



Information Resilience in Networks: An Analysis of a National Security Legislation Evidence Base

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Abstract


Governance theory emphasises that networks are pivotal to societal governance and related steering mechanisms. One important means of steering is legislation, the evidence base of which is built on the interaction between social actors and the expert hearings related to the legislative process. This research uses network analysis to examine the construction of a legislative knowledge base and the information resilience displayed in the related networks. The data are derived from experts (n=440) appearing in committee hearings on five proposed acts of parliament. The results show that the expert consultations behind the legislation are official-oriented and illuminate the limited information produced by the private sector and a narrow view of scientific expertise. The network reveals epistemic authorities – mainly representing the security cluster – acting as gatekeepers. A more systemic approach is needed to build an evidence base encompassing the views on societal phenomena derived from different disciplines.

Practical Relevance

- Increasing the knowledge base of governance and the variety of interpretations and perceptions can be accomplished by providing support for the creation of information resilience.
- Paying attention to the information flows and interactions within the governance network, as well as the mechanisms that either improve or degrade interaction patterns, is required in order to bolster the system's information resilience.
- A systemic approach is required to establish the knowledge base and situational awareness on security-related issues.
- Knowledge brokerage requires the ability to create a diverse and comprehensive cross-sectoral understanding of the security policy issues that are being discussed.
- Strengthening democratic decision-making about comprehensive security policy can be accomplished through increased transparency and openness throughout the policy cycle.

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Introduction

The physical survival of the state and protection from those who threaten it lies at the very heart of national security. The strategic goal of national security of supply is to ensure the continuity of production and infrastructure vital for society such that the critical functions of society and its population's living conditions are assured during emergencies. Enhancing national preparedness is not only a crisis management task but is also embedded in broader societal contexts such as democracy, the rule of law, and fundamental human rights and freedoms. National security can be viewed as a *wicked problem* – a problem that is “ill-formulated, where the information is confusing, where there are many clients and decision-makers with conflicting values, and where the ramifications in the whole system are thoroughly confusing” (Head 2022, 23, originally Rittel & Webber 1973). National security involves myriad interconnected issues such as defence, intelligence, diplomacy, economic stability, technology, and even health. Each of these factors is complex in its own right and interacts with others in often unpredictable and non-linear ways. National security is fraught with uncertainty, including unknown threats, unpredictable actions by other nations or non-state actors, and rapidly evolving technology that can offer new security tools but also create new security risks. National security affects many stakeholders with divergent interests and perspectives, including various government agencies, the military, industry, citizens, and foreign nations. Achieving consensus among these stakeholders is often challenging. Measures that enhance one aspect of national security may compromise another; for instance, investing heavily in the military might jeopardise social or economic stability.

Moreover, some security measures undermine individual privacy or civil liberties, triggering ethical and legal debates. Actions taken to address one national security threat might create new threats or exacerbate existing ones. Given the complexity, uncertainty, and compromises inherent in national security, achieving absolute security is impossible. Any solution is only temporary because the threats and resources landscape constantly changes. There are no true final solutions in this realm, only ongoing management of risks. National security is a challenge that defies easy solutions, requires nuanced understanding, and necessitates collaboration on the part of a broad range of stakeholders. From the *governance* perspective, no individual actor can access the information or resources necessary to address these problems (Klijn & Koppenjan 2015; Cairney, Heikkilä & Wood 2019). To address wicked problems, many scholars have suggested a network approach to governance (e.g. Ferlie et al. 2011; Klijn & Koppenjan 2014). The rationale has been that networks can facilitate the production and sharing of knowledge, which is necessary for evidence-based policymaking in general (e.g. Cairney 2016) and evidence-based legislation (Princen 2022) in particular. Acknowledging the critique of evidence-based policymaking (e.g. Head 2013; Newman 2017), we do not use the evidence base concept to describe the objective of ensuring effective, efficient, and well-targeted policy interventions. Instead, the term *evidence base*, as used here, refers to the knowledge originating in expert consultations related to the legislative process in the context of national security legislation.

This article examines governance and its evidence base from the perspectives of knowledge regimes, epistemic governance, and information resilience in the context of national security legislation. For the purposes of this study, knowledge regimes are defined as a variety of information and idea-based actors whose views define the political agenda, frame how those actors will determine the subject and determine the decision-making procedures. These entities are often composed on a case-by-case basis but may become established as permanent structures of power. In addition, they are largely context-related and vary widely between different administrative systems (Campbell & Pedersen 2014). The operation of the knowledge regimes can be perceived as an expression of epistemic work, which is a way to implement epistemic governance. Epistemic governance refers to an approach intended to influence people's views on social reality and, thus, the decisions they make (Alasutari & Qadir 2014). Information resilience, in the context of public policy, refers to a phenomenon that highlights the role of network-like cooperation, intermediary actors supporting or suppressing the flow of information, a forward-looking approach and social structures in building the evidence base of

decision-making, especially in uncertain circumstances (Rantamäki & Jalonen 2022). These theoretical concepts share a perspective on the significance of network cooperation and interaction and also highlight the important role of information intermediaries, who operate between various networks of actors and are central to the interpretation and employment of evidence supporting decision-making.

This research focuses on Finnish legislation addressing information and national security. The chosen research context reflects changes in the security environment and anticipated security threats (Finnish Government, 2022) and the findings of prior research on the central role of social institutions, such as legislation, in the emergence of information resilience (Rantamäki & Jalonen 2022). The acts of parliament in question are the Emergency Powers Act, the Act on the Supervision of Intelligence Activities, the Civilian Intelligence Act, the Military Intelligence Act and the Act on the Government Situation Centre. In this research, national security encompasses a goal of societal threats and risks remaining under control as a result of cooperation between different actors (see, e.g. The Finnish Terminology Centre TSK 2017; Finnish Government 2022). This research focused on the expert consultations and statements following government proposals on laws.

The research on how information resilience emerges within networks of actors in the drafting of legislation is important for three particular reasons. First, legislation is one of the key instruments of societal governance, emphasising the role of laws in reducing complexity and maintaining order within society (e.g. Luhmann 1985). The law is a system comprising the principal societal ideas, rules, and institutions and is key to determining how public, private, and civic actors operate in society. Legal systems embody foundational societal values, such as secure democratic decision-making, separation of state powers, and preservation of human rights (Waldron 2010). In the context of security, legislation is an important component that must convince a wide range of actors if it is to be useful and credible (Virta & Branders 2016; Valtonen & Branders 2020). Alasuutari and Qadir (2014) indicate this would mean that the legislative process must be able to create such debate and criteria that can also convince actors outside of the preparatory field of legislation. Knowledgeable stakeholders are more likely to engage in constructive dialogue and collaboration with policymakers (Nabatchi et al. 2012), which improves policy outcomes (Fung 2006). Scrutinising the parties involved in drafting legislation unveils the key governance actors, the links between them, and the types of actors absent from those networks.

Second, building information resilience has been highlighted as one possible way to prepare for various information-related challenges, such as increasing environmental uncertainty and the appearance of mis- and disinformation (Rantamäki & Jalonen 2022). Institutions encouraging the involvement of different social networks have been identified as an element that strengthens information resilience. However, findings from previous research suggest that the concept of information resilience requires further theoretical examination as well as empirical research on the subject (Rantamäki & Jalonen 2022; Rantamäki 2023). In this study, we aim to address that gap by applying network analysis to examine the construction of the evidence base underlying the context of national security legislation and also the information resilience within that construction. The context of national security legislation was chosen mainly because several studies have identified the relationship between resilience and crises as one that is crucial to national security (e.g. Canetti et al. 2014; Dalgaard-Nielsen 2017; Svitková 2017).

Third, the notion of knowledge regimes as idea-producing entities relates to viewing networked interaction as a key characteristic of information resilience (Brassett & Vaughan-Williams 2015; Bingham et al. 2017; Rantamäki & Jalonen 2022). Previous studies often use knowledge regimes as a framework for interpreting results, and consequently, there has been limited empirical examination of those regimes. At a national level, the nature of the knowledge regimes has been examined in various territories (Campbell & Pedersen 2014; Zhu 2020), but there is a lack of research addressing knowledge regimes from the perspective of epistemic governance. Most research on knowledge regimes is conducted in the political economy field, but the concept also has the potential to help advance security research (Campbell & Pedersen

2014). The current research explains how groups of actors apply epistemic work during the legislation process in the context of national security legislation.

The following research questions are intended to address the research gaps stated above: *What is the structure and nature of the network that contributes to the development of the knowledge base for national security legislation? How can the concepts of knowledge regimes, epistemic governance, and information resilience assist in understanding and interpreting that network?*

Expert consultation and statements offer a unique perspective on the knowledge networks underpinning the legislative process. They reveal details of the parties being consulted, their relationships and expertise, the valuable information they bring, and how their advice is applied. These understandings help map the networks involved in creating national security legislation.

Theoretical Framework

A network approach to governance

The transition from government to governance has highlighted the number of networks that create and direct the implementation of such governance. Governance can be seen as self-organising networks that cross organisations or societies (Rhodes 1996; Peters & Pierre 1998). These networks enable the dispersion of authority and resources such as information (Smith-Doerr & Powell 2005). The governance concept is based on solving societal problems through interaction between the state, industry, and civil society (Kooiman 1999). In a broad sense, it is a change in the interface between the state and civil society (Rhodes 2007), in which the role of decision-makers is to formulate societal objectives and enable the formation of networks appropriate to these objectives (Peters & Pierre 1998). Global governance is largely based on a process of generating and transferring information, negotiated by stakeholders representing various interests, relationships, and institutional requirements (Alasuutari & Qadir 2016). Instead of the government's goal-oriented and conscious activities, governance is about the sum of various interactions and activities (Rhodes 1996; Hufty 2011) and, conversely, about the steering produced by that sum of interaction (Alasuutari & Qadir 2014).

The networked cooperation highlighted in the governance approach is also relevant to political decision-making. The network approach has, for example, been used in research on the effects of policy networks on decision-making structures and the use of informal power (e.g. Rhodes 2006; Klijn & Koppenjan 2015). The approach also features in work on the advocacy coalition theory relating to various competing belief systems (Sabatier 1993). It has been suggested that the best way to understand the long-term change in policies is to look at the dynamics and efforts of networks in certain policy areas (Sabatier 1993, 16). Examples of such research include recent network analyses related to climate change decision-making (e.g. Wagner, Torney & Ylä-Anttila 2021; Gronow et al. 2022).

The knowledge regime as an institutional arrangement

A knowledge regime refers to the set of *institutional arrangements* (see e.g. North 1990), norms, and practices that shape the production, dissemination, and validation of knowledge within a society. Such a regime can encompass academic institutions, research organisations, media outlets, and other knowledge-producing entities, as well as the rules and norms that govern their operation. Knowledge regimes can differ significantly across countries and cultural contexts, and those variations shape the forms of knowledge produced and valued. The idea of knowledge regimes is analytically closely related to the research tradition of policy networks. The review of regimes, which originally developed in the study of international relations, has since become more widespread in political and economic research. The knowledge regimes concept is used to examine organisational and institutional systems that produce different ideas for public debate and decision-making (Campbell & Pedersen 2014, 3). The fundamental question is what are the different mechanisms that produce and convey these ideas and how these different ideas can, in turn, influence decision-making (Sorsa, Alaja & Kaitila 2021).

Knowledge regimes are the organisations and institutions that administer different policy ideas (Campbell & Pedersen 2015). Effective knowledge regimes help decision-makers justify

their past views and decisions (Campbell & Pedersen 2014, 340). Accordingly, the concept of knowledge regimes is linked to epistemic governance, which aims to influence others' views (Alasuutari & Qadir 2014).

Epistemic governance as a process

Epistemic governance is a *process* through which societies establish, maintain, and revise the rules, norms, and institutions that guide the production and distribution of knowledge (Alasuutari & Qadir, 2014). Epistemic governance is crucial to the quality, credibility, and trustworthiness of knowledge within a society. Previous studies define epistemic governance as a bundle of efforts to shape commonly shared perceptions within a specific social context (Alasuutari & Qadir 2014) and as practices through which the creation and dissemination of knowledge influence the comprehension of policy issues and the determination of priorities (Jacob & Hellström 2018). Actors working on the principle of epistemic governance aim to influence the views of others on the nature of reality and also the desirable and undesirable phenomena associated with that reality. Therefore, epistemic governance represents the interests that actors wish to see reflected in societal decision-making. Epistemic work is a way to implement epistemic governance (Alasuutari & Qadir 2014), which can also be described as the different ways of channelling information relevant to decision-making. Epistemic governance creates visions that encourage people to frame situations and phenomena in a certain way (Alasuutari & Qadir 2016).

Epistemic governance is also associated with the idea of epistemic authority or epistemic capital, the volume of which affects how much influence different actors have on others' activities and decisions (Alasuutari 2018). In the case of epistemic governance, authority is seen as cumulative capital, meaning that using different means of influence and epistemic work can also strengthen their impact, thereby increasing the amount of epistemic authority (Alasuutari 2018, 168). The key point is that such authority is located in interactions. Various networks and so-called epistemic communities, that is, groups sharing common beliefs, have been acknowledged to have a significant impact on the selection of ideas underlying political decisions (Haas 2016). In epistemic communities, information is seen as a valuable resource that circulates continuously (Haas 2016; Alasuutari & Qadir 2016; Alasuutari 2018).

Information resilience as system capacity

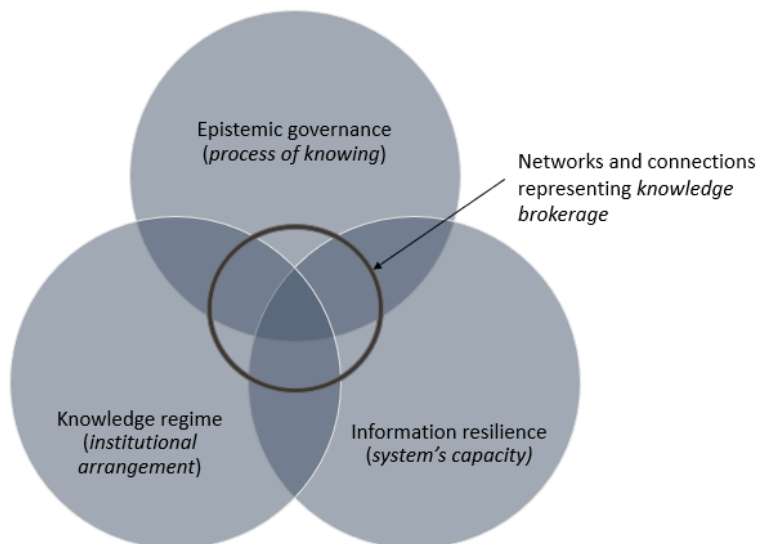
Prior research links information resilience, for example, to the ability of refugees to cope in a fragmented information environment (Lloyd 2017), to the role of various institutions in strengthening individual-level information resilience (Vårheim 2016), and to societal information infrastructures as a guarantor of stability (Scholl & Patin 2013). In the context of disasters, information resilience has become relevant in the context of the self-organising fourth sector and voluntary activities, for example (Raisio et al., 2023).

In the field of public policy, information resilience has been defined as the *capacity* of individuals, communities, and societies to withstand misinformation, disinformation, and other forms of information manipulation and recover from them. The concept also encompasses the ability to operate amid information uncertainty and imperfection. Establishing information resilience involves the development of cognitive skills, critical thinking, media literacy, and a robust information infrastructure that enables people to access, evaluate, and use information effectively. It is a systemic phenomenon created by the interaction between actors in an uncertain and fluctuating environment (Rantamäki & Jalonen 2022.) The logic of emergence suggests information resilience is generated by the interaction between different actors and influences that interaction (Blitz 1992). Information resilience has been identified as a phenomenon that strengthens information-related agency and reduces information-related vulnerabilities, such as the effects of misinformation and disinformation (Filipec 2019; Rantamäki & Jalonen 2022). Information resilience is therefore seen as one of the key elements in forming a systemic situational awareness and a multi-dimensional evidence base for decision-making.

Networks as elements strengthening the information resilience of governance and legislation

The theoretical framework underpinning the current research employs the concepts of knowledge regimes, epistemic governance, and information resilience. Figure 1 illustrates the interfaces between those concepts. Their overlapping nature is not arbitrary but is a manifestation of their intricate connections and mutual dependencies. First, the intersection between *epistemic governance* and the *knowledge regime* domain reflects the manner in which institutions and their arrangements influence knowledge production, dissemination, and use. Institutional structures and norms actively shape epistemic processes, determining what knowledge is deemed significant and how it is attained. Second, the intersection between the *knowledge regime* and *information resilience* points to the connection between institutional arrangements and their capacity to adapt and resist informational challenges, such as misinformation and disinformation (Filipec 2019). An institution's structural arrangement can either strengthen the system's capacity to confront those challenges or render it more vulnerable (Rantamäki & Jalonen 2022). Third, the overlap between *epistemic governance* and *information resilience* points to the strategies and tactics that either amplify or diminish a system's resilience to information disturbance. The domain of *networks and connections representing knowledge brokerage*, bridging the three circles, underscores that knowledge brokering and mobility are paramount in the interaction between those concepts (see, e.g. Oldham & McLean 1997; Meyer 2010). Knowledge networks and connections facilitate the flow, distribution, and reconfiguration of knowledge across different sections, creating a nexus between epistemic governance, the knowledge regime, and information resilience. The centrality of this network within the diagram is not merely a visual construction but mirrors the network's pivotal role in integrating and mediating interactions between the three realms. In summary, the figure provides a schematic representation and also comprehensively explores the fundamental relationships binding the concepts. It addresses the complexities inherent in the convergence of institutional structures, knowledge paradigms, and resilience strategies.

Figure 1. The theoretical framework of the research.



The legislative process embodies well-established social practices and structures that represent social institutions (Cairney & Geyer 2017, 3) and bind groups of actors together in complex systems of governance (Eppel 2017, 847). Focusing research on the networks involved in building the knowledge base of legislation helps unmask the gatekeepers who are central to the emergence of information resilience and who implement epistemic governance. In this context, gatekeeping refers to critical information sharing, which can either enable or prevent interaction and the flow of information between information environments (Gronow et al. 2022;

see e.g. White 1950 and Katz & Lazarsfeld 1955 on the concept of gatekeeping). Scrutinising these networks also helps identify existing and missing links between groups of actors. These links can be viewed as forms of *social capital* essential for the manifestation of information resilience. In this research, social capital refers to multidirectional social links reflecting strong relationship structures (horizontal links, cf. *bonding social capital*) and the understanding of the need to work beyond institutional and sectoral boundaries (vertical and diagonal links, cf. *bridging and linking social capital*) required by the legislative process. Similar to social capital, the connections between different groups of actors are seen as valuable social resources that, among other things, enable access to the information resources of others (e.g. Smith-Doerr & Powell 2005; Bhandari & Yasunobu 2009; Hawkins & Maurer 2010). Effective *societal institutions* can help construct competence-building capabilities – such as those derived from information and media literacy – and also foster the democratic decision-making underpinning societal governance. The networks building the evidence base of legislation represent the institutional arrangement of this decision-making process. Especially in the context of security and preparedness, this process requires a *forward-looking perspective* that is open to future uncertainties and is supported, for example, by diverse connections that produce various and even surprising perspectives (cf. Uusikylä 2019, 89).

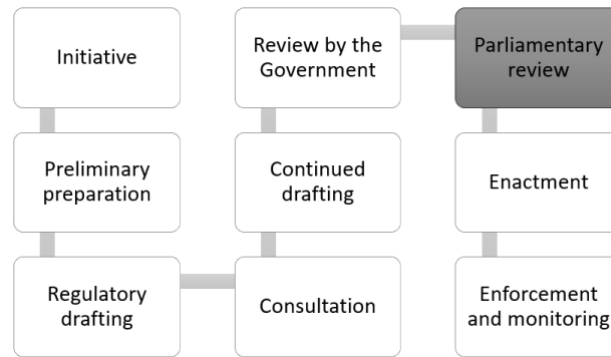
With regard to the knowledge regimes underlying the evidence base for national-level decision-making, it has been suggested that the knowledge regimes in Finland are not a single entity but are divided into sector-specific groups (Sorsa, Alaja & Kaitila 2021). Building networks between researchers and decision-makers has been identified as one of the major challenges for evidence-based decision-making (Finnish Academy of Science and Letters, 2022). The finding supports previous research conclusions on how groups formed in the context of policymaking increasingly interact between the actors in their own groups, thereby weakening both the connections outside the group and the resulting innovation and diversity of information (Uusikylä 2019, 89). Together, these findings create an impression of the evidence base of decision-making that lacks the vertical and diagonal connections required to build information resilience and gatekeepers conveying information between researchers and decision-maker groups. In this research, this initial assumption is tested with data consisting of a network that builds the evidence base of national security legislation in the Finnish context at one stage of the legislative process.

Research Context and Methodology

Like other security measures in the Nordic area, Finland's Comprehensive Security Model (CSM) adopts an expansive view of potential threats, involves various stakeholders, including the public, and prioritises the preparation and execution of safety plans. Serving as both a theoretical framework and a functional governance structure, the CSM is consistently applied in security strategies, collaborative forums, and by political leaders (Valtonen & Branders 2020). The concept of resilience, encompassing the protection of crucial infrastructure and the preservation of essential societal operations and societal security, is a fundamental component of Finland's CSM (The Security Committee 2023). That shift is confirmed in numerous policy documents produced by government departments (Hyvönen & Juntunen 2020).

This research examines the expert consultations related to the legislative process in the context of national security laws. The CSM involves a range of stakeholders, including the public, government departments, and other interested parties. Expert consultations are likely to reflect that diverse input and provide insights into the various perspectives and interests affecting the development of national security legislation. Expert consultation is a key part of the legislative process, providing the technical and theoretical underpinnings that inform policy formulation and implementation. Such consultation also provides a unique window onto the knowledge networks that underpin the legislative process, revealing who is being consulted, their affiliations and expertise, the information they provide, and how their advice is used. The information can reveal the networks behind the development of national security legislation. Figure 2 illustrates the Finnish legislative process to establish the overall picture and the positioning of the focus and data of this research.

Figure 2. The Finnish legislative process (Finlex n.d.).



The data consist of expert hearings from the seventh stage of the legislative process (*Parliamentary review*), where the committee hearings occur between the government's proposal being submitted to parliament and parliamentary approval. Expert consultations following government proposals are a key part of the legislative process, as they are the last step before the parliamentary process is adopted or rejected. From the point of view of building an evidence base in the legislative process, committee consultations are the third part of the process that is inclusive of and responsive to stakeholders. However, as the legislative process progresses, the scope of consultation and participation is reduced. In the preparatory phase, stakeholders are consulted to assess the need for regulation but also to assess the target effects and the desired state of affairs. The consultation process triggered by the government's draft proposal includes selecting the main stakeholders to consult. In the post-government committee hearings, the scope of participation rests heavily on the independent consideration of the committees. Parliament's right to information can thus be said to rely to varying degrees on decisions made in committee (Uusikylä et al. 2023).

The current research conducts network analysis to unveil the knowledge regimes and the information resilience within the networks of legislation, as reflected by the expert consultations on Finnish national security legislation. Network analysis is a proportionate method for exploring interaction structures and relationships between actors. In this context, network analysis refers primarily to the tradition of *structural network analysis* as a distinction between network metaphors, matrix organisations, or coordination mechanisms between markets and hierarchies (Scott & Carrington 2011). Although structural network analysis relies heavily on mathematical methods and statistical analysis techniques originally developed in the graph theory, it tends to be seen as the underlying interpretative framework. Despite this, it is not a unified theory but rather a perspective on the analysis of interaction structures (Emirbayer & Goodwin, 1994; Borgatti et al., 2009; Borgatti & Lopez-Kidwell, 2014). Knoke and Kuklinski (1982, 13) justify structural analysis by stating that the relationship structure between operators and the positions of individual actors in the network is important not only to reveal the behaviour, observations, and attitudes of operators but also to aid in understanding the system as a whole. A structural analysis does not merely analyse the importance of individual network positions but encompasses the links between those social positions. The ever-changing interaction structures between social positions change role-based behaviours and allow room for new roles while changing old ones. Accordingly, the structural characteristics of the network and the role of the individual in the structure of the network are very important to the individual's activities and to the overall functioning of the system. However, the intensity of the activity, the importance assigned to the network structure, and how it is interpreted varies considerably between theoretical interpretations. The above-mentioned theoretical concepts provide a wide range of interpretative frameworks for the study of networks and social interaction systems.

Research on power and policy analysis has scrutinised various aspects of networks, such as the presence of overlapping memberships on firms' supervisory boards or government committees, which are sometimes referred to as interlocking directorates. If the primary interpretive notions for trade networks across organisations centred upon competition and

conflict, the presence of overlapping memberships could indicate collaborative efforts between organisations. The perspective suggests organisations endeavour to address environmental uncertainty by assimilating the variables contributing to uncertainty within their own structures. Such a policy could ensure the stability and survival of the organisation within a complex or dynamic environment. The presence of overlapping and cumulative relational patterns might indicate the consolidation of social power and the aggregation of capital into a limited set of stakeholder groups. From this standpoint, examining interlocking directorates resembles the theory of elitist power discussed by Mills (1956). An exemplary illustration of this kind of research is that by Stokman et al. (1985) examining and comparing the concentration of economic structures across various countries.

Nevertheless, the diverse and multidisciplinary nature of the applications has contributed to the lack of a cohesive theoretical foundation to facilitate analysing organisational networks. Furthermore, the situation has hindered the development of a comprehensive theory encapsulating the role and importance of networks in shaping organisational behaviour (Salancik, 1995). Recent network analysis has effectively served as a quantitative approach to help examine intricate networks composed of multiple connections. The theoretical foundations typically consist of resource dependence theories (e.g. Mizruchi, 1992), resource mobilisation theories (Laumann-Knoke, 1987), elite theories (Domhoff, 1979), state theories such as neo-corporatism and pluralism (Mattila, 1994), models of rational choice (Stokman, 1995), and neo-institutionalist organisational theories (DiMaggio & Powell, 1991; Scott, 1995).

The data consist of lists of actors involved in the drafting processes. Data on actors and their background organisations were manually collected from the parliamentary database. The focus was on national security legislation and expert consultations on the relevant government proposals. The authors compiled an observation matrix of five government proposals made by experts in committee hearings and their organisations to facilitate the analysis of the networks. Table 1 shows the number of committees involved in the various legislative proposals, the number of experts consulted, and the number of statements on each piece of proposed legislation.

Table 1. Number of committees, experts consulted, and statements per government proposal.

Government proposal	Number of committees	Number of experts	Number of statements
HE 3/2008 Government proposal to Parliament for the Emergency Powers Act and certain related acts	13	100	147
HE 203/2017 Government proposal to Parliament for an Act on Military Intelligence and certain related acts	7	118	252
HE 202/2017 Government proposal to Parliament to Legislation on Civilian Intelligence	7	117	265
HE 199/2017 Government proposal to Parliament on the supervision of intelligence gathering activities and for an Act amending section 7 of the Civil Service Act	7	87	154
HE 261/2016 Government proposal to Parliament for an Act on the Government Situation Centre	2	18	20

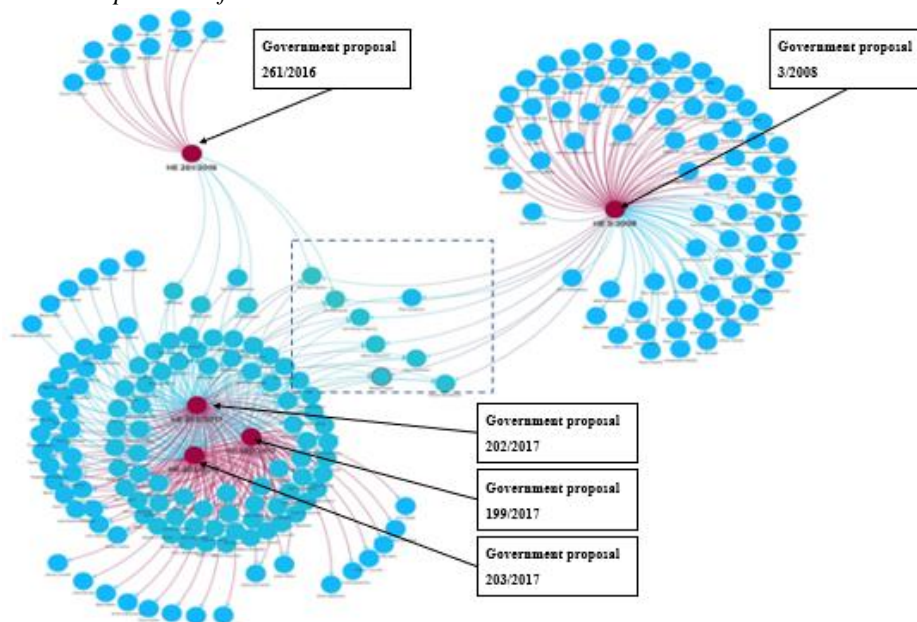
The experts consulted in the various committees were listed by the piece of legislation in their respective Excel tables, from where data were transferred to the Ucinet software to facilitate network analysis. The list consisted of the actors, their expert roles, the organisations they represented, and the committees involved. The experts were also divided into groups according to whether they were associated with public administration (including civil servants and political decision-makers), the scientific community, industry and business sector, and the third sector, meaning associations and non-governmental organisations. The study then computed the frequency and overlap of interaction structures between the organisations, the centrality of the organisations and the groups they represented, and also the linkages between the legislative proposals under consideration through the presence of joint experts.

Findings

The networks involved in the construction of the evidence base of legislation were analysed in three ways. The first analysis focused on the actors, and its results showed the experts representing the creative and knowledge-based gatekeepers who set up links between the legal entities and conduct epistemic work. The second analysis examined the organisations and their concentration. This concentration meant the distribution of statements among the actors of each organisation. Thirdly, the networks were examined from the point of view of the groups of actors, describing how the respondents and their organisations settled in the groups defined in the study and how those groups were represented in the consultations highlighting the structures of the knowledge regime in the context of national security legislation. In combination, the observations help reveal a network that underpins the evidence base of legislation. The observations on gatekeeping and connections between groups of actors also convey the information resilience that emerges within the network.

First, a network of experts formed around the government's presentations showed that the Civil Intelligence Act (HE 202/2017), the Military Intelligence Act (HE 203/2017), and the government's proposal on intelligence supervision (HE 199/2017) formed a fixed cluster cemented by a common knowledge regime. At its core were officials from the ministries involved in the preparation of laws (particularly the Ministry of Interior, Ministry of Defence, and Ministry of Justice) and representatives of key interest groups (Amnesty International, the Confederation of Finnish Industries, and the Human Rights Federation). In addition to the above, the actor-oriented review highlighted the key role of scientific experts in the network. The role of Finland's leading constitutional experts as gatekeepers at the heart of various legislative proposals is noteworthy. A clique of five professors of law and three key officials formed an intermediary structure in the regulatory field of national security (Figure 3). With regard to the network analysis indicators, the centrality of those eight actors is higher than that of other actors, most of whom can be considered peripheral (Hanneman & Riddle 2014, 363). By centrality, we refer to the number of direct links that the actor has with other nodes in the network (*degree centrality*) as well as to the intermediary or bridging role these actors have in the network (*betweenness centrality*) (Wasserman & Faust 1994; Hanneman & Riddle 2014, 364-366). It has been suggested that greater centrality in networks is linked to both greater influence and more constraints and obligations (see, e.g. Smith-Doerr & Powell 2005; Hanneman & Riddle 2014, 363). These eight key actors can therefore be considered to have the most influence and the most epistemic authority accumulated by the various overlapping consultations.

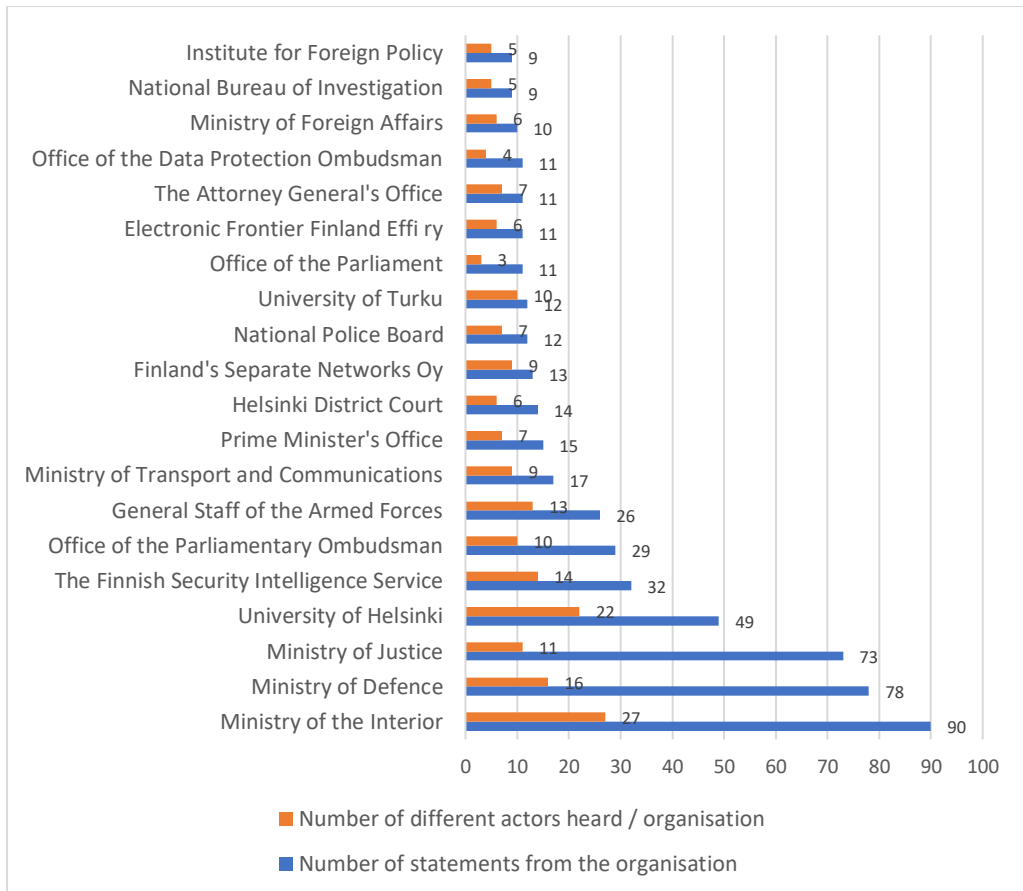
Figure 3. The position of actors in the network.



Several actors were involved in more than one of the legislative committee hearings, and thus actors formed entities that differed from their original groups. An examination of those groups identified key informants and actors spanning different groups. The repeated appearance of the same actors in expert hearings on different pieces of legislation raises the question of whether the network formed around a single bill is built in a phenomenon-based approach to the issues related to the legislation or whether the networks are more based on the process of legal drafting and familiar expertise (compare the *usual suspects*, e.g. Blackstock, Kirk & Reeves 2004). Although the previous research on the Finnish knowledge regimes indicates a case-by-case selection of data producers, the finding has been interpreted as being due more to structural changes in the decision-making system than to the specific selection of the most suitable data producers (Sorsa, Alaja & Kaitila 2021).

Second, in addition to the actor-centric approach, the contributions of the various organisations were observed by examining how they were represented in committee hearings. A total of 123 organisations were represented, and 838 statements were issued, of which the 20 most representative organisations accounted for 532 opinions, 63% of all opinions given (Figure 4).

Figure 4. The main organisations and the number of experts representing them in the consultation network.



Networks were studied to discern the concentration of different organisations and groups of actors. The term *concentration* refers here to the number of actors to whom statements issued by one organisation or group were distributed. An examination of the concentration of different organisations revealed that the number of actors giving statements was relatively small, especially in the case of the most consulted organisations. In contrast, representatives of organisations that issued fewer statements also issued fewer statements per actor. Accordingly, the number of actors who gave statements varied less than the number of statements per

organisation. The most concentrated organisations were the Ministry of Justice (6.6 statements per expert), the Ministry of Defence (4.9 statements per expert), the Office of the Parliament (3.7 statements per expert), and the Ministry of the Interior (3.3 statements per expert). The hearings focused on the public administration group, particularly the related security cluster, which included the Ministry of the Interior, the Ministry of Defence, the Ministry of Justice, and the Finnish Security Intelligence Service. These same organisations, including the Office of the Parliament and excluding the Finnish Security Intelligence Service, were particularly concentrated. In practice, this means that the actors of these organisations had a stronger epistemic authority and a key role in the knowledge-building process behind the legislation. The share of public organisations among the 20 most consulted organisations was high, both among the most consulted organisations (84%) and among the overall number of consultations (53%). As for the scientific community, the two universities among the most consulted organisations were represented in particular by legal practitioners focusing on the Constitution. The associations and NGOs were represented by Effi ry, which defends the rights of citizens in the context of information technology and the digital world. The only representative of the business sector among the most consulted organisations was the state-owned Finland's Separate Networks, which is controlled by the Prime Minister's Office. The situation raises a question on the actual participation of the business and industry sector in the process of national security legislation despite the majority of the critical information infrastructure being in the hands of this particular sector.

Third, the distribution of statements between the groups of actors was also examined. The actors and the organisations they represented were divided into public administration – including officials, civil servants, and political decision-makers – the scientific community, industry and business, and associations. In addition, an other-actors group was formulated to encompass the Finnish Centre for Pensions and the Matriculation Examination Board. The division of statements by group of actors and their share of the total amount of statements are shown in Table 2. The public administration group was both the most heard and the most concentrated of the different actor groups, with each actor providing approximately 2.3 statements.

Table 2. Distribution and proportion of total number of statements.

Organization group	Statements	Actors	Statement/actor	Share of total statements
Public administration	571	251	2.27	0.68
Scientific community	99	56	1.77	0.12
Business	45	31	1.45	0.05
Associations	121	100	1.21	0.14
Other	2	2	1.00	0.00

An analysis of the groups of actors showed that a wide range of associations and NGOs participated in the consultations, although only one of them was among the 20 most involved organisations. The hearings highlighted the role of technology associations, information networks, and various lobby groups. The business and industry group played a limited role in the consultations as a whole, despite the central role of industry in social preparedness and the support of critical infrastructure in society.

Conclusions

The current research aims to reveal the structure and nature of the network contributing to the knowledge base for national security legislation and how the concepts of knowledge regimes, epistemic governance, and information resilience assist in interpreting that network.

Structural view on the knowledge-building network

The research illustrates the structure and nature of the network contributing to the development of the knowledge base for national security legislation. The results present an image of a network mainly comprising government officials with some representatives of the scientific community, associations of non-governmental organisations, and a few members of the business and industry sectors. The results align with previous research identifying how, while the opportunity of consultation is theoretically open to all, different actors and organisations have different participation options in the legislative processes (Aaltola & Juntunen 2018; Princen 2022). In particular, legislative proposals concerning intelligence legislation form a close cluster, and the same actors are repeatedly consulted. The proposals related to the Situation Centre and the Emergency Powers Act are somewhat separate from this cluster, but all clusters are connected through a few individuals.

Network defining the knowledge regime

The results suggest that the national security legislation is based on a *technical-legal knowledge regime*. The expert hearings strongly highlight constitutional aspects and the statements of defence-related government officials, as previous research also suggests (see, e.g. Larsson 2020). The evidence base underpinning legislation is usually produced by competent actors (Princen 2022). Defence-related knowledge regimes are considered more isolated and to generally involve fewer research organisations (Campbell & Pedersen 2014 337). However, many key functions of society are affected by the underlying phenomena of legislation, so a more multidisciplinary approach would be needed to better take account of the intertwining and complexity of these phenomena. Supplementing the legal perspective with different aspects of social and behavioural sciences could strengthen the understanding of the societal implications of proposed legislative changes and the claims of legislative changes originating in other sectors. However, the change in network cooperation and the culture supporting it is slow and essentially central government-driven. Similarly, the change in knowledge regimes is institutionally limited and path-dependent (Campbell & Pedersen 2014, 341). Overall, these findings strongly indicate a need to reconsider knowledge management practices in parliament and how the decision-making processes of various committees should be developed.

The representation of epistemic governance in the network

The concept of *epistemic governance* prompts an examination of the actors located between different systems. These actors are seen as epistemic workers who act as information brokers between different systems and influence the connections formed between different systems. They can also be seen as gatekeepers that can either promote or prevent the manifestation of information resilience (Rantamäki & Jalonen 2022). The main epistemic governance and gatekeeping actors are legal experts, some of whom (e.g. constitutional experts) are very visible, and a few central government officials. The positioning of legal scientists as constitutionally aware gatekeepers is expected in the context of intelligence legislation, where safeguarding fundamental human rights is essential. The frequent appearance of certain officials and their role in information dissemination in the period covering legislative processes and the formulation of the law is particularly interesting. Epistemic authority approaches its zenith when the same actor is consulted in more than one context. Those officials who have consulted for both legal entities and committees have a high level of epistemic authority (Alasuutari 2018). However, the network can only reveal the actors conducting epistemic governance but not the way in which they do so. The network may also include ‘hidden’ gatekeepers: actors who determine who are consulted during the committee stages.

The manifestation of information resilience in the network

The manifestation of *information resilience* is dependent on the development of horizontal, vertical, and diagonal links between different information environments (Rantamäki & Jalonen 2022). In addition to legal experts, the consultations focused on the role of public administration and, in particular, on the related security cluster, which included various security-related actors, such as the Ministry of Defence and the Finnish Security Intelligence Service. The strong

emphasis on civil servants reflects the high level of horizontal contacts (see e.g. Uusikylä 2019). The links between legislation and various security-related actors, such as the police and district courts, reflect the vertical links. The vertical links to the safety cluster in national security legislation are logical. The group of associations was well represented in the hearings, although the associations involved were strongly lobbying-oriented. The participation of the business community in the network is very limited. These findings and the above observation of the shortcomings of multidisciplinary participants can be seen as illustrative of inadequate diagonal links in terms of information resilience. Diagonal links have also been considered particularly important for the construction of a diverse evidence base supporting the construction of information resilience (Yang & Wu 2020). The results highlight the need to strengthen diagonal links in decision-making in particular. These diagonal links both reinforce the linking social capital of legislation and decision-making and allow access to a broader evidence base that enables the utilisation of a forward-looking and phenomenon-driven perspective on societal challenges.

Prerequisites of information resilience include the acceptance of uncertainty and ignorance (e.g. DeNicola 2018) and creative and flexible approaches to foresight. Without multidirectional connections and the silent signals or new openings produced by stakeholders, such anticipation would be difficult (e.g. Uusikylä 2019). The results portray a network that is strongly civil-servant-centric and lacks sufficient links with other groups of actors. Increasing the systemic connections between decision-making processes and different organisations and communities, including a more diverse view of the scientific community, could expand the evidence base of legislation and thus help build a more systemic approach to society, its needs, and the means of strengthening its security and resilience (Aaltola & Juntunen 2018).

Summary of the findings

A robust knowledge regime is crucial to effective epistemic governance. It provides the institutional framework and norms that guide the production and dissemination of knowledge, ensuring that information is accurate, credible, and relevant to societal needs. In turn, strong epistemic governance helps maintain and improve the quality of the knowledge regime, as it sets the standards for knowledge production and distribution. Information resilience is a critical component of both knowledge regimes and epistemic governance. A society with high information resilience is better equipped to protect itself from misinformation and disinformation, which can undermine the credibility and effectiveness of the knowledge regime. In turn, effective epistemic governance fosters information resilience by encouraging critical thinking, media literacy, and the cultivation of reliable information sources. The three concepts are interconnected and mutually reinforcing. A strong knowledge regime supports effective epistemic governance, which in turn fosters information resilience. Information resilience, in turn, helps to maintain the integrity of the knowledge regime and the effectiveness of epistemic governance.

Incorporating the results into the theoretical framework indicates that constitutional experts and a few key officials act as gatekeepers with epistemic authority and as actors implementing epistemic governance. According to the results, the number of vertical and diagonal connections is limited. The results of the research thus confirm previous findings of inadequate links between decision-making and the scientific community (Finnish Academy of Science and Letters 2021) as well as decision-making and citizens (Uusikylä 2019). The idea-building regime of legal science has slack, meaning overlapping connections that can replace each other if needed. Slack among the connections is important for the construction of information resilience (Rantamäki & Jalonon 2022). However, there are no links between other scientific fields and legislative hearings. The results indicate that the Finnish legislative process is guided by an institutional tradition comprising both written guidelines and unwritten consultation practices.

The results show that the expert consultations behind the legislation are official-oriented, include limited information produced by the private sector, and hold a narrow view of scientific expertise. The network can identify gatekeepers as epistemic authorities, mainly representing the security cluster. The security cluster refers to those societal actors that have traditionally been associated with safeguarding social security, such as the police, the border guard, the

Ministry of the Interior, and the Ministry of Defence. A more systemic approach is needed to build an evidence base that takes better account of the views on societal phenomena of the various disciplines.

Discussion

This research contributes to public policy research both theoretically and pragmatically. The theoretical contribution is threefold. First, the research advances the theoretical understanding of information resilience. While information resilience has been studied in the context of individuals, preparedness, and crises, it has not been studied from a social networks perspective. This research highlights the role of gatekeepers in ensuring information diversity in one institutional network. Second, this article brings the research of knowledge regimes into the context of security. As Campbell and Pedersen (2014) advocated, this research showcases a knowledge regime that involves more state and fewer research or private sector organisations. This study thus reinforces the previous understanding that in the context of security, the knowledge regimes are narrow. Third, the article introduces a framework that showcases the links between the three theoretical concepts. Previous research has focused more on material interests than institutions, ideas, and immaterial interests (Walter & Sen 2009, 231). Future studies could exploit the theoretical framework established in this research, especially as it acknowledges the importance of information and the immaterial perspective in public administration and policy research. This research illustrates how the analysis of networks of governance can increase the visibility of those research interests and identify the key strengths and weaknesses of the networks' resilience.

The pragmatic contribution is also three-pronged. First, the study provides empirical evidence of the types of actors and groups involved in the process of national security legislation. The research results show that the expert consultations underpinning the legislative process are official-oriented, which illuminates the limited information produced by the private sector and a narrow view of scientific expertise. Second, the study provides an understanding of the evidence base of national security legislation and the underlying technical-legal knowledge regime. The results highlight the key role of government officials and constitutional experts in building the evidence base supporting the legislation. Third, the study reveals the formation of systemic links and the gatekeepers essential to reinforce information resilience in the institutional context of legislation. The network reveals epistemic authorities acting as gatekeepers, mainly representing the security cluster. Overall, the research shows that the analysis of networks makes it possible to identify the connections representing knowledge brokerage, gatekeeping, and social capital, as well as the connections missing from the network. The result should encourage the development of knowledge-producing networks so that relevant policy issues can be examined on a broader context, giving better access to different stakeholders.

This research examines national security legislation by focusing on expert consultations on legislative proposals. Future research should perhaps pay attention to the other stages of the legislative process and the associated networks of participants. Additionally, examining the network of actors does not reveal how the statements made utilise argumentation or persuasion. This research highlights the key parties to constructing the evidence base and the connections between them; however, further research is needed to understand how epistemic work is carried out and epistemic authority built into these legislative processes. That aspect could be better explored by examining the content of the statements. It is also worth noting that institutional contexts vary by country (e.g. March & Olsen 1996). Therefore, research might benefit from undertaking an institutional analysis with a comparative perspective (cf. Pollitt & Bouckaert 2017). That approach could identify patterns, similarities, and differences in how countries develop their national security knowledge base and reveal how institutional contexts shape such processes.

Some key constraints and challenges have been identified in the implementation of this research. One of the challenges is the temporal placement of the laws examined. The data consist of five acts of parliament, four of which were prepared during 2017–2018, while the Emergency

Act dates from several years earlier. This time gap particularly affected the actor-specific analysis, as it is assumed that the main actors in public administration will have changed over the nearly ten years between the acts. The second challenge relates to the framework of the knowledge regimes, as it has previously been used mainly in political-economic research. However, previous research has hypothesised on the regimes of other policy areas (Campbell & Pedersen 2014, 337). Knowledge regimes could also have explanatory power in the context of other policy issues, such as security and preparedness. Additionally, the research focuses on one phase of the legislative process, thus constraining interpretations of the overall evidence base of the legislation or the diversity of the debate behind the legislative initiatives. This research does not aim to create a nationally applicable interpretation of the underlying knowledge regimes that influence societal decision-making. It does, however, provide an overview of one part of the decision-making network using knowledge regimes as an analytical lens.

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