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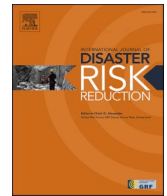
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A discipline without a name? Contrasting three fields dealing with hazards and disaster

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ABSTRACT

A growing number of research fields have been striving for recognition as an academic discipline. Rather than argue that 'our field' should also be recognised as such, we stop to ask two fundamental questions. Our first question concerns whether and how disciplinary concerns would benefit research fields dealing with hazards and disasters. re disaster risk reduction (DRR). Second, we reflect on the implications of not having a broadly accepted name referring to 'our' body of scholarship. We take as our point of departure a comparative assessment of three commonly used umbrella terms used to refer to the broad range of tasks that concern emergencies, hazards and disasters: DRR; homeland security; and societal safety. Each of these terms have their associated scientific journals and higher education programmes, as well as policy spheres of influence. We find that greater awareness of the label issue could facilitate increased conceptual pragmatism and integration among related fields, academic programmes and practice communities. Not only would this enhance knowledge creation initiatives, but it would also facilitate the formation of a shared professional and academic identity.

From time to time, every academic discipline needs to come under deliberation and discussion. Nowhere is this more apparent than in 'our field', which seems to lack identifiable thematic boundaries, a shared identity, and even an agreed-upon name. In this article, we investigate whether this field of research and higher education – broadly speaking the field dealing with hazards and disasters, as well as civil protection – can be said to constitute an academic discipline in its own right. What would arriving at such a conclusion actually entail, and what kind of implications would the 'namelessness problem' have for this kind of discipline?

More specifically, we aim to comparatively assess three related but somewhat siloed policy systems intended to function, to some extent, as umbrella terms for the field. At the United Nations (UN) and European Union (EU) levels, one typically defines the respective policy area in terms of *disaster risk reduction/disaster risk management* (DRR/DRM). In the United States (US), the concepts of *homeland security* and *emergency management* constitute the policy system in question. In Northern Europe, particularly in the Nordic countries and to some extent the Baltic Sea Region, the concept of *societal security* has some currency as an English-language umbrella term covering the same issues.

It remains unclear as to whether these terms refer to the same field, subsets of the same field, or whether the traditions captured by these terms are more distinct and what kind of scientific and practical coordination issues may follow. Particularly in the EU context, a number of additional systems with different labels and designs are expected to cooperate regionally. All of these umbrella terms have their respective academic and higher education counterparts, including scientific journals, higher education study programmes and

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public agencies, as this article sets out to discuss.

Behind the colourful conceptual landscape of safety and security also lurks profound ontological, epistemological, and axiological questions that are important for the academic community concerned. What is the nature of the activity that we teach and conduct research into? What is the nature of knowledge about these things? What are the ethical and aesthetic value judgements embedded in the current field?

Reflecting on some of these issues in the above-mentioned discourses, we conclude that their different specific puzzles and approaches are determined by the historical, political, societal, and institutional contexts in which they are rooted. Instead of denying this plurality, the field should strive to take advantage of it, which would, however, call for a more constructive dialogue between these conceptual 'schools' of thought and practice. Yet, as we will discuss throughout this paper, it will be difficult to speak together without speaking past each other if we continue to be divided between and by academic journals, faculty barriers, and professional identities lost in translation.

1. A field or a discipline – and what does it mean?

It is tempting to believe that a more rigid disciplinary understanding of one's academic field would enable a clearer comparison of theories and methodologies. In empirical terms, a shared understanding would better facilitate the need for cumulative knowledge production. In more practical terms, this would help to justify allocations in university and research programme budgets focusing on this field. Furthermore, having a widely accepted disciplinary status would give more visibility and prestige to this line of research and education. If it bore more signs of a traditional discipline, it would also be easier to communicate its achievements within and outside the academic community. Lastly, it would enhance the field's self-identity or disciplinary culture [1,2]. On the other hand, the very idea of a discipline might carry a negative connotation, conveying an overly rigid impression of what such a discipline should and should not encompass ([3]; p. 9). This might artificially prevent the field from further developing its current interdisciplinary spirit.

The main point in this article, however, is that regardless of whether we consider 'ourselves' a discipline, a field, a profession, or something different altogether (for a discussion on these terms, see for example: Urby and McEntire [4], the field is split between different journals, systems and epistemic communities. According to our observations, it may happen that members of each camp are unaware that they have colleagues in other camps working on the same issue, but under a different name or framework.

Yet it is true that most of the academic fields that are thus far unrecognised as genuine disciplines would welcome an upgrade to that title. These 'emerging disciplines' include studies on higher education [5], strategic management [6], human resource development [7], service operations management [8], supply chain management [9], intellectual capital [10], knowledge management [11], spatial epidemiology [12], occupational studies [13], and translation studies [14], among others. Why then would our field not strive for the same status? Let us therefore take a closer look at the nature and essence of academic disciplines in general.

2. What is a discipline?

It is difficult to discern the point at which an academic field becomes a discipline. The concept of a discipline is itself ambiguous, since established disciplines differ so widely from each other. Those who defend the rather hierarchical understanding of scientific knowledge production claim that at the highest (or broadest) level, there are 'sciences' like natural and social sciences. These, in turn, can be divided into parent, root or reference 'disciplines' like mathematics or psychology, which in turn can be divided into 'sub-disciplines', such as civil engineering or political psychology. Some of these can then be called 'fields' which, while relying on their parent disciplines, have to strive for their own identity. Then again, some of these fields are more applied and may include cross-disciplinary perspectives to help distinguish their idiosyncratic identity from their parent disciplines [7].

The further down in this hierarchy one places the area of interest, the less it resembles an independent discipline. Thus, it would be easy to define risk and reliability engineering as a field of engineering, which can in turn be understood as a profession under the natural or technological sciences. Whether the field by itself constitutes a discipline would be less clear and certainly more disputed among those who consider themselves 'traditional' within engineering or the natural sciences. Emergency management would consequently follow another path as it might then be understood as a subdiscipline, or just a field under social sciences, most notably under such disciplines as political science, sociology, or management studies. Moreover, whether we pick up an 'emergency management' book written in the context of business studies, finance or political science, the context will also surely shape its take on emergency management.

On the other hand, some representatives of our field seek to emphasise their specific field of activity as an independent science, manifested in journal titles (e.g., *International Journal of Disaster Risk Science*; *Safety Science*) or book titles (e.g., *The Science of Risk Analysis* by Aven [15]; or *Science of Societal Safety* by Abe et al. [16]). This indicates that a particular epistemic community ostensibly shares an identity in relation to their activity. Yet the extent of their uptake or resonance in 'our field' remains unclear. This in turn means that these 'sciences' are potentially recognised as sciences only by a small community of scientists, whilst other scientists are practising similar science but carrying a different banner. Again, our point here is principally to highlight that such groupings and re-groupings only increase the risk that we may be talking past each other or reinventing the wheel several times within these different epistemic communities if results are not widely shared between them. Perhaps the biggest obstacle to such cross-field communication, in turn, is likely to be the fact that some epistemic communities do not read or publish their work in related fields with different names, either because of identity-related barriers or simply because of being unaware of the fact that they may find colleagues working on the same research questions there.

What then are the criteria for what constitutes an academic discipline? Prominent sociologists of occupation have conceptualised disciplines in terms of identity and a sense of organisational belonging [17]. Taking a more typological approach, Armin Krishnan [3]

(see also Squires [18]; p. 202) suggests six criteria that a discipline must satisfy. The more characteristics a field has, the more likely it will become a recognised academic discipline, capable of reproducing itself and building upon a growing body of its own scholarship. The six criteria are that the field should 1) constitute a particular object of research; 2) constitute a body of accumulated specialist knowledge referring to the object of research, which is not shared with another discipline; 3) include theories and concepts that can organise the accumulated specialist knowledge effectively; 4) have specific terminologies or a specific technical language adjusted to the research object; 5) have its own specific research methods according to the specific research requirements; and 6) have some institutional manifestation in the form of subjects taught at universities, the respective academic departments, and professional associations connected to it.

Based on the above, one might argue that our field, whatever nomenclature is used, is a discipline in the making but is not quite there yet. This was the result of our small-scale questionnaire (N = 38 senior-level academics; reported in Pursiainen and Abdel-Fattah [19], which provided mixed results when applying these criteria to our field. While most would agree that the field constitutes a particular object of research to some extent, when it came to other questions, opinions were not that clear-cut. One point that became particularly clear is that when asked what our field is called, respondents did not agree despite considering each other colleagues (both research topic-wise and collaboration-wise).

3. What kind of discipline?

Should we nevertheless recognise our field as a discipline, this would not resolve all of the challenges pertaining to its identity, in the sense of the kind of discipline it would actually constitute. Geoffrey Squires [18] already noted three decades ago that the idea of a standard definition of a discipline to which all disciplines should conform has been eroded. Sociologically, disciplines are more about identity and in-group belonging (as well as out-group recognition) than objective traits or delimitations [17], or than any objective criteria. Academic disciplines have long been characterised by a range of attributes that emphasise their differences and idiosyncrasies (for a review, see Ref. [20]. Arguably the most well-known classification is Anthony Biglan's [21] demarcations between 'soft' versus 'hard', as well as 'pure' versus 'applied' disciplines. This then results in a typical matrix with four basic categories. He also included a third dimension, 'life' versus 'nonlife' discipline – often dismissed in later discussions – which would add to the complexity. Almost half a century after Biglan, it has been contended that his classification scheme has surprising persistence, and even predictive validity in its ability to classify new disciplines [22] (see also [23–26]).

In our case, the issue is less unambiguous. Most importantly, our field seems to be characterised by both soft-applied social scientific approaches (e.g., disaster management, vulnerability analysis) and hard-applied approaches (e.g., risk analysis, reliability engineering). This is related to an understanding that a discipline should be recognised as such not only by its own enthusiasts but also by representatives from other disciplines, which in turn is related to the perceived hierarchy of disciplines. The concept of a reference discipline is therefore used to make sense of this hierarchy. Such a discipline is 'a well-established, recognised academic domain that provides a theoretical and methodological foundation for other disciplines' ([10]; p. 482).

From this perspective, our field seems to be largely on the receiving end, borrowing theories and methodologies from several established fields and disciplines, but not contributing substantially to important theoretical or methodological debates outside of its own application areas. Whilst some would object to this observation, stating that resilience perspectives, vulnerability theory, disaster management, disaster behavioural theories and others stem from 'our field', we would argue these generally stem from other fields like human geography, ecology, development studies, social psychology, sociology, public administration, and political science, but have since been refined and deepened by scholars from what we may label as 'our field'. Moreover, when and if ground-breaking results are achieved within one epistemic community, the implications may not be as widely discussed as they could have been if members from this community had more of a unified identity, read the same journals, attended the same conferences, and spoke the same academic language.

4. Multidisciplinarity, interdisciplinarity, or post-disciplinarity?

The above discussion leads to a notion of the multi- and interdisciplinary nature of our field, which is rooted most notably in political science, geography, international relations, law, sociology, psychology, development studies, public administration, business studies and engineering. This situation has emerged rather naturally. Since its 'invention' as a research object, the field has become an amalgam of many disciplines, albeit in an uncoordinated manner – duly reflecting the non-disciplinarity of risks, hazards and disasters as societal menaces. This characteristic is widely perceived as a positive feature. There is a general normative claim in current research and pedagogical debates that the construction of knowledge requires a broader and more holistic approach than one discipline, particularly in the expansion and deepening of complex studies. The purpose then is to create unified knowledge, or at least to transfer methods from one discipline to another.

In practice, this purpose becomes a matter of degree. Multidisciplinarity generally refers to the application of more than one discipline to an object of study, while staying within the boundaries of each distinct discipline. Interdisciplinarity entails analysing, synthesising and harmonising links between disciplines into a coordinated and coherent whole. It has been argued that when it comes to interdisciplinarity, 'we are exploring not a single or standard phenomenon, but a range of phenomena, with a diversity of rationales, forms, outcomes and problems' ([18]; p. 204). This would lead to a specific non-standard model of interdisciplinarity, which no longer follows the old rules of a discipline. Most scholars in our field would agree that our field is multidisciplinary, whereas the degree to which or how often it is interdisciplinary is questionable. Most would probably also agree that frictions occur, particularly when we debate what our activities are called and which outlets, goals and findings primarily belong to our turf.

These understandings coexist somewhat uneasily with the traditional understanding of a discipline. This development suggests that

the concept of post-disciplinarity has the potential to evolve in such a way as to make a clear distinction between these new types of interdisciplinary fields with regard to traditional disciplines (e.g. [3,27–29]). The latter notion is in essence the same as the notion of transdisciplinarity, which is supposed to integrate disciplinary approaches so that the final product transcends traditional boundaries [30,31]. A specific evolutionary feature would be that this kind of post-discipline had not followed the same route as most classical or current academic disciplines. Instead of resulting from top-down diversification, post-disciplinarity would be a result of blending existing disciplinary perspectives together and developing something new through synthesis. It is debatable, however, whether our field could reach this point in practice as it would demand from an individual scholar or student an ability to freely move between, say, several social sciences, engineering, and emerging technologies, or at least the capability and institutional arrangements to establish truly interdisciplinary research groups.

Despite calls for breaking down silos, as we know all too well, institutional limitations unfortunately also still apply in the real-politik of the academy. Identities are sticky and if we move from one faculty to another, there is always the risk of being defined as a ‘non-sociologist’ by sociologists, a ‘non-engineer’ by engineers, and a ‘non-political scientist’ in the political science department. Similar identity conflicts may occur between practitioners and academics, applied researchers and theoretically-oriented ones, and quantitative as well as qualitative researchers, among others. In short, disciplinary- and occupational identity matters loom large both in research and in practice, fuelled by terminological and methodological differences that also shape where submit our manuscripts or give our talks.

5. A normative discipline

A further characteristic of our field is that it is not only applied [21] and often professional (Squires 1992, p. 205), but largely normative. Its explicit goal is not merely to analyse but also to produce scientific support for policymaking. This implies the much-discussed notion of evidence-based decision-making, which became a commonplace term in public policy in the late 1990s (e.g. [32,33]). However, policymakers rely on evidence in many ways, including its mere symbolic use to legitimise and sustain pre-determined positions [34,35]. Further, it has been suggested that if research produces controversial results compared to prevailing policies, it is less likely to be used by policymakers ([36]; p. 478). Moreover, even the same body of evidence can lead to diverse policies [37]. The most critical comments suggest that the rhetoric of evidence-based decision-making is misleading or overly optimistic, or even creates an illusion of rationality [38]. Many scholars are also uncomfortable with having policy dictate the research questions, while at the same time recognizing the importance of societal relevance. One question that emerges is whether policymakers necessarily know which questions are the most fundamental ones, not only in the short term but also in the long term.

The more recent debates regarding Science and Technology Studies (STS), a critical approach popularised in political sociology, further undermine the slogan of evidence-based policy and emphasise the non-neutrality of science. What often happens is so-called anticipatory knowledge production, which reduces the openness of the future and is based on the ‘standardisation of dominant knowledge practices and the emergence of professional cadres of experts forming a part of, or entertaining close ties to, the state apparatus’ ([39]: 3). These kinds of practices are claimed to exist, for instance, in climate change and other risk assessments [40]. However, it is also widely understood that disagreement and debate is productive and not antithetical to progress either in the sciences or in the ‘real world’.

6. Three perspectives on one discipline?

Starting to discuss the name for our field or discipline lands us in something of a conceptual minefield, not least because of the so-called broadening of security perspectives that started in the 1970s and really took off in the 1990s (e.g., Refs. [41,42]). Today, disasters, crises, and emergencies have become a central issue of governance, both domestically and internationally [43–46]. Previous efforts at tracing the political evolution of natural-disaster risk-governance systems suggest that these systems evolve, expand, and contract in response to national calamities affecting a country and region [47–50], indicating a degree of learning – and perhaps sometimes learning the wrong lessons, or forgetting, as disasters fade from national memory.

This in turn has given rise to great variation in how countries organise against risks and calamities, which is also reflected in their respective vocabularies, both in practice and in research. Indeed, there is an abundance of related concepts, all with their surges and declines in popularity, evolution over time, and in-built meta-level assumptions and idiosyncrasies. One regularly comes across at least the following concepts (in alphabetical order): accident prevention, civil contingencies, civil defence, civil protection, civil security, crisis governance, crisis management; comprehensive security, DRM, DRR, emergency management, hazards science, homeland security, human security, public safety, resilience building, risk analysis, risk management, safety management, safety science, security and safety, societal security, and soft security. A person who identifies as part of one or more of these ‘fields’ may, as the aforementioned survey [19] suggests, sometimes be surprised that people (e.g., at a conference) who work on similar research topics (e.g., flood disasters) identify themselves as part of a completely different set of fields than the person in question. This would make sense if the research were very different in nature (e.g., with one person studying physical flood protection and another the socio-economic drivers of flood vulnerability). Yet it is not uncommon for someone from ‘the safety and security field’, for example, to collaborate formally with someone who works on DRR, such that the two may not even be aware that they do not share the same identity until one person suggests a journal or a conference that the other person considers distant from their own field.

However, all of these concepts reflect a certain policy project and are largely constituted by the respective policies originating from different national and policy contexts. From this perspective, let us home in on the following policy projects and respective academic constructs: DRR/DRM; homeland security and emergency management; and societal security. They have all emerged within certain political systems and polities and reflect the respective perceived ontological realities, epistemological practices, and axiological value

judgments. Encouragingly, we can also identify reflexive debates within the related scholarships that aim to deconstruct the meta-narratives behind these constructs.

7. The UN and EU context: DRR and DRM

DRR and DRM have become widely embraced terms, particularly at the global level, most notably as they are endorsed by the UN and anchored in its Sendai Framework for Disaster Risk Reduction [51]. Most national disaster risk and contingencies agencies report to the UN Office for Disaster Risk Reduction (UNDRR) on their progress in implementing the framework goals, particularly its much-debated Target E, aiming to substantially increase the number of countries with national and local disaster risk-reduction strategies [52]. Besides the UN, the EU, closely partnering with the Sendai Framework, has already organised its own Civil Protection and Humanitarian Aid Operations for some time under the umbrella title of European Disaster Risk Management (EC n. d.). This also covers the EU flagship policy framework in this area, namely the EU Civil Protection Mechanism, which has legislative power within the EU's internal cooperation [53].

Following the UNDRR [54] terminology, a disaster refers to a serious disruption to the functioning of a community or society, which may exceed the ability of the affected community to cope using its own resources. DRR duly refers to the efforts to prevent and reduce the risk that such an event would happen, or at least to be prepared for it. DRM is the application of risk-reduction policies and strategies, coupled with strengthening resilience and the reduction of disaster losses.

The above conception of contingency, typically emphasising natural hazards with accompanying conceptual examples, presupposes the potential intervention of an external actor, that is, national or international assistance for the affected community. While this conceptualisation mirrors the UN's mission, and also that of the EU as to its member states and the external world, it implicitly restricts the level of risk that should be considered. By definition – but also by implication – it excludes most of the crisis management of the smaller-than-disaster hazards that are conventionally dealt with by national authorities, local communities or organisations with their own resources.

As an academic field or discipline, disaster research has its institutionalised platforms, including a considerable body of specialised journals, as well as a number of other outlets. These include examples such as Springer's ever-growing 27-vol *Disaster Risk Reduction* series or *The Routledge Handbook of Disaster Risk Reduction Including Climate Change Adaptation* [55]. These kinds of manifestations are important for facilitating the global epistemic community of disaster research. Yet the political umbrella for this field comes with an extensively and theoretically rather well-grounded conceptual framework and guidelines that define much of the respective academic activity [56–58]. This policy framework largely revolves around the relationship between the concepts of disasters, hazards, vulnerabilities, exposure, capacities, and the latest all-encompassing concept of resilience, which are seen as the central determinants and constitutive elements of the phenomena at stake.

While it is true that some reflexive academic debates also exist on how the research field and practice should proceed, the distance between the policy and academic levels does not seem to be very wide. Participants in this debate (e.g. [59–62]), typically argue for more attention to be paid to the concept of resilience, thus explicitly or implicitly emphasising the limits of preventive efforts. Some participants go further in unpacking the problematic assumptions and conditions in the current disaster scholarship itself. JC Gaillard [63]; for one, proposes breaking down the de facto continuing hegemony of Western epistemologies, particularly when it comes to DRR in developing countries. Instead, one should empower local researchers analysing local disasters using local epistemologies, including concepts and methodologies, because local epistemologies are needed to reflect diverse local realities. In effect, this school argues that current 'outsider' disaster research has misinterpreted the realities of non-Western disasters and the communities affected.

The same debate can be encountered in the field of higher education. Disaster research has its professors and departments like any traditional academic field. However, a somewhat less traditional picture can be found in the debates that deal with how higher education on disasters should be organised. As a rule, this genre concerns developing countries, and carries within it a certain normative pathos of so-called participatory higher education [64]. Consequently, higher education on disasters should be an integral and necessary part of public awareness, education and management training within the very communities where the disasters take place, committed to the social good (e.g. [65,66]).

8. The US context: homeland security and emergency management

When Shawn Reese [67]; in his capacity as research advisor to the US Congress, walks through the evolution of the concept of homeland security, he refers to one broad definition as the 'efforts to ensure a homeland that is safe, secure and resilient against terrorism and other hazards'. As this is only one of the official definitions, he concludes that there should be a general consensus among policymakers on the physical and philosophical definition and mission of the concept, with constantly re-evaluated priority lists of threats and risks.

As is well known, the concept of homeland security is inherently rooted in the post-9/11 development of its institutional manifestation, the establishment of the US Department of Homeland Security (DHS). There were naturally agencies before this that dealt with similar issues, but the justification for the DHS was largely due to the perceived need for better coordination on US security. Under this new institutional framework, homeland security represents a broader ontology than emergency management, which is duly reflected in the institutional solution to integrate the Federal Emergency Management Agency (FEMA) into the DHS as one of its many agencies. The 9/11 attacks resulted in a considerable amount of research money and effort being invested in this field. Although the initial response was not particularly robust in academic terms, over the years, several noteworthy institutional changes, as well as study programmes and research have emerged, which can be hailed as a success, especially when compared with the initial rush towards capitalising on homeland security funding initiatives.

The above-mentioned institutional developments in turn have largely constituted the respective academic field, particularly higher education programmes. As Christopher Bellavita [68]; cf. Walsh [69]; Pelfrey et al. [70] has noted, the issues that are now taught at universities under the label of homeland security started ‘with institutionally approved, rather than objectively-tested and validated, foundational knowledge’. Thus, whether explicitly stated or not, homeland security bears all the hallmarks of an Americanised political construct. It truly reflects the perceived US realities in terms of threat pictures, ways to create knowledge about them, and values embedded in both the concept of ‘homeland’ and that of ‘security’. Early on, Annette Beresford [71] had already critically discussed the very concept of homeland security and its genealogy in terms of an ‘American ideology’. The textbooks that facilitate this line of higher education (e.g. [72–74]), depict the US policy and institutional evolution of this field, together with more substantive discussion on some conceptual themes such as different phases of emergency management and recent experiences with natural hazards and terrorist attacks.

As a research field, homeland security, often combined with emergency management, has its own peer-reviewed journals, most notably the *Journal of Homeland Security and Emergency Management* (JHSEM). In its mission statement, the JHSEM refers to the two concepts in its title, with the aim of serving ‘as a bridge between them, encouraging exploration of their underlying relationships, interactions, and synergies’. Furthermore, it ‘encourages an interdisciplinary approach that reflects the expanding boundaries of these two disciplines by including such content as public health, cyber security, and environmental policy’. Several scholars have elaborated on these issues, treating the field reflexively, engaging in fundamental debates about the nature of homeland security as academic scholarship, as well as an applied policy field. Linda Kiltz [75] refers to emergency management as an emerging discipline, but notes that the broader ‘homeland security is currently not an academic discipline’. She consequently asks whether it is ‘a subfield of public administration, political science, criminal justice, national security, or something else, or should it be developed into a new academic discipline’. As there is no agreement on basic definitions, main theories, paradigms, and philosophies, however, ‘the best option may be to define homeland security as a subfield within a traditional discipline in the short term, while continuing moving toward becoming a discipline’.

Marcus Holmes [76] has similarly called for the field to discuss its ontological and epistemological foundations. Researchers should ask questions about the types of threats that are posed to homeland security, what it means to have a secure homeland or to be safe, and how one could generate knowledge about these issues. John Comiskey [77] has described homeland security as an evolving discipline or rather a meta-discipline, due to its broad curricula that constellate around leadership, risk management, security, terrorism, cyber terrorism, transnational crime, nuclear proliferation, climate change, and new threats caused by a rapidly evolving technological industrial society. But its shortcoming, Comiskey argues, is that it ‘lacks a grand theory or overarching framework’.

Given the American roots of homeland security, one could question the concept’s applicability outside of the US. We may, however, find some efforts to apply the concept in European and other regional studies. A closer look at this phenomenon suggests that the term is to some extent treated with a degree of pragmatism or opportunism based on the preferences of publishing outlets and perceived target audiences. For instance, Marc Rhinard and Arjen Boin [78] titled their JHSEM article ‘European Homeland Security: Bureaucratic Politics and Policymaking in the EU’; and Christian Kaunert et al. [79] called their edited volume *European Homeland Security: A European Strategy in the Making?* Nevertheless, neither the EU nor any of its member states have recognised the concept of homeland security in their national disaster management systems, irrespective of whatever other titles are used (sub-)nationally.

Using the inherently American political concept in the European context would likely not resonate given differences in foreign and domestic policy and experience. While the concept of internal security, which is used both at the EU level as well as by some of its member states, might indirectly benefit from debates about homeland security, the more established concept of emergency management has much more relevance as a generic field or discipline outside of the US as well.

9. The Nordic countries: societal security

The notion of societal security draws on several policy and academic traditions that are to some extent at cross-purposes [80]. Arising from social constructivist debates in the early 1990s, societal security refers to ‘the defence of a community against a perceived threat to its identity’ [81]; p. 581; and [82]. More to the point for the purposes of our discussion is the use of societal security as a practice-oriented and functional approach in terms of dealing with civil contingencies. Bengt Sundelius [83] originally presented it as a European equivalent of the concept of homeland security, albeit correcting the perceived shortcomings of the latter. It has subsequently been argued that the concept of societal security ‘has developed as a guide for the policy developments for emergency management in many European nations’ [84]; p. 162).

Societal security as an umbrella concept has indeed had considerable success in cross-border crisis management training activities [85,86]. Furthermore, the concept has to some extent been applied in international and European standardisation [87]: [88]. Moreover, the main European science funding programme, Horizon [73]; has adopted the ‘Secure Societies’ label for this field. In the Nordic countries, the national research councils as well as Nordforsk, a regional research council under the Nordic Council of Ministers, organise their funding programmes in this field under the label of societal security [89]. In the Council of the Baltic Sea States – an eleven-country intergovernmental political forum for cooperation across the whole Baltic Sea Region – societal security has been approved as the official English-language term to cover this area of collaboration [90].

In yet another tradition, presented as a Norwegian invention in a foundational scholarly article by Odd Einar Olsen, Bjørn Ivar Kruke and Jan Hovden [45]; a slightly different societal *safety* concept emerges. In the article, the official Norwegian parliamentary definition of *samfunnssikkerhet* from the early 2000s, defined as a society’s ability to maintain critical social functions, to protect the life and health of its citizens, and to meet citizens’ basic requirements in a variety of stress situations, was approved by the scholars. The article deconstructs the unspoken meanings of the concept’s elements and situates societal safety in relation to other concepts, such as

state security and human security. It is notable that the then relatively new concept of resilience in this particular context was also emphasised early on. These ideas were later elaborated in Norwegian-language higher education textbooks (e.g. [91,92]).

The role of public policy has remained important in directing the academic interest in this specific Norwegian adaptation of societal security. For the past twenty years, the Norwegian government has continued to prepare rather lengthy *Societal Safety Notifications* for parliamentary discussions [93,94], thereby not only institutionalising the concept as a specific policy area but also as a government-supported academic field or discipline. Sindre Høyland [95] has systematically explored the central underlying assumptions of 'societal safety and security' in the Norwegian context in particular. To this end, he provides a critical notion of how 'authorities, politicians, and media shape today's threat pictures', epistemologically dominated by the instrumental belief that 'every major risk and event can be accounted for'.

While Norway's *samfunnssikkerhet* is akin to the use of homeland security in the US, the equivalent Swedish term '*samhällssäkerhet* in fact never cemented itself as the main umbrella term in the same way' ([96]; p. 60). The same is true in other Nordic and more widely Northern European countries. However, despite considerable national differences and under different domestic labels [19,97, 98], the shared understanding about the field has been consolidated to some extent. Societal security is understood to represent an all-hazards perspective and to combine safety and security by including both non-malicious (safety) and malicious (security) hazards, often emphasising the notion of total defence. This is a prerequisite for languages (e.g., German, Scandinavian languages, Finnish, Dutch) that do not make a distinction between safety and security in linguistic terms, having only one common word for both or alternative ways of wording that change the connotational difference to some degree. Societal security is also understood as bridging state security and human safety challenges, as well as building transboundary linkages across domestic and international levels, thus overcoming the perceived inherent limitations of the concept of the US homeland security.

10. Conclusion: the need for shared vocabulary while preserving plurality

As we have shown, it seems clear that: the concepts of DRR and management are popular at the UN and EU levels; homeland security has not gained popularity outside the US political system; and the concept of societal security has appealed particularly to the Nordic countries. All of these concepts reflect the respective historical, institutional, and politicised rather than academic genealogies, although under closer scrutiny all of these elements are intertwined. Yet the existence of multiple concepts to refer to 'what we do' may also make it harder for international actors to coordinate their work and identify relevant partners albeit offering a terminological flexibility that many have grown to appreciate. The implication would be negligible if all were aware that their preferred umbrella term is not universally used, but such awareness is not always apparent, in turn potentially leading to siloed knowledge production and prevents us from reading widely and from developing a more comprehensive body of knowledge.

Given this situation, it seems reasonable to conclude that trying to establish 'one discipline with one name' would not seem realistic and would certainly be outside the scope of this paper to declare. Instead, the institutional and conceptual plurality should be turned to the field's advantage, resulting in justified alternative interpretive frameworks and new knowledge creation, recognizing that harnessing this benefit depends on reading widely and flexibly. Highly related fields with different names would benefit from exchanging knowledge to a larger extent so as to avoid reinventing the wheel in different academic and policy silos. As such, there are some core focus areas that all of the perspectives discussed in this article share, most notably including risk, crisis, emergency or disaster management, and the more recently popularised resilience concept with its different application domains. In order to create a pluralistic epistemic community around 'our field', we should have some minimum level of shared vocabulary to enable inter-school communication without unnecessary translation problems, while keeping in mind the constitutive power of rival concepts. Of course, no international body can regulate our terminological usage and such a body may not even be desirable to create. Yet, greater awareness of how similar professionals and scholars working under differently-named frameworks would certainly help expand knowledge horizons. This enhanced understanding would require fewer silo-oriented academic platforms, such as journals, faculties, conferences, and associations that are not based on overly exclusive norms, rules and agendas, and where reciprocal judgment, practical discourse and rational persuasion would prevail. Greater awareness of the namelessness problem could also facilitate increased conceptual pragmatism and integration among scientific journals, academic institutions, study programmes and relevant agencies across borders and policy systems.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

- [1] T. Becher, Academic Tribes and Territories, Open University Press, Milton Keynes, 1989.
- [2] T. Becher, Towards a definition of disciplinary cultures, *Stud. High Educ.* 6 (2) (1981) 109–122.
- [3] A. Krishnan, What Are Academic Disciplines? Some Observations on the Disciplinarity vs. Interdisciplinarity Debate. NCRM Working Paper Series 03/09/2009. ESRC National Centre for Research Methods, University of Southampton, Southampton, 2009.
- [4] H. Urby, D.A. McEntire, Field, discipline, and profession: understanding three major labels of emergency management, *Journal of Emergency Management* 13 (5) (2015) 389–400.
- [5] M. Tight, Higher education: discipline or field of study? *Tert. Educ. Manag.* 26 (2020) 415–428.
- [6] M.Z. Cox, J. Daspit, E. McLaughlin, R.J. Jones III, Strategic management: is it an academic discipline? *J. Bus. Strat.* 29 (1) (2012) 25–42.
- [7] P.K. Kuchinke, Why HRD is not an academic discipline, *Hum. Resour. Dev. Int.* 4 (3) (2001) 291–294.
- [8] J. Heineke, M.M. Davis, The emergence of service operations management as an academic discipline, *J. Oper. Manag.* 25 (2) (2007) 364–374.
- [9] P.D. Cousins, B. Lawson, B. Squire, Supply chain management: theory and practice – the emergence of an academic discipline, *Int. J. Oper. Prod. Manag.* 26 (7) (2006) 697–702.
- [10] A. Serenko, N. Bontis, Investigating the current state and impact of the intellectual capital academic discipline, *J. Intellect. Cap.* 14 (4) (2013) 476–500.
- [11] S.Z. Shariq, Knowledge management: an emerging discipline, *J. Knowl. Manag.* 1 (1) (1997) 75–82.
- [12] R.S. Ostfeld, R.F. Glass, F. Keesing, Spatial epidemiology: an emerging (or re-emerging) discipline, *Trends Ecol. Evol.* 20 (6) (2005) 328–336.
- [13] D.K. Molke, D. Laliberte-Rudman, H.J. Polatajko, The promise of occupational science: a developmental assessment of an emerging academic discipline, *Can. J. Occup. Ther.* 71 (5) (2004) 269–280.
- [14] A. Riccardi (Ed.), *Translation Studies. Perspectives of an Emerging Discipline*, Cambridge University Press, Cambridge, 2003.
- [15] T. Aven, *The Science of Risk Analysis. Foundation and Practice*, Routledge, London, 2020.
- [16] S. Abe, M. Ozawa, Y. Kawata (Eds.), *Science of Societal Safety. Living at Times of Risks and Disasters*, Springer Open, Singapore, 2019.
- [17] R.M. Pavalko, *Sociology of Occupations and Professions*, F.E. Peacock Publishers Inc, 1988.
- [18] G. Squires, Interdisciplinarity in higher education in the United Kingdom, *Eur. J. Educ.* 27 (3) (1992) 201–210.
- [19] C. Pursiainen, D. Abdel-Fattah, *Societal Security as Higher Education: the State of the Art in the Baltic Sea Region*. NEEDS Project Deliverable, 2020. Retrieved 7 March 2021 from, <http://www.bsr-secure.eu/wp-content/uploads/2021/03/FINALV1-2.pdf>.
- [20] W.A. Jones, Variation among academic disciplines: an update on analytical frameworks and research, *Journal of the Professoriate* 6 (1) (2011) 9–21.
- [21] A. Biglan, The characteristics of subject matter in different academic areas, *J. Appl. Psychol.* 57 (3) (1973) 195–203.
- [22] A. Simpson, The surprising persistence of Biglan's classification scheme, *Stud. High Educ.* 42 (8) (2017) 1520–1531.
- [23] D.M. Doberneck, J.H. Schweitzer, Disciplinary variations in publicly engaged scholarship: an analysis using the Biglan classification of academic disciplines, *Journal of Higher Education Outreach and Engagement* 21 (1) (2017) 78–103.
- [24] M. Schommer-Aikins, O.K. Duell, S. Barker, Epistemological beliefs across domains using Biglan's classification of academic disciplines, *Res. High. Educ.* 44 (3) (2003) 346–366.
- [25] J.E. Stoecker, The Biglan classification revisited, *Res. High. Educ.* 34 (4) (1993) 451–464.
- [26] J.W. Creswell, R.W. Rosken, The Biglan studies of differences among academic areas, *Rev. High. Educ.* 4 (3) (1981) 1–16.
- [27] M. Sodr , A post-disciplinary science, in: M. Sodr  (Ed.), *The Science of the Commons. Global Transformations in Media and Communication Research* (9–33), Palgrave Macmillan, Cham, 2019. Translated by David Hauss.
- [28] N. Gregson, Discipline games, disciplinary games and the need for a post-disciplinary practice: responses to Nigel Thrift's 'The future of geography', *Geoforum* 34 (1) (2003) 5–7.
- [29] B. Jessop, N.-G. Sum, Pre-disciplinary and post-disciplinary perspectives, *New Polit. Econ.* 6 (1) (2001) 89–101.
- [30] V. Chimendes, A. Rosa, Y. Miranda, H. De Souza Andrade, The use of multidisciplinary, interdisciplinarity and transdisciplinarity to develop the critical and scientific spirit in the student, *International Journal of Advanced Engineering Research and Science (IJAERS)* 4 (12) (2017), <https://doi.org/10.22161/ijaers.4.12.1>.
- [31] B.C. Choi, A.W. Pak, Multidisciplinary, interdisciplinarity and transdisciplinarity in health research, services, education and policy: 1. Definitions, objectives, and evidence of effectiveness, *Clin. Invest. Med.* 29 (6) (2006) 351–364.
- [32] P. Davies, The State of Evidence-Based Policy Evaluation and its Role in Policy Formation, vol. 219, *National Institute Economic Review*, 2012, pp. R41–R51.
- [33] V.V. Baba, F.H. Zadeh, Toward a theory of evidence based decision making, *Manag. Decis.* 50 (5) (2012) 832–867.
- [34] J.N. Lavis, D. Robertson, J.M. Woodside, C.B. McLeod, J. Abelson, The Knowledge Transfer Study Group, How can research organizations more effectively transfer research knowledge to decision makers? *Milbank Q.* 81 (2) (2003) 221–248.
- [35] N. Amara, M. Ouimet, R. Landry, New evidence on instrumental, conceptual, and symbolic utilization of university research in government agencies, *Sci. Commun.* 26 (2004) 76–106.
- [36] B.W. Head, Toward more "evidence-informed" policy making? *Publ. Adm. Rev.* 76 (3) (2015) 472–484.
- [37] O. Rubin, N.A. Errett, R. Upshur, E. Baekkeskov, The challenges facing evidence-based decision making in the initial response to COVID-19, *Scandinavian Journal of Public Health. Advance online article* (2021), <https://doi.org/10.1177/1403494821997227>.
- [38] G. Hodgkinson, The politics of evidence-based decision making, in: D.M. Rousseau (Ed.), *The Oxford Handbook of Evidence-Based Management*, 2012, <https://doi.org/10.1093/oxfordhb/9780199763986.013.0023>.
- [39] S.C. Aykut, D. Demortain, B. Benbouzid, The politics of anticipatory expertise: plurality and contestation of futures knowledge in governance – introduction to the special issue, *Sci. Technol. Stud.* 32 (4) (2019) 2–12.
- [40] B. Cointe, V. Cassen, A. Nada , Organising policy-relevant knowledge for climate action: integrated assessment modelling, the IPCC, and the emergence of a collective expertise on socioeconomic emission scenarios, *Sci. Technol. Stud.* 32 (4) (2019) 36–57.
- [41] K. Krause, M.C. Williams, Broadening the agenda of security studies: politics and methods, *Mershon Int. Stud. Rev.* 40 (2) (1996) 229–254.
- [42] D.A. Baldwin, The concept of security, *Rev. Int. Stud.* 23 (1997) 5–26.
- [43] S.S. Manyenaa, E. Mavhurab, C. Muzendab, E. Mabasoc, Disaster risk reduction legislations: is there a move from events to processes? *Global Environ. Change* 23 (6) (2013) 1786–1794.
- [44] B. Anderson, P. Adey, Governing events and life: 'Emergency' in UK civil contingencies, *Polit. Geogr.* 31 (1) (2012) 24–33.
- [45] O.E. Olsen, B.I. Kruke, J. Hovden, Societal safety: concept, borders and dilemmas, *J. Contingencies Crisis Manag.* 15 (2) (2007) 69–79.
- [46] D. Alexander, From civil defence to civil protection – and back again, *Disaster Prev. Manag.* 11 (3) (2002) 209–213.
- [47] Q. Zhang, Q. Lu, D. Zhong, The pattern of policy change on disaster management in China: a bibliometric analysis of policy documents, 1949–2016, *International Journal of Disaster Risk Science* 9 (2018) 55–73.
- [48] M. Berg, V. De Majo, Understanding the global strategy for disaster risk reduction, *Risk Hazards Crisis Publ. Pol.* 8 (2) (2017) 147–167.
- [49] T.A. Birkland, *Lessons of Disaster: Policy Change after Catastrophic Events*, Georgetown University Press, Washington D.C., 2006.
- [50] E.L. Quarantelli, Disaster planning, emergency management and civil protection: the historical development of organized efforts to plan for and to respond to disasters, *Preliminary Papers #301*. University of Delaware, Disaster Research Center (2000).
- [51] UNISDR, *Sendai Framework for Disaster Risk Reduction 2015–2030*, United Nations International Strategy for Disaster Reduction, Geneva, 2015. Retrieved 28 July 2021 from, https://www.preventionweb.net/files/43291_sendaiframeworkfordrn.pdf.
- [52] UNDRR, *Status Report on Target E Implementation*. Geneva, United Nations Office for Disaster Risk Reduction, 2020. Retrieved 28 July 2021 from file:///C:/Users/cpu000/Downloads/Status%20Report%20on%20Target%20E.pdf.
- [53] EU, *Decision (EU) 2019/420 of the European parliament and of the council of 13 march 2019 amending decision No 1313/2013/EU on a union civil protection mechanism*, *Off J Eur Union* 20 (3) (2019), 2019, L 77 I/1–15.

- [54] UNDRR (n.d.). Terminology on Disaster Risk Reduction. United Nations International Strategy for Disaster Reduction. Retrieved 10 May 2021 from <https://www.undrr.org/terminology>.
- [55] I. Kelman, J. Mercer, J.C. Gaillard, *The Routledge Handbook of Disaster Risk Reduction Including Climate Change Adaptation*, Routledge, London, 2017.
- [56] UNDRR, Words into Action. National Disaster Risk Assessments. Guidelines. Governance System, Methodologies, and Use of Results, United Nations Office for Disaster Risk Reduction, Geneva, 2017. Retrieved 28 July 2021 from, https://www.preventionweb.net/files/52828_nationaldisasterriskassessmentwiagu.pdf.
- [57] EC, Commission notice. Reporting guidelines on disaster risk management. Art. 6(1)d of decision No 1313/2013/EU (2019/C 428/07), Off J Eur Union 20 (12) (2019), 2019, C 428/8-33.
- [58] EC, Disaster Risk Reduction. Increasing Resilience by Reducing Disaster Risk in Humanitarian Action. European Commission DG Echo. Thematic Policy Document No. 5. September, 2013. Retrieved 8 May 2021 from, https://ec.europa.eu/echo/files/policies/prevention_preparedness/DRR_thematic_policy_doc.pdf.
- [59] R. Shaw, Thirty years of science, Technology, and academia in disaster risk reduction and emerging responsibilities, *International Journal of Disaster Risk Science* 11 (2020) 414–425.
- [60] J.C. Gaillard, J.R.D. Cadag, M.M.F. Rampengan, People's capacities in facing hazards and disasters: an overview, *Nat. Hazards* 95 (2019) 863–876.
- [61] S. Briceño, Looking back and beyond Sendai: 25 years of international policy experience on disaster risk reduction, *International Journal of Disaster Risk Science* 6 (2005) 1–7.
- [62] D.E. Alexander, Resilience and disaster risk reduction: an etymological journey, *Nat. Hazards Earth Syst. Sci.* 13 (2013) 2707–2716.
- [63] J.C. Gaillard, Disaster studies inside out, *Disasters* 43 (S1) (2019) S7–S17.
- [64] UNESCO, Reinventing higher education: toward participatory and sustainable development, *Diverse: Issues Higher Educ* Bangkok: UNESCO (2008).
- [65] N. Aghaei, H. Seyedin, H. Sanaeinasab, Strategies for disaster risk reduction education: a systematic review, *J. Educ. Health Promot.* 7 (98) (2018).
- [66] R. Shaw, F. Mallick, Y. Takeuchi, Essentials of higher education in disaster risk reduction: prospects and challenges, in: R. Shaw, K. Shiwaku, Y. Takeuchi (Eds.), *Disaster Education* (Pp. 95–113). Community, Environment and Disaster Risk Management, vol. 7, Emerald Group Publishing Limited, Bingley, 2011.
- [67] S. Reese, *Defining Homeland Security: Analysis and Congressional Considerations*, Congressional Research Service, 2013. Retrieved 28 July 2021 from, <https://fas.org/sgp/crs/homesecc/R42462.pdf>.
- [68] C. Bellavita, How to learn about homeland security, *Homel. Secur. Aff.* 15 (2019) 1–30. Article 5.
- [69] W. Walsh, A vision of growth for the emergency management higher education academic discipline: a program management perspective, *Journal of Emergency Management* 17 (1) (2019) 13–15.
- [70] W. Pelfrey, *Homeland Security Education: A Way Forward*, The NPS Institutional Archive, Calhoun, CA, 2013.
- [71] A.D. Beresford, Homeland security as an American ideology: implications for U.S. Policy and action, *J. Homel. Secur. Emerg. Manag.* 1 (3) (2004) 1–22. Article 301.
- [72] R.T. Sylves, *Disaster Policy and Politics*. Emergency Management and Homeland Security, third ed., Sage Publications/CQ Press, Thousand Oaks, CA, 2020.
- [73] G.D. Haddow, J.A. Bullock, D.P. Coppola, *Introduction to Emergency Management*, sixth ed., Butterworth-Heinemann/Elsevier, Amsterdam, 2017.
- [74] C.P.P. Nemeth, *Homeland Security. An Introduction to Principles and Practice*, third ed., CRC Press, Boca Raton, FL, 2016.
- [75] L. Kiltz, The challenges of developing a Homeland Security discipline to meet future threats to the homeland, *J. Homel. Secur. Emerg. Manag.* 8 (2) (2011) 1–20. Article 1.
- [76] M. Holmes, Homeland security as international security? The case for international relations as disciplinary model, *J. Homel. Secur. Emerg. Manag.* 9 (1) (2012) 1–13. Article 26.
- [77] J. Comiskey, Theory for homeland security, *J. Homeland Secur Edu* 7 (2018) 29–45.
- [78] M. Rhinard, A. Boin, European homeland security: bureaucratic politics and policymaking in the EU, *J. Homel. Secur. Emerg. Manag.* 6 (1) (2009) 1–17. Article 50.
- [79] C. Kaunert, S. Leonard, P. Pawlak (Eds.), *European Homeland Security: A European Strategy in the Making?*, Routledge, Basingstoke, 2012.
- [80] M. Rhinard, Societal security in theory and practice, in: S. Larsson, M. Rhinard (Eds.), (2021). *Nordic Societal Security. Convergence and Divergence*, Routledge, London, 2021, pp. 22–42.
- [81] O. Wæver, The changing agenda of societal security, in: H.G. Brauch, U. Spring Oswald, C.M. Liotta, J. Grin, P. Kameri-Mbote (Eds.), *Globalization and Environmental Challenges*, Springer, Berlin, Heidelberg, 2008, pp. 581–593.
- [82] O. Wæver, Societal security: the concept, in: O. Wæver, B. Buzan, M. Kelstrup, P. Lemaitre (Eds.), *Identity, Migration, and the New Security Order in Europe*, Pinter, London, 1993, pp. 17–40.
- [83] B. Sundelius, A brief on embedded societal security, *Inf. Secur. Int. J.* 17 (2005) 23–37.
- [84] B. Sundelius, Societal security: an emerging field of scholarship underpinning practices in the Baltic Sea region, in: M. Andžans, I. Brūge (Eds.), *The Baltic Sea Region: Hard and Soft Security Reconsidered*, Latvian Institute of International Affairs & Publishers Hansa Print Riga, Riga, 2016, pp. 157–168.
- [85] E. Stern, B. Sundelius, Crisis management Europe: an integrated regional research and training program, *Int. Stud. Perspect.* 3 (2002) 71–88.
- [86] P. 't Hart, B. Sundelius, Crisis management revisited: a new agenda for research, training and capacity building within Europe, *Cooperat. Conflict* 48 (3) (2013) 444–461.
- [87] ISO, Societal Security – Terminology, ISO 22300:2012(en), International Organization for standardization, Geneva, 2012 ([Withdrawn]).
- [88] CEN (n.d.) CEN/TC 391. Societal and Citizen Security. European Committee for Standardization. Retrieved 28 July 2021 from https://standards.cen.eu/dyn/www/?p=204:7:0:FSP_ORG_ID:680331&cs=18422BF6F2CD25C72E8F63D87A8147AB.
- [89] Nordforsk, Societal Security in the Nordic Countries. Policy Paper 1, Nordforsk, Oslo, 2013.
- [90] Joint position, Joint position on enhancing cooperation in civil protection area, in: 15th Meeting of Directors General for the Civil Protection in the Baltic Sea Region, 2017. Retrieved 28 July 2021 from, http://www.bsr-secure.eu/wp-content/uploads/2017/05/JOINT-POSITION-ON-ENHANCED-COOPERATION_Final-Text-3.pdf.
- [91] M. Njå Sommer, E. Rake, G.S. Braut, *Samfunnssikkerhet. Analyse, Styring Og Evaluering*, Universitetsforlaget, Oslo, 2020.
- [92] O.A.H. Engen, B.I. Kruke, P.H. Lindøe, K.H. Olsen, O.E. Olsen, K.A. Pettersen, *Perspektiver På Samfunnssikkerhet*, Cappelen Damm Akademisk, Oslo, 2016.
- [93] C. Morsut, The emergence and development of *samfunnssikkerhet* in Norway, in: S. Larsson, M. Rhinard (Eds.), *Nordic Societal Security. Convergence and Divergence*, Routledge, London, 2021, pp. 68–90.
- [94] C. Morsut, Societal security and safety in Norway: the duality of Samfunnssikkerhet, in: M. Aaltola, B. Kuznetsov, A. Spruds, E. Vizgunova (Eds.), *Societal Security in the Baltic Sea Region. Expertise Mapping and Raising Policy Relevance*, Latvian Institute of International Affairs & Publishers Hansa Print Riga, Riga, 2018, pp. 60–82.
- [95] S.A. Høyland, Exploring and modeling the societal safety and societal security concepts – a systematic review, empirical study and key implications, *Saf. Sci.* 110 (2018) 7–22. Part C.
- [96] S. Larsson, Swedish total defence and the emergence of societal security, in: S. Larsson, M. Rhinard, M (Eds.), (2021). *Nordic Societal Security. Convergence and Divergence*, Routledge, London, 2021, pp. 45–67.
- [97] S. Larsson, M. Rhinard (Eds.), *Nordic Societal Security. Convergence and Divergence*, Routledge, London, 2021.
- [98] M. Aaltola, B. Kuznetsov, A. Spruds, E. Vizgunova (Eds.), *Societal Security in the Baltic Sea Region. Expertise Mapping and Raising Policy Relevance*, Latvian Institute of International Affairs & Publishers Hansa Print Riga, Riga, 2018.