggested to be, for example, in highlighting current trends, such as the insecurity experienced by the elderly. In addition, various safety and security-related community meetings were mentioned, even if these seemed to be mainly one-way communication, from public authorities to residents.

Emergency preparedness exercises appear to be the most visible case of co-creation that emerges from the data. These exercises could be positioned on different levels on the ladder of co-creation, depending on their specific nature. Examples discussed in the security cafés would be located somewhere between ladder rungs 5 and 6. They were action-oriented exercises, which also included dialogue to some extent; for example, large-scale exercises, that last for several days and involve a range of societal actors, generally ending in a cooperative debriefing event. In addition, elements of pre-co-design were present: "*We plan the exercise together. It is in everyone's interest*" (SC5, NGO). However, the timing challenges discussed above still apply: "*Large exercises are never conducted on weekends, when there would be a huge rush [of volunteers], because public authorities do not want to practice at weekends*" (SC6, NGO).

In turn, service design, described in one of the small groups, is well suited to exemplify ladder rung 6. In this particular instance, young people took part in co-designing police services: "*They came up with some brilliant ideas on how they would like to interact with the police, what they want from the police, and how they would like the police to behave and act*" (SC1, public authority). In addition, café participants thought about setting up forums such as deliberative security cafés, which can also be included on rung 6. An example of a more continuous forum that was mentioned in several security

cafés is that of regional committees of the Voluntary Rescue Service—a network of volunteers from 53 NGOs, coordinated by the Finnish Red Cross. These shared discussion platforms generally meet twice a year and include representatives of all the 53 NGOs as well as representatives of the relevant public authorities.

It remains open to debate whether any of the activity mentioned in the security cafés will reach the highest level of the ladder of co-creation (rung 7); however, a few collaborative models are at least fairly close to the top. One example is the Safety and Security Cluster of the Tampere Region[iv], established in 2011. This cluster is a diverse network of safety and security actors. It includes a variety of participants from the public, private, and third sectors. Regional polytechnics and universities have played a key role as coordinators of the cluster, which aims to address a range of safety and security-related challenges through collaboration, for example through sharing information and developing new ideas that can contribute to safety and security. As one café participant said, "*[the cluster] is an excellent vantage point for the third sector too…. In my opinion, it has been a pretty good think tank and a developer that comes up with huge amounts of good ideas*" (SC6, NGO).

The dark side of co-creation

Small-group discussions also shed light on the often-neglected dark side of co-creation. Examples illustrating symbolic and tokenistic practices emerged (ladder rung 2). The general narrative was, as already discussed above, that different national strategies emphasize the volunteers' role, but those roles are not sufficiently supported. One issue raised was that volunteers do not always have a real opportunity to participate owing to a lack of practical support from employers: "*So the ability exists, the willingness exists, everything exists. Moreover, the need [for the third sector] has been identified nationwide. But then what is lacking is that we do not have the authorization [from our employers to participate]*" (SC1, NGO). It was considered that it would not be enough for individual employers to

support volunteers participating in emergency tasks during working hours, but that the support should come from a much higher level: In essence, it should be a national policy, as articulated in the Security Strategy for Society.

Another issue raised was the perceived increase in the regulations imposed on NGOs. The requirements for volunteering to assist in an emergency task were seen as expanding continuously: "*Are we guilty of too high a standard of training requirements? We are demanding almost professional skills from volunteer groups, which is now reflected in the fact that not many people have the chance to participate*" (SC6, public authority).

Co-creation and co-production may also be hampered by public authorities being protective of what they view as their own territory. Emergency tasks are perceived as a job for professionals and volunteers are not always welcome. Professionals might for example think that they are not paid enough because volunteers do the same work for free. As one café participant commented, "*Among professional firefighters, the idea that volunteer firefighters are doing their job [for free] is still quite strong*" (SC5, public authority).

In addition, the exclusive nature of preparedness planning was mentioned. There were examples of NGOs being included in the planning to some extent, but participants also pointed out that in other cases only a few public authorities knew the content of the preparedness plans. This was seen as problematic because volunteers would not know which tasks were planned for them: "*What is planned for the third sector? And the question has not even been asked whether they can accomplish these [tasks]*" (SC1, public authority). Café participants also pondered the extent to which preparedness plans should be kept secret: "*The stamp [classified information] is stuck on many papers quite*

unnecessarily, that is to say, for example, that municipal-level preparedness planning to prepare for a natural disaster is not a secret" (SC7, public authority).

Interestingly, co-contamination (ladder rung 1) was associated almost exclusively with spontaneous volunteers and emergent citizen groups and cooperation with those actors was considered challenging. Café participants, for example, were concerned that among spontaneous volunteers, emotions and excess enthusiasm would predominate while skills and knowledge would be subsumed. At worst, these actions can lead to breaches of law: "*We have good examples of emergent groups within the fourth sector, who might be justifying their acts with an attitude like 'we are now breaching the law, because we have good intentions'*" (SC7, public authority). Café participants thought it especially problematic that public authorities and NGOs did not always know the objectives of fourth-sector actors, which are dictated by their interests and ideologies. In some cases, those objectives could run counter to those of the emergency management organizations. Café participants were also concerned with issues of liability: "*If something happens, for example [a spontaneous volunteer] gets hurt or even dies, then who is accountable?*" (SC8, NGO).

Many of the security-café participants had taken part in search and rescue operations for missing persons and had witnessed spontaneous volunteers converging at the search sites and the emergence of unofficial search groups. The key problem was that these fourth-sector actors often compromised tracks: "*They are going searching like they were wild horses*" (SC1, NGO). That scenario is then related to ladder rung 2 (symbolic and tokenistic practice), as café participants in two small groups in separate security cafés even raised the possibility of misleading fourth-sector actors as an alternative course of action; fourth-sector actors had deliberately been directed to an area that had already been searched. That situation could also easily escalate; for example, fourth-sector actors might take offense when public authorities do not court their involvement in crisis situations. Such a situation had

occurred (in relation to an oil spill response) and prompted media coverage that had in turn stirred widespread discussion of public authorities' operating models and the role of communication.

Participants suggested (in a widely shared narrative) that if the spontaneous volunteers' desire to help could be channeled through third-sector organizations, the volunteers would then not burden public authorities, and would instead become an important resource. Brief training and the possibility of using spontaneous volunteers alongside trained NGO actors were suggested as key activities to control the convergence of spontaneous volunteers and as a way to mitigate tensions around the issue.

Discussion

In this article, a ladder of safety and security co-creation was formulated (see Figure 1) by developing an existing model (see Torfing, Sørensen, and Røiseland 2019). The premise was that the ladder would help outline the multifaceted field of co-creation and expose its benefits and demerits. The model does not seek a juxtaposition between co-production and co-creation but considers co-production as a limited case of co-creation. The model is not hierarchical, although the negative aspect of co-creation should be avoided. Other, more positive, levels of the model should be understood as context-dependent, that is, the context determines the appropriate level of co-creation (see also Vallance 2015; Blackman et al. 2017).

This article analyzed co-creation practices taking place between the public sector and civil society in Finland, in the context of comprehensive security. The theory-based ladder of co-creation seems to be suitable to describe the diversity of co-creation practices, in that there are clear examples of practices on all levels (see Table 3). The small-group discussions that took place in security cafés emphasized action-oriented co-production, as expected. It was important for the volunteers to be able to do

something concrete (to help people), not just talk about it, which implies there is an element of sensation seeking in volunteering (e.g., Perrott and Blenkar 2015) and a sense of commitment to the safety of family, friends, and the wider community (see Tõnurist and Surva 2017).

**** Table 3 about here *****

Establishing and maintaining a strong connection between volunteers and public authorities was considered valuable, which can be seen for example in the way NGO representatives responded to auditing systems and contractual cooperation. The formality was appreciated as a virtue and not considered a negative factor. In contrast, the increasing demand for expertise among the volunteer contingent was considered a possible burden, in that if standards are set too high, volunteers might be deterred from offering their support in times of crisis (cf. Haski-Leventhal, Meijs, and Hustings 2010; see also Haraoka et al. 2012). The situation forms a kind of a paradox where volunteers "would like to have more core responsibilities to maintain their motivation to continue volunteering" when at the same time "the more specific tasks volunteers acquire, the more control and responsibility there is from the state—diminishing also the freedom to choose one's activities" (Tõnurist and Surva 2017, 239).

The contrast between urban and rural areas emerged from the data as a significant issue. In urban areas, high numbers of public authority staff mean it is less often necessary to ask for volunteer help but in rural areas hit by cuts to public authority staff numbers, the support provided by the third sector is increasingly becoming more important (see also Tõnurist and Surva 2017; cf. Musso, Young, and Thom 2019). This research also confirms a finding previously reported in the literature; that volunteer recruitment will continue to be challenging for NGOs (see e.g., Haski-Leventhal, Meijs, and Hustings 2010; Malinen and Mankkinen 2018; McLennan and Kruger 2019). This may eventually lead to *philanthropic insufficiency*, which refers to a volunteering system's "inability to generate resources on a

scale sufficiently adequate and reliable to accomplish the given task" (Dollery, Kinoshita, and Yamazaki 2019, 14; see also Salamon 1987).

The security cafés reported on in the current research also discussed how to empower citizens to enhance their capacity to master their own lives, for example, through people taking responsibility for their own preparedness. However, there was considerable skepticism of the level of such activity. This may be linked to the strong trust in public authorities traditionally reported in Finnish society (see e.g., Staubli 2017): There is a strong belief that if something bad happens, emergency service organizations will come to the rescue in any and all situations. This also reflects the well-known free-rider problem of public goods (see Salamon 1987).

The data here indicate that in Finland, in the domains of safety and security, action-oriented co-production (ladder rungs 3 and 4, see Figure 1) is more common than talk-centric co-creation (ladder rungs 5, 6, and 7). There were examples of robust co-design, such as service design, but many examples on the higher levels of the ladder were rather traditional and of one-way interaction, such as surveys and community meetings. It seems then that in Finland substantial issues (participation in specific activities) dominate procedural issues (participation in decision-making) (see Vallance 2015). It is an interesting question to what extent this is due to volunteers' desire for concrete action (i.e., co-production) and to what extend it is due to authentic participatory options being limited, for example, because of the differing daily schedules of public authorities and volunteers. It may also be that even when given more options and support for co-creation, volunteers would prefer action-oriented co-production over talk-centered and planning-focused co-creation. Action motivates people more than planning does (e.g., Perrott and Blenkar 2015).

The data also offered evidence of two lower levels of the ladder of co-creation. The penultimate level—symbolic and tokenistic co-creation—was not reduced to any particular case of co-creation but was instead considered by the café participants on a more fundamental level. Tokenism and symbolic participation can be regarded as manifestations of solely rhetoric-based co-creation in society that stays on the pages of written strategies and never realizes the concrete action potential of volunteerism. At this level of the ladder, in the worst case, not only implementing, but also initiating and planning safety and security practices becomes something that is fundamentally done *for*, not *with*, volunteers (or citizens in general).

Café participants (public authorities and NGO representatives) did not consider that they themselves might be a source of co-contamination—the lowest level of the ladder of co-creation—but instead blamed the spontaneous volunteers and emergent citizen groups. Such actors were welcomed (as extra pairs of hands) when they could be controlled but seen to constitute a risk when allowed to run wild and free[v]. This attitude aligns with the involvement/exclusion paradox of spontaneous volunteering, as defined by Harris et al. (2017). The café participants' critical views of spontaneous volunteers and emergent citizen groups can at least partly be explained by the fact that in Finland there is no bridge between these outsider emergency volunteers and traditional emergency service agencies. As McLennan et al. described (2020, 10) in the Australian context, prior to building such a bridge (in that case the *Emergency Volunteering and Community Response to Extreme Weather* model), "spontaneous volunteers were primarily viewed as a nuisance and a risk within the Queensland, and Australian, emergency management community. Spontaneous volunteering was also perceived by some in the sector as a threat to the authority and reputation of established EMOs." Ideally such a bridge would help (in Finland too) "to carve out a new space of legitimacy for spontaneous volunteers within the formal governmental authorizing environment" (ibid.).

The results of this study are illustrated in Figure 3. In the figure, co-creation is assessed according to two dimensions: *exploration*—the innovative, transformational side of action—and *exploitation*, the more constricting, institutional side of action (see March 1991; Jalonen, Puustinen, and Raisio, 2020). The upper right-hand corner of the figure describes the ideal co-creation situation, where exploitation and exploration are *ambidextrously* balanced. There is then a possibility to both maintain day-to-day operational capacity and stability, and to innovate *together* in order to adapt to changing circumstances. At its best, such ideal co-creation is characterized by enabling governance. The ladder levels from three to seven can be situated in the figure so that level three is near the *origin* and seven near the upper right-hand corner. When exploration activities decrease and exploitation levels remain high, we may find symbolic and tokenistic co-creation (ladder rung 2, upper left-hand corner in the figure), which is characterized by systemic rigidity and fueled by public authorities wishing to retain full control. Too much exploitation will not foster co-creation. When both exploitation and exploration are absent or at very low levels, the worst-case scenario becomes one of co-contamination powered by systemic distortion (ladder rung 1, bottom right-hand corner of the figure). Value creation diminishes and the situation can easily escalate into unexpected and undesirable effects.

**** Figure 3 about here *****

Finally, the data revealed a phenomenon that was not considered in the original ladder of safety and security co-creation: situations where co-creation is not dominated by public authorities, but instead by NGOs and spontaneous volunteers. This can be labeled pop-up participation or citizen production and is situated at the bottom right-hand corner of the figure. From the perspective of the public authorities, it is a sort of laissez-faire governance where exploration dominates. This includes prosocial (instead of harmful) activities of spontaneous volunteers and emergent citizen groups and independent activities of NGOs in sparsely populated areas. This relates to a communitarian regime, defined

by Pestoff (2018), where citizens become the main service providers and the opportunity for co-creation becomes limited. The downside is that, if citizens do not act to fill the gap left by, for example, non-existent services, some functions of society may remain overlooked, which particularly in the context of security and safety can lead to undesirable consequences (see also Guribye and Mydland 2018).

Conclusions

Co-creation has been proposed as a way to respond to perceived burgeoning complexity[vi]. The argument is that "it takes complexity to beat complexity" (Uhl-Bien and Arena 2017: 10), that is, complexity should be addressed by deploying a multitude of actors and actions, instead of any singular authority or recipe. Such an approach is the underlying premise of the Finnish Concept for Comprehensive Security. This article sought to answer the question of how co-creation occurs as part of societal safety and security functions in Finland, and what kind of challenges and problems are involved in the practice. The data informing this study indicate that the comprehensive security approach extends beyond being mere political rhetoric (see also, Griffith 2018) into the everyday action and functions of many societal actors, as demonstrated by the empirical examples on the rungs of the ladder of co-creation.

With regard to the future applicability of the ladder of safety and security co-creation, the following potential uses can be highlighted. First, the model creates a framework for public authorities to orient the foundations and opportunities for co-creation at different levels of the ladder. The model can help to clarify the role of different stakeholders in planning and decision-making and assists with the selection of the level of co-creation context appropriate to the situation. Similarly, the model can assist volunteers to position their own activities in relation to different levels of co-creation and, if they are

dissatisfied with the current state, the potential to target a level they feel is more appropriate. The ladder of safety and security co-creation is also suitable for teaching purposes, for example, as a component of safety and security training programs.

Nevertheless, it must be stated that the data informing this study do not offer evidence on the participation of business operators and moreover, the available evidence on fourth-sector type activity is limited. Future research on co-creation in the realm of safety and security functions could then beneficially focus on the role of business operators and especially on the role of spontaneous volunteers and emergent citizen groups (see also Raisio et al. 2019). Researchers might investigate the options to include spontaneous volunteers and emergent citizen groups in the co-creation process, while at the same time reducing their susceptibility to risk, while preserving their innovation potential and adaptability. If fourth-sector actors are seen solely as extra pairs of hands, then co-creation begins to emphasize exploitation instead of its explorative potential. Particularly in cases where business operators are actively involved in co-creation processes, the different value creation logic from that found in the public sector and civil society may pose problems and would benefit from further investigation.

Research on co-creation should also adopt a stronger focus on the dark side of co-creation (see also Jalonen, Puustinen, and Raisio, 2020), since despite its popularity, not all co-creation is by definition positive. The processes of co-contamination could certainly be better understood. Another pertinent question for further research is whether the ladder of safety and security co-creation itself should be developed in some way, for example, by adding dimensions to it (cf. Fung 2006), so that it might reflect the complex operating environment even more efficiently. Also, further studies on co-creation processes in Finland would increase the reliability of the results presented in this article, because even though the security-café participants formed a rather large and heterogeneous group of people, they

were probably aware of the meaning of their answers for the funding of the organizations they represented, which might have influenced those answers.

Finally, even though analysis of the impact of the current COVID-19 on co-creation is still in its infancy, interesting observations can already be made. In the Finnish context, preliminary findings have shown that cooperation between public authorities and NGOs appears to have intensified during the pandemic (see Eronen et al. 2020). This effect has mainly related to soft services and the role of expanding support emergency management NGOs and extending community NGOs. The fourth sector has also become active during the COVID-19 crisis: People began spontaneously to help each other, for example by delivering groceries to those in risk groups. There are several interesting questions for further research, for example: How does the dark side of co-creation manifest itself in the context of the COVID-19 pandemic? What opportunities and challenges are involved in the activities of spontaneous volunteers and emergent citizen groups during pandemics? What is the role of primary response emergency management NGOs during severe pandemics?

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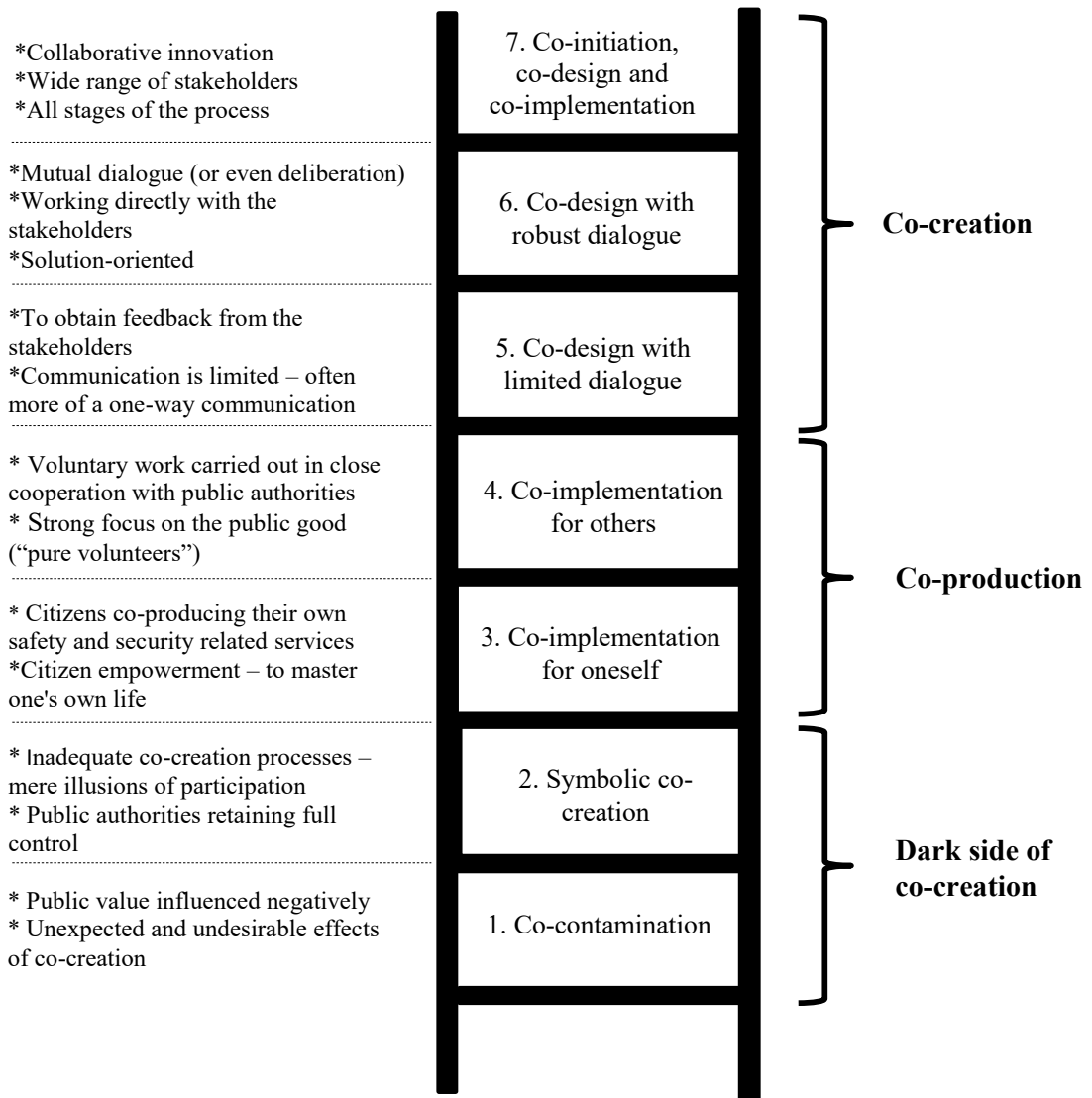
Figure 1. The modified ladder of safety and security co-creation.

Figure 2. Coordinating preparedness in central government, regions, and municipalities (Finnish Government 2017, 11).

Table 1. The composition of the security cafés

	SC 1	SC 2	SC 3	SC 4	SC 5	SC 6	SC 7	SC 8	In total
Participants	26	23	25	15	25	27	22	25	**188**
Women	9	7	11	4	8	8	4	10	**61**
Men	17	16	14	11	17	19	18	15	**127**
Age* <20									
20–34	2	1	1		3	3		1	**8**
35–49	10	4	7	3	7	10	3	6	**49**
50–64	12	5	11	6	11	10	10	10	**75**
>65	1	4	2	3	2	2	2		**16**
Public authorities	10	6	7	7	8	9	6	8	**61**
NGO representatives	16	17	15	8	17	18	15	17	**123**
Other**	0	0	3	0	0	0	1	0	**4**
* Only people who reported their year of birth were included. *** Representatives of a congregation, university, or polytechnic.*									

Table 2. Participants' organizational background

Number of participants	Public authorities / NGOs*
>15	Finnish Red Cross
10–14	Finnish Defence Forces; fire and rescue departments; municipal management; National Defence Training Association of Finland
6–9	Finnish Police; Regional State Administrative Agencies; Voluntary Rescue Service**; Finnish Lifeboat Institution; Martha Organization***; community associations; Finnish Working Dog Association; Finnish Search and Rescue Dog Association; volunteer firefighter associations; League of the National Defence Women; Finnish Reserve Officers' Federation
2–5	Hospital districts; regional councils; Finnish Border Guard; Finnish Air Rescue Society; Finnish Reservists' Association; Finnish Amateur Radio League; Women's National Emergency Preparedness Association; Soldiers' Home Association; SámiSoster****; Finnish National Rescue Association; Federation of Mother and Child Homes and Shelters; universities; polytechnics
1	Finnish Customs; Finnish Association for Mental Health; Finnish Hunters' Association; Guides and Scouts of Finland; Finnish Swimming Teaching and Lifesaving Federation; Finnish Federation of Settlement Houses; game management association; Reserve Officer Women's Heritage League; Automobile and Touring Club of Finland; social welfare and health security association, Finnish Peace-Keeping Veterans' Association; "reindeer master" ****; active civic actor; parish

Several participants represented more than one background organization. Here, the participants' primary organization is considered. In addition, due to local and regional variations in naming practices, and to protect participants' anonymity, these regional and local organizations have been named as far as possible in accordance with their umbrella organization.

*** The Voluntary Rescue Service (VAPEPA) is a network of volunteers from 53 organizations, coordinated by the Finnish Red Cross.*

**** The Martha Organization is a home economics organization that promotes well-being for households and families. It provides information on food and nutrition (e.g., on edible wild plants and home emergency supply kits, etc.)*

***** Two of the security cafés took place in Lapland. It was thus important to include Sámi people. SámiSoster is an organization for social and health affairs of the Sámi. The reindeer master is a chief executive officer of reindeer pasture district.*

LADDER RUNG	EXAMPLES
7. Co-initiation, co-design and co-implementation	- The Safety and Security Cluster of the Tampere Region
6. Co-design with robust dialogue	- Service design - Deliberative security cafés - Regional committees of the Voluntary Rescue Service
5. Co-design with limited dialogue	- Citizen surveys dealing with welfare and safety and security issues - Safety and security-related community meetings - Some emergency preparedness exercises
4. Co-implementation for others	- Co-production between e.g. the rescue services and fire brigades, and the Coast Guard and the volunteers of the Finnish Lifeboat Institution - Spontaneous volunteers and emergent citizen groups
3. Co-implementation for oneself	- Incipient fire suppression - Having a home emergency supply kit - The 72h preparedness concept - 112 Suomi mobile application
2. Symbolic co-creation	- NGOs not included in preparedness planning - NGOs not knowing what is planned for them - Misleading fourth-sector actors, e.g. to an area that has already been searched
1. Co-contamination	- Challenging cooperation with spontaneous volunteers and emergent citizen groups

Table 3. The diversity of co-creation practices emerging from the analysis.
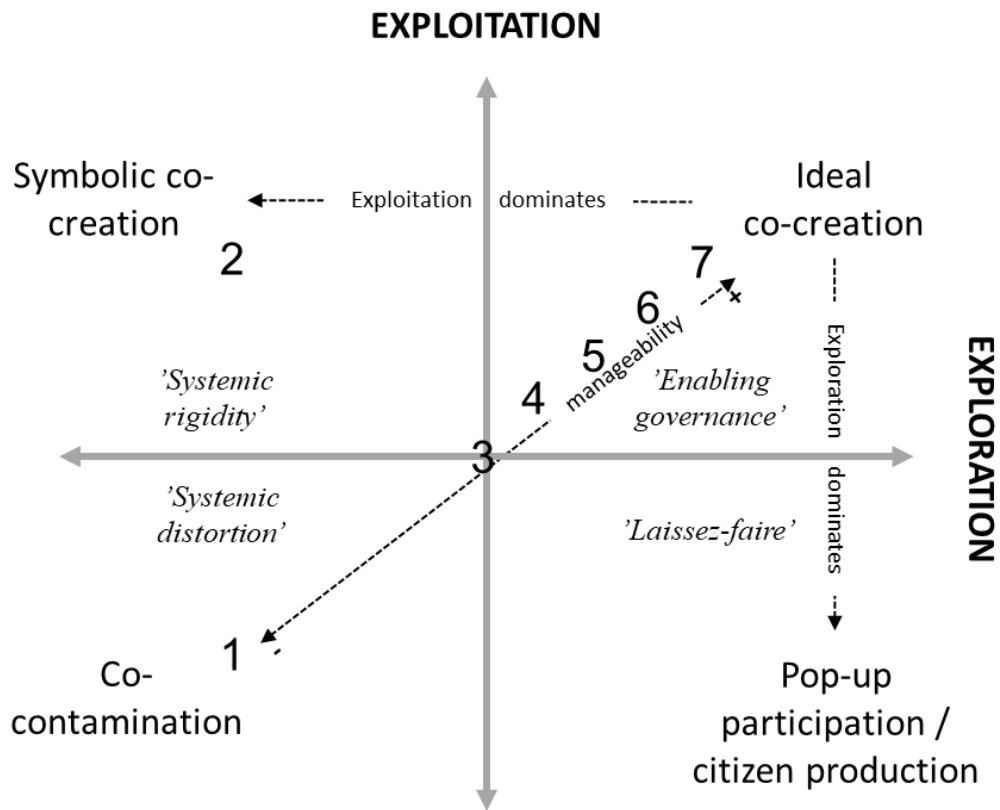
Figure 3. Balancing the tension between exploration and exploitation (adapted from Jalonen, Puustinen and Raisio, 2020). Numbers indicate the rungs on the ladder of co-creation.

Notes

[i] For more information on security cafés, please see Puustinen, Raisio, and Valtonen (2020).

[ii] More information of the concept at http://72tuntia.fi/en/

[iii] More information of the application at https://digia.com/en/112-suomi/

[iv] More information on the cluster is available at https://sites.tuni.fi/safety-and-security-cluster/

[v] For a more detailed discussion on the role of spontaneous volunteers and emergent citizen groups in Finland, please see Raisio et al. 2019.

[vi] Discussion on whether the complexity of the operating environment is actually growing, please see Raisio, Puustinen, and Jäntti 2020.