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A Contribution to Empirical Revitalization of the Samfunnssikkerhet Concept

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Abstract: Current research of the Norwegian samfunnssikkerhet concept appears to be lacking, with few scientific publications advancing the understanding of the concept. This weakness is addressed through the paper's empirical exploration of challenges in the work on samfunnssikkerhet (Paper aim #1), where the resulting insight informs an epistemological understanding of the concept of samfunnssikkerhet (Paper aim #2). The paper identifies four challenges in the work on samfunnssikkerhet, which suggest that samfunnssikkerhet is about mobilizing against both known and unknown threats through broad and border-crossing cooperation and about flexible methods and design approaches. It is concluded that the paper's empirical exploration of the samfunnssikkerhet concept contributes to a clarification and overall empirical revitalization of the concept. A recommendation to safety and security researchers is to further develop the empirical understanding of the samfunnssikkerhet concept, including through validation of the challenges identified in this paper and continuous mapping of additional and future challenges. This can give the samfunnssikkerhet concept, including its relation to concepts such as resilience, risk and societal security, a clearer meaning and consequently a stronger unifying role in efforts to prevent and manage today's dynamic threats both within and outside Norway.

Keywords: the samfunnssikkerhet concept; samfunnssikkerhet challenges; empirical exploration; interviews; computer-assisted qualitative data analysis software (CAQDAS)

1. Introduction

This paper explores the Norwegian concept of *samfunnssikkerhet*, which has often been translated as societal safety in English literature, albeit with a meaning that overlaps the concept of societal security. Specifically, the samfunnssikkerhet or societal safety concept is currently used in a broad sense that considers safety and security against challenges ranging from limited natural occurring events to threats against the nation's independence or existence [1].

This author's systematic literature review of existing security research reveals 16 scientific publications that address how the Norwegian samfunnssikkerhet or societal safety concept can be understood [2], of which only a few [3–8] represent marked developments in terms of advancing the understanding of the concept rather than just referring to it or discussing it briefly. This includes Aven et al.'s [3] understanding that samfunnssikkerhet is about planning to create a resilient society; Olsen et al.'s [4] identification of the general dimensions (extraordinary stress, complexity, and confidence) required to define samfunnssikkerhet; Jakobsson's [5] exploration of how triggers such as major accidents and risk assessments increase the focus on samfunnssikkerhet; and Junker's [6] emphasis on how samfunnssikkerhet can be strengthened through measures to promote the natural resilience of ecosystems. This author's literature review also reveals some challenges in the work on samfunnssikkerhet.

For example, Almklov and Antonsen [7] emphasized how increasing standardization of products and services among critical infrastructure providers (energy, transport, information and communication technologies, health, etc.) can cause these companies to lose or suppress unique ways of organizing and thinking about safety, such as safety practices that improve the ability to recognize and handle dangerous situations. This poses a challenge for both governments and companies, given the fact that standards aimed at safeguarding government-imposed quality and safety requirements for products and services can also threaten safety and security practices that contribute to the reliability of these products and services. Reduced reliability, in turn, threatens samfunnssikkerhet by influencing the delivery of critical societal products and services, such as energy production and data handling. Another challenge presents itself in Tehler et al.'s [8] exploration of how Swedish authorities contribute to creating or designing samfunnssikkerhet, where the design takes the form of risk and vulnerability analyses and measures to reduce risk conditions and enhance the ability to handle crises. In the Swedish study, the researchers found that the design elements—that is, the risk and vulnerability analyses and measures—did not include descriptions of contexts where the proposed measures are supposed to be effective or the effects of introducing the measures. The challenge manifests in the government spending resources on the design of samfunnssikkerhet in theory, while at the same time, through unclear conditions or effects of measures, not facilitating the introduction of measures in practice among public and private enterprises. The exploration of samfunnssikkerhet further consists of some theoretical definition attempts that can be summarized in the following: Samfunnssikkerhet includes the practices and capacities required to prevent and handle unwanted events that (a) exceed the standard procedures of the community; (b) threaten the population's confidence in the ability of vital institutions to safeguard life, health, and basic needs; and (c) threaten the reliability of critical societal functions such as hospitals, electricity and water supply [3,4,7].

The background above outlines the limited research into understanding the samfunnssikkerhet concept. This weakness is addressed through the paper's empirical exploration of challenges in the work on samfunnssikkerhet (Paper aim #1), where the resulting insight informs an epistemological understanding of the concept of samfunnssikkerhet (Paper aim #2). This exploration applies data from the author's empirical study of the samfunnssikkerhet concept in Norway. More precisely, by using detailed interview excerpts derived from a reanalysis of the empirical patterns presented in Høyland [2], the present paper provides in-depth insight into specific challenges in the work on samfunnssikkerhet in Norway. This insight helps clarify and revitalize the current understanding of the samfunnssikkerhet concept. The detailed excerpts, the identified challenges, and the revitalization focus represent extensions of the previously published work in Høyland [2].

This paper identifies four specific challenges in the work on samfunnssikkerhet. The first challenge concerns the need to establish national and transnational cooperation in the prevention and management of today's global threats to critical societal values and functions. The second challenge is about the need to create an interaction between key actors and the population in the development of threat pictures, and between authorities and municipalities in facilitating favorable local conditions. The third challenge lies in how methods in the work on samfunnssikkerhet must be adapted to the individual organization and both known and unknown threats. The fourth and final challenge concerns how designing samfunnssikkerhet requires broad and flexible approaches in the form of methods that take into account both known and unknown threats, limitations of the individual methods and outcomes, involvement of all relevant parties, and testing and validation of the outcome of methods and analyses. The discussion section of this paper connects the core finding derived from these challenges, in terms of flexibility and breadth, to the concepts of risk, resilience, and collective mindfulness.

The Samfunnssikkerhet Concept

At an academic level, the planning of a new cross-disciplinary master and civil engineering study program at the University of Stavanger (UiS) in the late 1990s saw the first use of the Norwegian

samfunnssikkerhet concept [3]. The concept was not explicitly defined but related to planning to create a resilient society. This planning required examining a society's ability to prevent undesirable events from occurring, to prevent and handle the consequences of undesirable events when they do occur, and to facilitate a quick return to desired normalcy after an undesirable event ([3], p. 32). At a political level, the government committee "Sårbarhetsutvalget"—appointed in 1999 in the wake of several natural disasters, serious accidents in the transportation sector, and concerns related to transitioning to the year 2000—first employed but did not define the concept. The committee was tasked to identify and describe the new threat facing Norwegian society and to propose associated measures to improve society's preparedness [9]. Following Sårbarhetsutvalget's report, the samfunnssikkerhet concept was defined as follows by the Norwegian Parliamentary White Paper No. 17 [2]:

"Samfunnssikkerhet is used in this white paper to describe the society's ability to maintain critical societal functions, to protect the life and health of the citizens and to meet the citizens' basic requirements in a variety of stress situations. The concept of samfunnssikkerhet is used in a wide sense and covers safety and security against the whole spectrum of challenges, from limited, naturally occurring events, via major crisis situations that represent a comprehensive threat to life, health, environment and material values, to security challenges that threaten the nation's independence or existence" (p. 4).

The white paper's 2002 version of samfunnssikkerhet, or variants thereof, has since found its way into other Norwegian governmental white papers [10–13] and Official Norwegian Reports [14–16]. Researchers, mostly of Scandinavian origin, have also translated the white paper's 2002 understanding of samfunnssikkerhet to "societal safety" in international publications. However, as stated in the introduction section, the samfunnssikkerhet concept has a broad meaning that overlaps the concept of societal security [1]. Therefore, in this paper, the original/native term samfunnssikkerhet is applied to ensure that the meaning of the concept is not lost in translation.

2. Methodology

2.1. Data Collection and Analysis

The empirical study of the samfunnssikkerhet concept in Norway, presented in this paper, comprised a total of 18 individual interviews with central, regional, and local authorities as well as critical infrastructure providers (see Table 1). The interview objects were chosen based on organizational leadership position or key position related to safety and security, which suggested that they could provide valuable insight into aspects of samfunnssikkerhet. The interviews were conducted face to face, over the phone, and via email, using an interview guide with both general and specific questions to stimulate reflections regarding how one thinks about and works on samfunnssikkerhet (see Appendix A). All telephone and face-to-face interviews were digitally recorded and fully transcribed. The empirical data were systematically analyzed using the computer-assisted qualitative data analysis software (CAQDAS) QSR NVivo 11 (QSR International, Melbourne, Australia), which increased the overview of and thus the ability to identify patterns and connections in the data related to challenges in working on samfunnssikkerhet. This strengthened the reliability of the analysis process [17,18]. Specifically, using a dual-monitor desktop setup, NVivo was organized for transparent and easy access to the empirical data, with the left-hand monitor displaying the identified empirical patterns ("nodes" in NVivo's terminology) from Table 2 of Høyland [2], and the content of the particular transcribed interview ("document source" in NVivo's terminology) located on the right monitor. With this organization, the existing empirical patterns were explored to identify in-depth insight/excerpts that shed light on challenges in the work on samfunnssikkerhet. The resulting excerpts were then copied directly from NVivo into a separate MS Word document, and compared and collated to identity the challenges (or empirical patterns) presented in this paper. In sum, using detailed interview excerpts derived from a reanalysis of the empirical patterns presented in Høyland [2], this paper provides in-depth insight into specific challenges in the work on samfunnssikkerhet in Norway.

Table 1. Sample and methods used in the empirical study.

Interview #	Interview Category	Interview Sub-Category	Interview Method	Gender	Geographic Region
1		Directorate 1	Face-to-face	F	Oslo county
2		Directorate 2	Phone	M	Vestfold county
3	Central/national authorities	Directorate 3	Electronic	M	Rogaland county
4		Safety authority 1	Electronic	F	Rogaland county
5		Safety authority 2	Electronic	F	Oslo county
6		Department 1	Face-to-face	M	Oslo county
7		Department 2	Electronic	F	Oslo county
8		Municipality 1	Face-to-face	F	Rogaland county
9		Municipality 2	Face-to-face	M	Rogaland county
10	Regional and local authorities	Municipality 3	Electronic	F	Rogaland county
11		Municipality 4	Electronic	M	Rogaland county
12		County Governor 1	Face-to-face	F	Rogaland county
13		County Governor 2	Electronic	M	Aust- and Vest-Agder county
14		Hospital 1	Face-to-face	M	Rogaland county
15	Critical infrastructure providers	Hospital 2	Phone	M	Rogaland county
16		Defense	Electronic	M	Rogaland county
17		Police	Electronic	M	Rogaland county
18		Energy	Electronic	M	Rogaland county

2.2. Limitations and Strengths

The empirical study has a qualitative and Norwegian nature that makes it contextual, and therefore problematic, from which to extrapolate and generalize [19–22]. At the same time, qualitative and exploratory research approaches are necessary for developing new conceptualizations in maturing research fields, such as samfunnssikkerhet [23]. Consequently, the paper's empirical exploration of challenges in the work on samfunnssikkerhet represents a contribution to samfunnssikkerhet as a research field. The use of CAQDAS in the postdoctoral project also provides a degree of systematics and reliability in the analysis process that is often absent or poorly documented in qualitative research.

2.3. Ethical Considerations

To protect respondents' anonymity, the name of their organizations were removed. All potential study participants received written information that all information would be treated confidentially, with full anonymization of data. This complies with the norm that "an anonymous data material contains no information that may identify an individual, neither directly or indirectly" [24]. All potential participants were also informed of the project's background and purpose as well as the fact that participation would be voluntary, with the opportunity to withdraw consent at any time and without the need to give a reason. Finally, confirmation of participation was requested based on the above information (informed consent).

3. Results

This section presents excerpts derived from a reanalysis of the empirical patterns found in Høyland [2], followed by the identification of specific challenges in the work on samfunnssikkerhet.

3.1. Understanding Samfunnssikkerhet

Across authorities and infrastructure providers, the respondents present several perspectives on samfunnssikkerhet, specifically highlighting the broad nature and number of threats facing society today, the roles and responsibilities of different actors, and definitional aspects of the samfunnssikkerhet concept. The following excerpts are illustrative:

The work on samfunnssikkerhet is a collaboration between the public and private sectors. Private actors are in many cases owners or operators of critical societal functions or infrastructures,

and should in those contexts be mindful of their roles and responsibilities. Furthermore, the private sector develops and provides a wide range of services in the work on samfunnssikkerhet and should continue these roles (County Governor 2).

I think that one must work with preparedness and learn from other countries, and cooperate with others and think safety and preparedness across borders. But in the big picture, I think that one should avoid excessive inequalities, in particular between people that are in deep distress and those that live in abundance. There is nothing as risky as the safety of a society [...]. We have lived safely in our bubble where everyone has a pretty good life; however, if you receive large numbers of refugees, the differences continue, and the less fortunate do not get to share our prosperity, war, terror and turmoil may be the result. It is the biggest risk in the world today (Hospital 2).

Samfunnssikkerhet is about a society's ability to master both known and unknown risks in order to maintain critical societal functions, or to show that critical societal functions are taken care of, although in a situation you may also need to recreate these functions and at the same time protect life and health (Directorate 1).

There are so many different perspectives on samfunnssikkerhet [...], we limit it to exclude the ordinary service production in society, where there is only a minimal strain, but include something that is sudden and goes beyond normal preparedness or normal preventive work (County Governor 1).

Identification of Challenge 1: Summarized, these excerpts recognize that the global nature of today's threats to samfunnssikkerhet—such as excessive inequalities, distress, and terrorism—transcend borders. This makes us globally dependent as well as responsible, which requires cross-border cooperation in the work on preventing and managing both known and unknown threats to critical functions, life, health, and environment in society. Establishing broad national/domestic and cross-border cooperation in preventing and managing today's global threats to critical societal values and functions thus represents a challenge in the work on samfunnssikkerhet (Challenge 1).

3.2. Centralization, Security Measures, and Values

Another challenge in the work on samfunnssikkerhet can be seen in the respondents' view that increased centralization and strengthened security measures challenge democratic values in society. Specifically, the respondents emphasize how an elite of central authorities, politicians, and the media define, communicate, and maintain today's threat pictures, rather than the society as a whole, including minority groups. This centralized power to define threats indicates that today's samfunnssikkerhet policy does not account for threat perceptions across groups in society. Consequently, democratic values become challenged, such as participation and influence in the definition of threat pictures. The following excerpts are illustrative:

PST ("Politiets sikkerhetstjeneste" or the Norwegian Police Security Service in English) is obviously a major actor in shaping many of today's threat pictures [in Norway]. [...] So generally, I think that the same institutions that were created as a result of the [samfunnssikkerhet discourse] are very skilled in using what is happening in society, and they have a very strong influence on threat pictures [...]. As for the media, it is a bit different; they compete for attention and have a pretty clear tendency to play on people's small and big fears. Consequently, they contribute to influence how threat pictures are perceived. One can talk about some kind of unfortunate alliance between institutions that exist because of these threats and media who gladly help to reinforce these threats (Directorate 1).

The threats that are being communicated change, where some media set the agenda, and some politicians set the agenda. And there perhaps are weak voices, specifically within Muslim environments, saying we feel threatened, we feel less safe, because we are afraid of both the terrorists and how the majority view us as a result of the terrorists (County Governor 1).

The respondents also emphasize how central authorities' increased focus on security technologies and systems in the prevention of various types of risks such as espionage, terrorism, and sabotage

can challenge democratic values such as freedom, rights, and privacy and thus, confidence in society, for instance, by increasing the level of surveillance and control, thereby reducing the level of privacy:

Because we prefer an instrumental approach, that is, the belief that we should be able to anticipate and identify all possible risks and prepare ourselves for them, we implement comprehensive security systems that eventually cover all aspects of life. The question is if this can be at the expense of important values such as all freedom, rights, and privacy [...]. We are very fortunate in Norwegian society with an incredibly high level of trust between people, between groups in the population, and between citizens and authorities, but this is an ongoing discussion and not something that we can take for granted (Directorate 1).

We now see new car driving technology using fingerprints or breath. The car runs almost by itself, and plenty of sensors are placed everywhere. You have the phone with you everywhere. Eventually you start to wonder how far we should take this, where information is stored and how safe it is (County Governor 1).

When fundamental societal and democratic values such as participation, influence, freedom, rights, and privacy are challenged, as suggested in the excerpts above, fundamental aspects of our identity as a society are also challenged, including the trust between authorities and citizens. Therefore, it can be argued that centralization trends, illustrated in central actors' power to develop and define threat pictures and security technologies, represent a challenge to current trust levels and consequently samfunnssikkerhet in Norway.

The respondents argue that the focus on centralization must be replaced with improved communication, dialogue, and involvement of minority groups and the population as a whole; strengthened interaction between municipalities and authorities; and facilitation of sufficient municipal resources, simple guidelines, and opportunities for adapting local risk and vulnerability analyses:

I simply think that what we should do to reduce the gap between the majority and minority is talk about it. Picturing this as the Norwegian threat picture is not right. Instead, we should keep an ongoing discourse about what one is exposed to. I do not think that a white paper or other things will be able to produce a Norwegian threat in capital letters (Hospital 1).

I do not feel that threats communicated today take into account what society as a whole, including ethnic and religious minority groups, perceives as threatening to its identity. In order to reduce the gap between the majority and minorities in society, communication must become clearer and the opportunities for participation in decision making greater (Energy).

We know which relatives need to be taken care of when a disaster has occurred, and we need the resources [...]. One must get rid of all the top-down bureaucracy focused on registering. We do not need more detail management, we need simple guidelines; we can solve so much locally if we are only allowed to use our resources [...]. It is important that we have this flexibility in the municipalities, we who have the local knowledge. I think it is wrong to make a comprehensive risk and vulnerability analysis that becomes so general that it almost does not concern your municipality anymore (Municipality 1).

I think there is much room for improvement in the communication between government agencies and the municipalities, because we experience again and again that municipalities are being notified too late [about events]. So it is important to improve the interaction between the municipality and government agencies (Municipality 1).

Identification of Challenge 2: Overall, the empirical data point to the following challenge in the work on samfunnssikkerhet: In order to counteract centralization trends threatening the trust levels and democracy in Norway, it is necessary (1) that authorities, politicians, and the media create an interaction with the population based on communication, dialogue, and involvement in the development of threat pictures, and (2) that central authorities strengthen the cooperation with municipalities and provide the municipalities with sufficient resources as well as opportunities for adaptation, for instance in local risk and vulnerability analyses (Challenge 2).

3.3. Methods in the Work on Samfunnssikkerhet

A traditional and instrumental approach to samfunnssikkerhet rests on the belief that any risk and event can be accounted for by means of predefined standards and methods. This perspective is challenged by the respondents. They emphasize that the work on samfunnssikkerhet consists of a number of methods, such as risk and vulnerability analyses, contingency plans, scenario thinking, training, exercises, and evaluations, where the methods must be adapted to the individual organization with good basic preparedness against both known and unknown threats (so-called black swans). The following excerpts are illustrative:

Practice today is still characterized by an inadequate or incorrect assumption that we can identify a risk and make it known. In the administration, there is also a very traditional idea that safety and security can be controlled instrumentally. In other words, you can drive goal management. As long as you are good enough to formulate goals and performance indicators and achieve the necessary precision in the reporting, then safety and security is taken care of (Directorate 1).

A good risk and vulnerability analysis is the foundation for reducing probability and consequence, and for mapping the residual risk that must be addressed through contingency plans. It is important to acknowledge that you cannot make risk and vulnerability analyses that cover any eventuality. There is always an unknown event. Good basic preparedness is crucial for managing an unknown event. "Good basic preparedness" means the ability to acknowledge that a critical situation arises and to apply the necessary measures to address the situation (County Governor 2).

Furthermore, the interviewees express that samfunnssikkerhet can be designed into building processes and urban planning, for example in the form of risk and vulnerability analyses of the new government quarter and school buildings in Oslo, which strengthen risk awareness. However, any design requires broad and flexible approaches in the form of methods that take into account both known and unknown threats as well as limitations of the individual method and outcome (this must be understood):

Several schools in Oslo focus on the design of safety and security solutions for new buildings, aimed at the prevention and management of threats in schools (such as school shootings). Urban planning with a focus on fire control and defense is nothing new, but modern urban planning may not have had much focus on safety and security, but rather environment, efficiency, urban environments, and so forth. While risk assessments are required for construction projects for example, in practice I wonder if the developer takes this seriously. Urban planning should have an important part, and perhaps a clearer role in the work on samfunnssikkerhet (Department 2).

I think that risk analyses are useful, but they must be applied mindfully and with experience to be beneficial, because I think they can quite easily be misused to exaggerate the risk. A risk analysis can be a useful tool in many situations […], but one must understand the method […] and one must understand the results of the analysis (Hospital 2).

Samfunnssikkerhet is designed as a combination of [risk and vulnerability analyses] and an emphasis on good basic preparedness. It is important not to rely on the risk and vulnerability analyses blindly. The unknown event will always occur, and then a good basic preparedness that is not locked to predefined scenarios becomes crucial (County Governor 2).

The respondents also point out that the design of samfunnssikkerhet, including through risk and vulnerability analyses, must involve all interested and affected parties and where the outcome of methods and analyses, i.e., the measures, must be tested and validated in practice:

There are currently a number of scenarios that The Norwegian Directorate for Civil Protection have prepared and ranked. These are a good starting point for risk and vulnerability analyses and may work in design direction. The challenge will always be to get all relevant players involved and avoid making it a question about economy. A common knowledge platform could improve this [design] work (Defense).

I do not believe in managing risks based solely on risk analyses, but I believe that risk analyses are a good starting point for designing measures and that the designed measures can be tested and validated both through "real life" and through exercises (Hospital 1).

Identification of Challenges 3 and 4: In summary, the results reveal two additional challenges in the work on samfunnssikkerhet: Methods in the work on samfunnssikkerhet must be adapted to the individual organization and both known and unknown threats (Challenge 3); designing samfunnssikkerhet requires broad and flexible approaches in the form of methods that take into account both known and unknown threats, limitations of the individual method and outcome, involvement of all relevant parties, and testing and validation of the outcome of methods and analyses (Challenge 4).

4. Discussion

4.1. Samfunnssikkerhet Equals Breadth and Flexibility

The empirical data suggest that breadth and flexibility are key to understanding the samfunnssikkerhet concept. Breadth concerns the need to establish national and transnational cooperation in the prevention and management of today's global threats to critical societal values and functions (Challenge 1). Breadth is also about the need to create an interaction between key actors and the population in the development of threat pictures and between authorities and municipalities in facilitating favorable local conditions (Challenge 2). The combination of breadth and flexibility is evident in how the design of samfunnssikkerhet requires broad and flexible approaches in the form of methods that take into account both known and unknown threats, limitations of the individual methods and outcomes, involvement of all relevant parties, and testing and validation of the outcome of methods and analyses (Challenge 4). The importance of breadth and flexibility is also supported by the fact that methods in the work on samfunnssikkerhet must be adapted to the individual organization and both known and unknown threats (Challenge 3). Overall, the empirical data indicate that samfunnssikkerhet is about mobilizing against both known and unknown threats through broad and cross-border cooperation as well as flexible methods and design approaches. Figure 1 shows the tensions between forces/actors in Norway involved in understanding the samfunnssikkerhet concept. Central institutional forces favor narrow/selective threat pictures and methods characterized by a lower degree of breadth and flexibility, whereas forces comprised of various groups in society, local institutions, and individual actors (as represented in the results section) favor a higher degree of breadth and flexibility in the work on samfunnssikkerhet. Note that the placement of the oval shapes in the figure is based on the author's subjective perception.
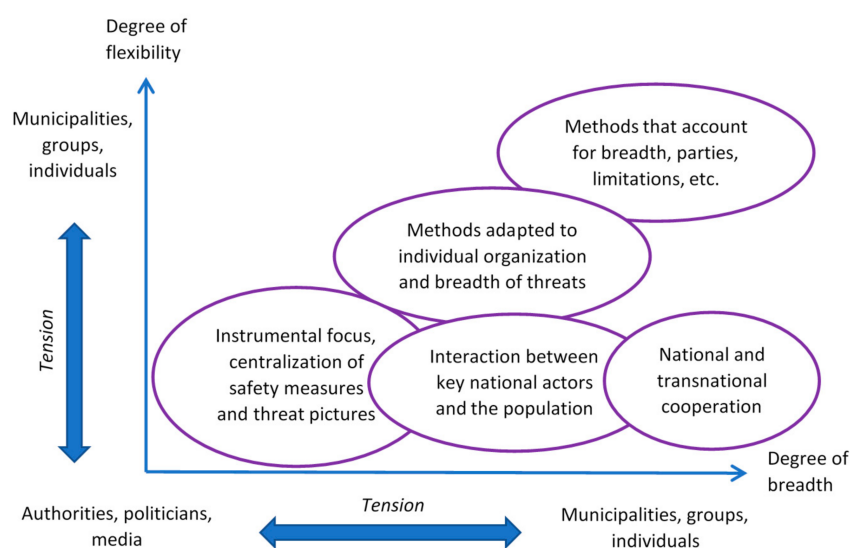

Figure 1. Illustration of the breadth and flexibility space and tension among actors/forces in the work on samfunnssikkerhet. The content of the oval shapes is derived from the four identified challenges.

The key empirical finding, in terms of the importance of breadth and flexibility in the understanding of the samfunnssikkerhet concept, is seldom and only indirectly reflected in today's safety and security research. Almklov and Antonsen [7] outlined how increased standardization threatens safety and security practices that are unique and contribute to the reliability of critical societal functions. An interpretation of Almklov and Antonsen is that standardization reduces flexibility with regard to methods and design approaches (see Challenge 3 and 4), in this case, safety and security practices. Similarly, Tehler et al. [8] discussed how authorities' emphasis on the design of samfunnssikkerhet, by means of risk and vulnerability analyses and measures, becomes a theoretical exercise disconnected from the practical challenges of introducing measures in private and public businesses. An interpretation of Tehler et al. is that the design of samfunnssikkerhet does not take into account the importance of involving all relevant parties in the testing and validation of methods (risk and vulnerability analyses) and measures, nor does it account for adapting analyses and measures to the needs of the particular organization (see Challenge 3 and 4). The introduction to this paper presented a summary definition of samfunnssikkerhet, understood as the practices and capacities required to prevent and handle unwanted events that (a) exceed the standard procedures of the community; (b) threaten the population's confidence in the ability of vital institutions to safeguard life, health, basic needs; and (c) threaten the reliability of critical societal functions such as hospitals, electricity, and water supply [3,4,7]. Based on this understanding, practices and capacities can be interpreted to include breadth and flexibility regarding stakeholder involvement, methods, and design approaches in the work on samfunnssikkerhet (see Challenges 1–4).

Overall, having to make interpretations and inferences between the empirical findings and current safety and security literature reveals a weakness in the precision and communication of what is meant by samfunnssikkerhet in current research. This situation is in line with characteristics of samfunnssikkerhet as a relatively immature research field, despite 15 years of research and higher education activities [23]. Given the links between research, public policy and governance, weaknesses in research on the samfunnssikkerhet concept can develop into a fragmented and consequently less coordinated work on samfunnssikkerhet in the face of today's threats. In short, there is a need to clarify how samfunnssikkerhet as a concept can be understood.

4.2. A Clarification of the Samfunnssikkerhet Understanding

Through empirical exploration of both challenges in the work on samfunnssikkerhet and the understanding of the samfunnssikkerhet concept, this paper contributes to clarify what samfunnssikkerhet is about. A further clarification can be provided by linking empirical findings in this paper, and specifically the need for flexible methods when facing unknown threats, to developments within the risk research field or concept. This particularly includes Aven's [25–27] considerations that when working with risks one must take into account Black Swans through flexible assessments and actions. Black Swans are events that occur surprisingly because they are not expected and are beyond our minds, and where the events are extreme and associated with large and serious consequences, such as the swine flu in 2009, which caused mild but also surprisingly serious side effects [28,29]. To handle this type of event, Aven [27] outlined the need for a move away from instrumental approaches and compliance with procedures to individual and collective assessments and actions that take into account the dynamic nature of risk and knowledge. This movement is reflected in the concept of collective mindfulness [30–32], focused on safety and security principles that promote alertness and ability to handle the uncertain, unexpected, and unknown. This includes the ability to see how one actually works (individually and together) rather than what was planned, which makes it easier to reveal deviations or irregularities ("sensitivity to operations" principle). Viewed in light of the empirical findings in this paper, samfunnssikkerhet is about accounting for the dynamic nature of risk and knowledge—including Black Swans—through breadth and flexibility in methods and design approaches, promoting individual and collective assessments and actions rather than an instrumental rationality.

Breadth and flexibility, as key elements in understanding the samfunnssikkerhet concept, also connect with the concept of resilience, defined as the intrinsic ability of a system to adjust its functioning prior to, during, or following changes and disturbances, so that it can sustain required operations under both expected and unexpected conditions ([33], p. xxxvi). Specifically, a resilient system (a) goes beyond reaction and recovery and looks for how it can continue to achieve its purpose by adjusting and changing its functioning; and (b) is prepared to deal with diverse conditions of functioning—both expected and unexpected—by adjusting and changing its functioning ([34] p. 13). In other words, resilience is about a system's ability to achieve failure-free operation by applying flexibility in its design and operation, which enables the system to handle a breadth of excepted and unexpected conditions. Society itself can be viewed as a larger system comprised of numerous sub-systems within critical areas of production and services, such as energy, transportation, health care, and economy, where it is crucial to account for breadth and flexibility in their design and operation. Thus, from the perspective of samfunnssikkerhet presented in this paper—focused on the need to mobilize against both known and unknown threats through broad and cross-border cooperation, as well as the application of flexible methods and design approaches—the resilience concept connects directly with the "flexible methods and design approaches" part of samfunnssikkerhet, making resilience and samfunnssikkerhet complementary concepts.

It follows from the parallel between the concepts of resilience, risk, and collective mindfulness and empirical data from the research into the samfunnssikkerhet concept presented in this paper, that a combination of different research perspectives and data/knowledge bases must be central to the further development of the understanding of the samfunnssikkerhet concept. This is in line with Engen et al. [23] who emphasized that "samfunnssikkerhet is interdisciplinary and multidisciplinary by nature and draws on a variety of scientific disciplines" (p. 44, translated from Norwegian). The interdisciplinary and multidisciplinary nature and variety of disciplines mean that the understanding of samfunnssikkerhet is in constant motion and continuous evolvement, challenging the desire to arrive at a clear-cut and unambiguous understanding of the samfunnssikkerhet concept. For that reason, it is not appropriate to operate with definitions of the samfunnssikkerhet concept. Nevertheless, it is important that the *understanding* of the samfunnssikkerhet concept becomes more concrete to prevent vagueness and to add meaning to the concept. This paper's attempt at concretization consists of the four identified empirical challenges, the keywords breadth and flexibility, and specifically the understanding that samfunnssikkerhet must accommodate the need for mobilization against both known and unknown threats through broad and cross-border cooperation and flexible approaches and design approaches. This concretization constitutes a contribution to the development of understanding the samfunnssikkerhet concept.

4.3. Future Research and Implications

As identified in the introduction section of this paper and noted by Engen et al. [23], the samfunnssikkerhet or societal safety concept has seen few scientific advancements despite 15 years of research and higher education activities. Specifically, the Research Council of Norway (NRC) has funded two past and one present research programs on samfunnssikkerhet—namely, SAMRISK (2006–2011), SAMRISK II (2013–2018) and SAMRISK (2018–2027)—while multi-level study programs in Norway have existed for years at the University of Stavanger (UiS) and the University of Tromsø (UiT). A possible explanation for the lack of advancement of the societal safety concept, despite the presence of more than decade-long national funding and established higher education, can be found in a fresh report from NRC on the SAMRISK II program [35]. The report points out that the field of samfunnssikkerhet needs to (a) consolidate fragmented research communities in a multidisciplinary direction, and (b) develop the knowledge base for policy and research in the field. In other words, while topical issues such as fake news in social media and associated "digital wildfires" are currently emphasized by research funded by the SAMRSK II program, the overall levels of knowledge and cooperation in researching samfunnssikkerhet need to improve. Thus,

a recommendation for safety and security researchers is to further develop the understanding of the samfunnssikkerhet concept empirically, including through the validation of the identified challenges in this paper as well as continuous mapping of additional and future challenges. Developing this understanding, including through research cooperation, can be achieved specifically by means of interviews, observations, surveys, and so forth that explore samfunnssikkerhet as a concept, including views and perspectives on today's and future challenges.

As suggested in the discussion section above and in the introduction section of the paper, the concept of samfunnssikkerhet is closely linked to developments of international concepts such as resilience, risk, and societal security. Consequently, research into related and international concepts can integrate and further explore the understanding of samfunnssikkerhet and the associated challenges identified in this paper, thereby validating and revising the present understanding. Vice versa, the samfunnssikkerhet concept can integrate and further explore developments of related and international concepts. Pursuing these veins of research can give the samfunnssikkerhet concept, including its link to related and international concepts, a clearer meaning and, consequently, a stronger unifying function in the prevention and handling of today's dynamic threats and threat pictures both within and outside Norway.

Applied to a Norwegian context, by reaching a more unified understanding of the samfunnssikkerhet concept, including through its connection to other related and international concepts, it may be possible to reach consensus on regulatory actions that can improve current levels of samfunnssikkerhet, for instance with respect to vital infrastructures. Specific actions include—as pointed out by the Gjørv Commission's investigation of the attacks on the executive government quarter of Norway and Utøya on 22 July 2011 [36]—modernization of current national plans and regulations and forms of cooperation, coordination, and risk acknowledgement within and across organizations. Implementing these and similar actions aligns with the need identified in this paper to account for breadth and flexibility in methods, designs, and so forth in the work on samfunnssikkerhet. Specifically, implementing improved forms of cooperation and coordination could potentially counteract "the current organization of public administration [that] still fosters siloed thinking and turf wars around the principle of responsibility and each sector's respective area of expertise" ([37], p. 1). Implementing the above actions could also help address the observation and critique from the Office of the Auditor General of Norway that only limited plans exist in Norway for the basic security of sensitive objects, and that overall critical infrastructures remain unprotected [38,39].

Based on the systematic literature review conducted in Høyland [2], this paper has identified limited research into the concept of samfunnssikkerhet, or societal safety. However, the amount and range of scientific publications uncovered in any literature review is always determined by the specific search terms and parameters applied. Thus, a broader literature search than that undertaken in Høyland [2], covering related fields or concepts such as risk governance, crisis management, resilience, and trust in institutions, is likely to uncover a wider range of international research and publication activities that connect with the samfunnssikkerhet concept. This broader literature review might also reveal that today's research into the samfunnssikkerhet concept is more developed than what the present paper and Høyland [2] have been able to identify. Consequently, safety and security researchers should undertake a broader literature review in order to further develop the present understanding of the samfunnssikkerhet concept, its associated challenges, and related concepts presented in this paper.

5. Conclusions

The introduction portrayed today's research into the concept of samfunnssikkerhet as lacking, with few scientific publications providing insight into what the concept is about. This weakness was addressed through the paper's empirical exploration of challenges in the work on samfunnssikkerhet (Paper aim #1), where the resulting insight informed an epistemological understanding of the samfunnssikkerhet concept (Paper aim #2). More specifically, this paper identified four challenges in

the work of samfunnssikkerhet, which combined, indicate that samfunnssikkerhet is about mobilization against both known and unknown threats through broad and cross-border cooperation, as well as flexible methods and design approaches. The empirical data further revealed a weakness in the precision and communication of how the samfunnssikkerhet concept is understood in the safety and security literature, which can make the work on samfunnssikkerhet fragmented and thus, less coordinated in the face of today's threats and threat pictures. From these findings arises a need for clarification among researchers of what the samfunnssikkerhet concept is about, which is reflected in the future research needs discussed above.

It is concluded that the empirical exploration of the samfunnssikkerhet concept contributes to a clarification and overall empirical revitalization of the concept that needs to be further developed and validated through research efforts as discussed above (Section 4.3). Given that the concept of samfunnssikkerhet is a dynamic construct comprised of content and understandings that will change over time depending on local, national, and global developments, it must be noted that clarification of the concept is a continuous process and this contribution only represents a starting point.

Conflicts of Interest: The author declares no conflict of interest.

Appendix A   The Interview Guide for the Research Project Samfunnssikkerhet

Introductory Questions

1. What do you believe samfunnssikkerhet is about?
2. How do you view current efforts in the work on samfunnssikkerhet? Feel free to provide examples based on your own experiences from your organization. How is planning included in the work on samfunnssikkerhet?
3. What do you believe are central methods in the work on samfunnssikkerhet, and why?
4. What do you believe characterizes situations or events where one talks about samfunnssikkerhet?

Management and Governance

5. Increased standardization of products and services within critical industries, such as water and power supply, can result in the loss of unique ways of organizing and thinking about safety. What role do you believe that the authorities should have in this development?
6. In your opinion, what is the role of the authorities, such as the government, county governor, or municipality, in the work on restoring a local community or society after a crisis?
7. What do you believe is the role of public actors in the work on samfunnssikkerhet?
8. What events do you believe are the strongest triggers for strengthening the focus on samfunnssikkerhet, including implementation of measures?
9. A study from 2012 found that actors in the Swedish crisis management system contributed to design samfunnssikkerhet through risk and vulnerability analyses and associated measures proposed to reduce risk and strengthen the crisis management ability. Do you believe that samfunnssikkerhet can be designed in this way?
10. What do you believe should be done in the future work on samfunnssikkerhet within and outside Norway?

Threats and Media

11. Do you identify with the following quotation: "When a society loses its identity, the survivability of a society is threatened"?
12. What threat pictures do you believe that Norway faces today?

13. How do you understand "security" in connection with samfunnssikkerhet?

14. In the work on "security" and samfunnssikkerhet, one perspective suggests that this is about protecting the identity of a nation—understood as the feeling of belonging to the same nation and sharing common values—against potential and actual external threats. Do you agree with this perspective?

15. What media and actors (including social media) do you believe convey and shape the threat pictures that we face today? Are there some media and actors that stand out in this respect?

16. Media and actors can also have a mobilizing function, perhaps in particular social media, as recently illustrated in their support and efforts in connection with the Syrian refuges. What are your thoughts on media' and actors' mobilizing role, from a samfunnssikkerhet perspective?

17. Do you feel that the threats communicated today accounts for what the society as a whole, including ethnical and minority groups, perceive as threatening to its identity? What should be done to reduce the potential gap between the majority and minorities in society?

Final Questions

18. How do you believe that samfunnssikkerhet can be defined?

19. Is there a limit to samfunnssikkerhet; for example, in terms of offering international aid?

20. Are there any other aspects of samfunnssikkerhet that have not been discussed and that you find relevant? If so, please describe these.

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