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Science and securitization: Objectivation, the authority of the speaker and mobilization of scientific facts

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Abstract

The interface between science and securitization has not been systematically addressed. This article argues from a Bourdieusian viewpoint that scientific arguments and 'facts' are at work in at least three distinct mechanisms within and around securitization. First, science communities/explanations can come to objectify an issue to the extent where securitization – and even politicization – becomes next to impossible. Second, science co-determines the status of a securitizing actor and thus influences the authority of the speaker in specific fields. Third, scientific facts can be mobilized in securitization claims by securitizing actors in attempts to seek back-up in the objective, disinterested aura of the scientific vocation. The RAND Corporation's objectivation of the issue of nuclear deterrence is taken as an example of the first mechanism, while climate change and democratic peace illustrate the other two mechanisms. The article questions whether securitization theory has adequately addressed the issue of context, points to a new research agenda and carves out practical reflexivity for security experts.

Keywords

science studies, securitization, Pierre Bourdieu, theory/practice, practical reflexivity

Introduction

With the formulation of what has come to be known as *securitization theory*, doing security science has become a dangerous endeavour. Using the word 'security' may bring about what one is trying to avoid, as Huysmans (2002a) once argued. But, how to think more systematically about the relation between science and securitization? In this article, I take a sociological point of view on securitization processes and argue that 'science' is at work in at least three distinct mechanisms of relevance for securitization theory. First, scientific communities/explanations can come to objectify an issue to the extent where securitization – and even politicization – becomes next to

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impossible. Second, science co-determines the status of a securitizing actor and thus influences the authority of the speaker in specific fields. Third, scientific facts can be *mobilized* in securitization claims by both experts and other political actors in attempts to seek back-up in the objective, disinterested aura of the scientific vocation. Examples from contemporary security illustrate the points made.

By focusing on the interface between securitization and science, the article zooms in on the issue of *science in society* and the impact of science on politics or societal processes – outside of the field of science. The article therefore focuses primarily on how the political process of securitization is influenced – or even altered – when a science dimension is taken into account.[1]

The argument presented proceeds in three sections. The first section starts with a discussion of possible sites of science mechanisms in securitization theory. It is argued that one internal and two external mechanisms might be at play. Before proceeding to flesh these out, the section reviews four attempts to bring science and securitization together in the international relations literature and concludes that further investigation can fruitfully be pursued through a reading of Pierre Bourdieu, because of his twin focus on contextual and agential factors. The second section of the article turns to sociology of science discussions about the nature of science and the relationship between science and society. It argues that even though differences exist, social and natural science share important features – not least when viewed from the perspective of how science functions in the political domain. The section then draws in three important insights from Pierre Bourdieu: that science objectifies its object of study; that it can co-determine the authority of the speaker in specific fields; and that scientific products can be mobilized strategically by agents. Through these insights, science materializes as three distinct mechanisms within and against securitization. These are illustrated by examples from climate change, the democratic peace thesis and the RAND Corporation's objectivation of nuclear deterrence.[2] The article's conclusion stresses that the study of science in the specific political process constituted by securitization not only directs attention to a phenomenon largely overlooked in securitization studies, but also points to possible points of development for the theory of securitization as such. Centrally, an exclusively internal reading of securitization as a speech act does not capture the issue of science. This brings to the fore the underdeveloped issue of the context of securitizations, while at the same time retaining an explicit focus on the grammar of securitization and the means by which agents seek success.

Securitization and science

This article focuses explicitly on a discussion of *securitization* and science, and not *security* and science. As a specific issue in relation to securitization, the role of science has been studied by a very limited number of authors. The research largely falls into four clusters: (1) a focus on *natural science facts* related to diseases like HIV/AIDS, SARS and swine flu or to climate change (Brauch, 2009: 40; Trombetta, 2008); (2) a focus on how *adding a focus on the scientific setting* (among other settings) can remedy the theory of securitization as it was first formulated by Buzan et al. in 1998 (Salter, 2008); (3) a focus on the *production of truths* by technocratic or semi-scientific agents (experts) in relation to migration (Bigo, 2002; Huysmans, 2006); and (4) a focus on the *mobilization of social science facts* – for example, the securitization of the democratic peace thesis (Büger and Villumsen, 2007; Villumsen, 2008). These four clusters of research agree on foregrounding the role of science/expertise but address the issue from different perspectives.

In this section, I will first give a brief summary of the securitization perspective as laid out by Buzan et al. (1998) and will point to possible sites in the theory where a science dimension might be at play. I then move to an overview and discussion of the four clusters of research that have addressed

the link between science and securitization. I conclude that a focus on how science is perceived in society, the status or weight of scientific arguments outside of the scientific field, and how these arguments can impact on securitization processes has yet to be developed to the full. Especially the status of the *context* within which agents strive for success in securitizing moves, as well as the *means* by which they do so, needs to be specified in order to capture the science dimension.

Securitization and possible sites of science mechanisms

The term securitization[3] has been specifically developed within the discipline of international relations, and its usage does not equal the everyday usage of the term security. When the word 'security' is uttered and linked to a particular referent object that is threatened in relation to its existence, 'something is done' (Buzan et al., 1998: 26): a process is set in motion in which measures beyond normal politics are legitimized. Security is thus a performative (illocutionary) speech act that has a certain structure, or grammar, that links different elements to one other. Buzan et al. identify a *securitizing actor* who claims that a *referent object* is *existentially threatened* and seeks acceptance from an *audience* in the quest for legitimizing *extraordinary measures*. These features are internal to the speech act. Certain *facilitating conditions*, however, strengthen or weaken securitization attempts (Buzan et al., 1998: 35–42). These are external to the speech act. According to Stritzel (2007), the dimensions internal/external represent two different 'centres of gravity' in securitization theory: the internal concerns the speech act and its 'social magic' or performativity, while the external concerns the social position of the speaker and the utterance, including facilitating conditions: in short, the context (see Balzacq, 2005: 172).

Science can thus be sought as a mechanism in both an internal and an external dimension of securitization theory. One might ask whether mobilizing scientific facts in the securitization grammar can potentially increase the likelihood of acceptance of securitization attempts, or whether certain features of science affect the authority of a speaker or an utterance. Interestingly, however, Buzan et al. touch upon a case that might reveal a third science mechanism. They take the shared fears of nuclear annihilation during the Cold War as an example of a case that ran into problems concerning security legitimacy – supposedly because the referent object was *too broadly defined* (Buzan et al., 1998: 36). But, could an additional reason – or science mechanism in the language of this article – have been at work? The unsuccessful securitization of nuclear annihilation could perhaps be found in the fact that the area of nuclear deterrence was heavily non-politicized owing to an unprecedented degree of *scientific objectivation*. In Bourdieu's terms, nuclear deterrence was becoming *doxic practice* and therefore next to impossible to talk about as anything but a logic of necessity. It was 'what we knew without knowing that we knew it', to paraphrase Bourdieu (Crossley, 2004: 100). Objectivation as a third mechanism of science in relation to securitization thus keeps an issue from being securitized in the first place, or helps desecuritize it. This resonates with the spectrum ranging from the *non-politicized* over the *politicized* to the *securitized* that underlies the argument that '"security" is the move that takes politics beyond the established rules of the game and frames the issue either as a special kind of politics or as above politics' (Buzan et al., 1998: 23). Securitization is a more extreme version of politicization, while being non-politicized means that an issue is not easily made the object of public debate or decision (Buzan et al., 1998: 23–24) – possibly because of objectivation, one might add.[4]

Reading science as a set of mechanisms questions an exclusively internal reading of securitization theory in which meaning is created in the moment of the utterance itself – irrespective of social surroundings or patterns of domination[5] – by placing the utterance in a context while retaining a focus on the grammar of securitization. Adding an external, contextual dimension to the

securitization perspective is thus pivotal to understanding science in securitization processes.[6] Buzan et al. (1998: 31) seem to have accepted this without giving it much theoretical attention: 'security is … very much a structured field in which some actors are placed in positions of power by virtue of being generally accepted voices of security, by having the power to define security'. This could raise the question of whether the objective aura of science might be a position or source of power in securitization processes.[7]

Reading the science dimension to securitization theory through Bourdieu seems particularly relevant for at least three reasons.[8] First, Bourdieu's explicit focus on the role of science and expertise in the constitution of the social makes his thoughts important for understanding the role of science in society. Second, his focus on *fields* as the structure of social reality can provide tools that enable us to better understand the external dimension of securitization theory: the context in which securitizations take place. Third, his explicit focus on the role of *agency* and *strategic manoeuvring* resonates well with the image of the securitizing actor as defined by the Copenhagen School and makes for important insights about how agents strive to become successful agents in securitization attempts. The Bourdieusian framework thus captures both the internal and the external science mechanisms in securitization. Below, I review four attempts to include science in the securitization research programme. In the subsequent section, I flesh out the three Bourdieu-inspired science mechanisms.

Science in securitization studies

The first cluster of research on the relation between science and securitization concerns facts produced in the natural sciences concerning issues such as disease or climate change.[9] According to several authors (e.g. Brauch, 2009), such facts have been securitized to varying degrees. However, given a strong trend arguing for the lack of hard scientific facts about how, for example, climate change will affect us, an important subdiscussion related to this cluster concerns *the role of science in risk management*. In other words, when hard facts are absent, a range of risks need to be juggled. In the *precautionary* mode of risk management, according to Aradau and Van Munster, risk management is constructed as working against catastrophic and irreversible risks of which there is a high degree of *scientific uncertainty* (Aradau and Van Munster, 2007: 103). In political practice, however, it is argued that lack of scientific knowledge should not hinder governments from taking action. Sovereign decisions (and not democratic deliberations) are therefore taken 'at the *limit of knowledge*' (Aradau and Van Munster, 2007: 106–7; Oels, 2010) and may cause drastic interventions such as shoot-to-kill policies, pre-emptive strikes and war (Aradau and Van Munster, 2007: 105). In the words of Oels (2010: 7), 'even though science fails to deliver conclusive evidence, *the will to knowledge* is becoming unlimited' (emphasis added). Science thus seems to be mobilized as *failed* science, which leads to a problematic process similar to that described by securitization theory: the *instrumentalization in politics* of a lack of knowledge leads to the legitimization of undemocratic practices in the name of managing risk.

The second cluster of research includes the work of Mark Salter, who draws our attention to how different audiences can receive ('hear') securitizing moves differently. Salter argues that in the case of the Canadian Air Transport Security Authority (CATSA), expert communities challenged a further securitization of airport security after the initial securitization of civil aviation post 9-11 through a set of desecuritizing moves – for example, 'a critical appraisal of the risk management approach' (Salter, 2008: 333). He does not, however, take a stand on how science operates and is received in society in general, even though he argues that 'if, as security experts, it is part of our role to intervene in the securitization/desecuritization process, then we must gain a tactical

knowledge of the conditions for success and failure' (Salter, 2008: 343). Part of this knowledge concerns how science is perceived in society, I would argue. Instead of pursuing this line of reasoning, however, Salter takes the scientific arguments as they were presented by scientific agents to a scientific audience. Interesting questions about the role of science and scientific statements in society thus remain. How does society perceive of science? What weight does a scientific argument carry? And, can that influence securitization processes?

The third cluster of research on securitization/science is occupied by what has come to be known as the *Paris School*. This school is concerned with how experts engage in the *production of truths* and thus help shape the threat environment independently of dramatic securitizations.[10] According to the Paris School, the Copenhagen School only studies the tip of the iceberg by focusing on exceptional measures. Instead, securitization is seen as a not very spectacular everyday practice that often involves 'experts'.[11] This draws attention to the status and everyday workings of concrete security experts and constitutes an important insight for securitization theory.

The fourth cluster of research on securitization/science concerns the mobilization of scientific facts in political practice. In a study of the securitization of the democratic peace thesis, Christian Büger and I (2007) showed how the scientific 'fact' of democratic peace was transformed into a security policy by both the US government and the security organization NATO after the end of bipolarity. In a more thoroughly sociological version of this point, I argue from a Bourdieusian viewpoint that science can be understood as both a type of practice and a type of capital, with important weight in specific *fields* (Villumsen, 2008).

As the above overview shows, there has been some attention to the connection between science and securitization, but no real debate within securitization studies (or within security studies more broadly, for that matter) has materialized. In the following, I will develop the ideas sketched above, while keeping in mind the important insights from the contributions to the science/securitization issue.

Science in securitization studies: Objectivation, the authority of the speaker and mobilization of scientific facts

But, how to capture science? In the next subsection, I flesh out the Bourdieusian take on science, but first a general discussion of science is in place. A useful distinction suggests that science can be viewed both from within the scientific field and, for example, from political practice outside the scientific field.[12] Seen from within, science is a field in itself, with its own rules and expectations concerning how to do science in a 'scientific' way. Even though differences exist between social and natural sciences, a dominant strand of science studies generally converges on the idea that science is a *practice* with its own profits and positions that are obtained within the field of science (Latour, 1983; Bourdieu, 2004).[13] Central to scientific practices is the notion of *controversy*: falsification and dissent are integral to the workings of science, and the settling of controversies – or their reopening – often results in fierce struggles (Latour, 1987). Seen from the outside, however, natural science in particular has traditionally been viewed as producing objective, autonomous knowledge that is disinterested and not imbued with power (Swartz, 1997: 67).[14] The products – so-called facts – of natural science have been taken as 'black boxes' (Latour, 1987) filled with knowledge, and the controversies have seemed to stay in the realm of science. Changes in the production mode of science are altering these traditional features (Gibbons et al., 1994). However, as Ole Wæver (2011) rightly argues elsewhere in this special issue, science in general remains cast in objectivist terms of 'pure' or 'tainted' when transported into the political field, irrespective of the mode of production.

The autonomy of the social sciences has been taken to differ somewhat from that of natural science, because the topics lie close to what 'ordinary' people feel they know something about; 'everyone feels entitled to have their say in sociology and to enter into the struggle over the legitimate view of the social world' (Bourdieu, 2004: 87). Seen in the light of Giddens' (1984: 374) concept of 'double hermeneutics' and the constant 'slippage' between lay and expert language,[15] social science is often deemed less autonomous than the natural sciences. Add to this the influence of social constructivist theories, which hold that the social world is 'what we make of it' (Wendt, 1992), and social science seems less able to black-box its findings. Controversies could therefore be expected to spill over into the political realm to a much larger extent than in the natural sciences. However, seen from within the scientific field, social science is still a science that requires certain skills and methods in order to be counted as science: 'facts' need to be manufactured in a specific way, and scientific authority is tied closely to the scientific field and its practices of objectivation (see below). Further, as we shall see below, the reception of both social and natural science in political practice often follows the same structural features. So, even though differences exist, important similarities prevail.

Drawing on the understanding of science as a practice, three observations from Bourdieu's sociology of science will structure the discussion of science in securitization processes below. First, science *objectifies* its object of study and plays an important role in the production of difference and hierarchies in society. This may lead to closing off debates on certain issues. Second, the social world can be conceived as being structured in fields, where the distribution of symbolic capital is important for determining the 'authority of the speaker' (the securitizing actor) or of an utterance (speech act). With a position of (symbolic) power and a 'sense of the game', an actor gains 'a place from where to speak' in a specific field – for example, the scientific field or the field of security. These two mechanisms relate to the external dimension to securitization identified in the first part of this article. Finally, third, scientific facts – observations, products, methods (or theories) – can be mobilized strategically by agents in political struggles as a form of capital in securitizations. This concerns the internal mechanism or 'grammar' of securitization. These three mechanisms are analytically distinct in the discussion of securitization theory, in the sense that they address different aspects of the theory, but they are related in Bourdieu's sociology. One, however, does not collapse into the other two. With the aid of Bourdieusian concepts, I flesh out these observations below and add illustrations from contemporary security.[16]

Objectivation: Closing down controversy

Bourdieu described intellectual enterprise – science – as a practice among other practices (Swartz, 1997: 58–9) concerned with how to understand and explain (social) phenomena. A veil of scientific objectivism and distance was a historically constructed part of its *habitus*.[17] Science was seen as reflexively related to the social world in a particular way. Through an important distinction between 'science-practice' and 'practice-practice', Bourdieu let the researcher assume a special role as an active part in a process called *objectivation*, in which human practice – unintentionally or intentionally – was categorized and rationalized in order to form systematic categories and solid conclusions. In Bourdieu's (1977: 2) words:

> in taking up a point of view on the action, withdrawing from it in order to observe it from above and from a distance, [the scientist] constitutes practical activity as an object of observation and analysis, a representation.

This created an 'altogether different vision' that, unfortunately, 'risk[s] destroying its object or creating pure artefacts whenever it [is] applied without critical reflection' (Bourdieu, 1998: 130). The scientist was thus seen as an interlocutor in the formation of practice-practice and could be responsible for consecrating a social reality with scientific status – making it next to impossible to change it. Accordingly, the scientist's analyses potentially *prescribe* action and exercise a specific kind of symbolic violence on practice-practice.

As an illustration, consider the early years of the RAND Corporation, where a group of researchers set out to explain the new security situation from a social-scientific standpoint (Kaplan, 1983; Schelling, 1958).[18] With no empirical evidence to support their findings (no nuclear war had been fought!), the group developed a thought-provoking and immensely influential view of how nuclear strategy should be performed. From the models it developed, policy advice was deducted and policy formed. The necessity of nuclear deterrence was objectified by scientists with a habitus belonging to the scientific field. Some controversy remained in the scientific field, however: Green (1966: xiii) concluded a study of the methodology of the deterrence theory of the day with the statement that the theory's 'air of authority was and is completely spurious'. Some of the conclusions seemed 'absurd: for example, the casual assumptions that the "rational" response to a nuclear strike on one's cities is a counterstrike on the attacker's cities' (Green, 1966: xi). This controversy, however, did not travel to the political realm. The RAND people not only were good at producing scientific knowledge,[19] but also had efficient channels for transmission of their ideas to practitioners – including politicians (Kaplan, 1983; Wolfson, 1972: 22). Many in the US government felt that 'it added scientific legitimacy' (Kaplan 1983: 131) to listen. The black-boxed fact of nuclear deterrence that was manufactured through a process involving a specific kind of power tied to objectivation – the power to define and categorize (Bigo, 2002: 70) – entered the political field and closed down controversy there. Science set the scene and determined the value of various statements and 'incidents'. In the case of nuclear strategy, game theory became the chessboard upon which the game was played. The rules of the game, and the possible games being played, were objectified by scientific standards established within economics and mathematics (Kaplan, 1983: 121). And so was the necessity to deter in order to produce security. In the words of Green (1966: xiv), 'this condition has come about largely because of our society's great respect for the claims of science and expertise'. In that sense, 'Bourdieu takes the conventional argument that science has a "feedback effect" on social reality a step further. In his work he insists heavily on the role played by academia in the (re)production of social hierarchies' (Leander, 2002: 605).

For securitization theory, this adds a contextual dimension to the political processes in the field of security: Science can exert a considerable degree of influence on what is being said and what not. It can (co)determine the setting and the issues deemed legitimate and 'true' as objects of security. Theoretically, this influence of science links up with the discussion of securitization theory's spectrum of social reality ranging from the non-politicized and politicized to the securitized (see above). Science may hold a power of actively fertilizing a move from the politicized or securitized to the non-politicized through scientific practices of objectivation and a closing down of controversy in the political realm. This constitutes the first mechanism of science in relation to securitization theory. And it produces a democratically problematic outcome that differs from the legitimation of extreme measures through fierce securitization moves: The non-politicized has no language; it is 'what we know without knowing that we know it' – what Bourdieu referred to as *doxic practice*.[20] Without debate, without language, security strategies, for example, can become so deeply rooted that change becomes utopian and emergency measures become everyday practice.[21]

The authority of the speaker

Related to the mechanism of objectivation, but analytically distinct from it, is the production of authority in specific fields. Salter (2008: 344) argues that 'to engage with the ethical or normative dilemma of the analyst's involvement in securitization processes, we must first ask "what makes an intervention successful"?' For Bourdieu, authority is produced in fields structured by different types of field-specific, valued capital – military capital, social capital (networks), economic capital, scientific capital, etc. (Villumsen, 2008).

A field's limits are determined by an agreement on the 'stakes at stake' and the reach of the effects of the field.[22] Some agents possess more valued capital than others and thus hold a position 'from where to speak with authority' (Bourdieu, 2004: 34; Leander, 2005: 812). As argued above, Buzan et al. (1998) recognize that the standing of the speaker is important in securitizations ('security is a structured field'), but offer no tools for studying this element in a systematic way. A Bourdieusian focus on fields and field-specific capital could pave the way for an empirically sensitive approach to this issue.

With relation to the security field, a range of types of capital have been analysed as important. Huysmans (2002b) points to humanitarian capital, Williams (2007) to military and especially cultural capital, and I have argued that military capital is important, as are social and economic capital (Villumsen, 2008). But, what is perhaps most interesting for the purposes of this article is the extent to which *scientific capital* is also co-determining the hierarchy in the field of security and the chances of winning and speaking with authority (Berling, forthcoming). Two brief examples will serve to illustrate such a mechanism: one relates to authority produced by the natural sciences, the other to the social sciences. First, Brauch (2009: 94) argues with reference to the climate debate that 'the scientific messages of the IPCC [Intergovernmental Panel on Climate Change], due to its *high scientific … reputation …* have reached a global audience' (emphasis added). In other words, the scientific setting has given scientists 'a place from where to speak' in the security field.[23] Brauch does not give this any more than superficial attention in his attempt to argue that global and environmental change has been successfully securitized. However, without attention to the special status of science in society and the production of authority in specific fields, he risks overlooking the mechanism of authority production underpinning the IPCC's success.

A social-scientific example concerns the spread and status of the democratic peace thesis. From being a philosophical ideal, the thesis was solidified through scientific methods (COW and Polity datasets) and ended up being used to support the USA's security strategy in 1995 (White House, 1995). During the election campaign in 1992, would-be president Bill Clinton was advised to declare democracy promotion a top priority owing to the *scientifically certified relation* between democracy and peace (Hamilton, 1992; Scholarz, 1992). By establishing a relation between a given regime type and peace (or, initially, the absence of war), researchers created certainty about the relations between a certain type of countries: democracies. This not only gave politicians a strategy in a situation where old truths about the nature of the international system were under pressure. It also hurled democratic peace theorists into a position of authority in the political field in the USA. This added to the symbolic power of their scientific product (the democratic peace thesis) and bolstered their standing in both the scientific and the practical worlds. Democratic peace researchers could establish themselves as spokespersons (or authority) for the 'nature' of relations between democratic states (Büger and Villumsen, 2007).

These observations do not translate into science holding *the most powerful* position in the field of security or imply that science will always have a role to play in securitizations. Even if science's *habitus* involves a sense of having special access to the truth (Bourdieu, 2004) and the political

field seems to cast science with the authority of objectivity, there is nothing universal about this. The weight of science needs to be determined empirically through a study of the context of securitizations as constituted by fields and field-specific capital. And, importantly, no *a priori* exclusion of, say, the social sciences as powerful can be supported, as the above example indicates.

Mobilization of scientific facts

A third science mechanism concerns the internal workings of the grammar of securitization: If science enjoys a position in society that sets it apart from other social practices, the products of science – for example, facts, scientific models, data – can be mobilized strategically[24] by agents as 'weapons' in political struggles in their efforts to secure for themselves the power to impose the legitimate version of the social world and its divisions (Swartz, 1997: 89). The mobilization of, say, scientific products such as the democratic peace thesis in order to arrive at an agreement on the spread of democracies as a security strategy (see above) or the presentation of a model showing the covariation of greenhouse-gas emissions and rises in sea levels in order to underline the objectivity of human-made rises in world temperatures (Brauch, 2009) are examples of this. These mobilizations strive to close off debate and create *doxic practice* and objectivation, but will often find themselves in orthodoxy/heterodoxy struggles. But, when a relation is framed in technical terms, the knowledge about this relation can only be challenged by using, for example, sophisticated statistical techniques and academic vocabulary. In this sense, scientific capital is needed in order to counter these mobilizations.[25]

To continue with the example from the debate on global and environmental change, a number of models have been central in the moves leading to a near-consensus. Brauch (2009) describes what he calls the new security danger with the use of models from both the IPCC and the Mauna Loa Observatory in Hawaii. He reproduces a graph with the following explanatory text: 'The new security danger in the Anthropocene posed by changes in atmospheric CO2 measured at the Mauna Loa Observatory in Hawaii (1958–2007)' (Brauch, 2009: 67). The text not only gives a visual representation of a drastic development and couples this image with the scientificity of a long time span. It also labels the development a security danger. Drawing on data from the IPCC, Brauch (2009: 67) argues that 'the security danger posed by hydro meteorological hazards has killed ca. 1.5 million people and affected more than 5 billion people … and the trend has been rising in both number and intensity…. [S]uch events will be very likely during the 21st century'. The scientific language 'very likely', the graph, the numbers, the historical mapping and the mentioning of five-sevenths of the world population in a matter-of-fact way all add to the weight of the argument.

This constitutes the internal mechanism of science with relation to securitization: the value ascribed to scientific products as 'aces' or 'trumps' should be kept in mind when analysing securitization attempts. There is no causal mechanism, however: the mobilization of scientific 'facts' does not guarantee success, but it is an important factor to be reckoned with.

Conclusion: Science and practical reflexivity in securitization studies

Stating that science is a factor in political practice seems to be becoming uncontroversial. But, *how* science works in *securitizations* has remained underdeveloped. By turning this question into one of 'mechanisms', this article has tried to fertilize debate on this issue with the aid of Bourdieusian concepts. In the process, science materialized as concrete questions of how objectivation, scientific

authority and scientific facts work in relation to securitization processes. The first and second mechanisms relate to the context of securitizations, while the third concerns the internal grammar of securitization theory. The three mechanisms are related, I argued, but analytically distinct in the sense that they capture different aspects of the science issue with relation to securitization. None of them are constant, but should be read as open research questions that require contextual, empirical answers.

Apart from directing our attention to concrete workings of science in securitization, the discussion of the three mechanisms also raised the question of whether the two centres of gravity in securitization theory have been adequately theorized. With the help of Bourdieu's sociology, I argued that in order to understand science in securitization, a contextual dimension is pivotal. The concepts of objectivation, fields and field-specific capital stepped in to do the conceptual work in this regard in the article. Further, the internal centre of gravity was supplemented with a focus on the 'weapons' that agents can mobilize in securitization attempts. These were conceptualized through the Bourdieusian concept of strategic manoeuvring. A further development in this direction, I argued, could develop securitization theory on these specific points.

The article illustrated the three science mechanisms through examples drawn from both natural and social science. All cases could have revealed instances of all mechanisms, but in order to show the diversity of science in play – and not least to counter the myth that social science only rarely produces objectivation, authority and 'facts' because of a lack of autonomy and the omnipotence of social constructivism – I made a point of including a range of different examples. The cases revealed that the social sciences have indeed been involved in processes of, for example, objectivation that have led to debate-stopping and doxic practice in international security. While Buzan et al. (1998) focused primarily on natural science, this article argued that the social sciences also need to be taken into account.

So, even in the face of the massive attempts at deconstructing the objectivist truth ideal in the social sciences in general over the past thirty years or so, and though truth may not hold the gold standard it formerly did, something seems to happen, I argued, when science leaves the scientific field: It seems that science – whatever type – has a tendency to perform a function in the political field that glosses over the controversies often still active in the scientific field. It is therefore still justified to investigate the status of science in society: the philosophical deconstruction of truth does not smoothly spill over into a practical devaluation of science as such.

This inevitably points a finger to ourselves as researchers: How do we balance the different mechanisms possibly at play in and around securitizations? Can we use these mechanisms strategically to desecuritize? Or, is the securitization–science relationship a maze with no exit? Seen in this light, the discussion in this article can be taken as a call for *practical reflexivity* on the part of the securitization scientist.[26] When acting as external consultants to practical politics, commenting in the news or writing op-eds, practical reflexivity about how 'facts' are presented and how comments are placed within a larger sociological setting of authority can guide the practices of scientists. Perhaps, with time, this can produce answers to how to deal with the normative dilemma of writing security, as formulated by Jef Huysmans (2002a).

Notes

1. The questions of the politicization of science and science-as-understood-in-science are thus not the topic of this article.
2. I use Bourdieu's word 'objectivation' and not the more common 'objectification' to signal the approach of the article.
3. The literature on securitization is vast. This section teases out central elements of the theory in order to capture the workings of science in relation to securitization processes.

4. This spectrum bears resemblance to the distinction between the sedimented and the politicized in Laclau and Mouffe (1985).
5. A debate about authorized language can be found in Bourdieu (1991: 107–17); see also Butler (1997).
6. I thus agree with Balzacq (2005: 178–84) that securitization theory has not adequately addressed the issue of context, but differ in my reading of it.
7. As Bourdieu (1988) was with regard to the political field, I am aware that science does not hold the most powerful position in the field of security. Indeed, it might very well be a dominated part of it.
8. It lies beyond the scope of this article to present Bourdieu's thoughts in full. For an overview, see Swartz (1997). Within security, Bourdieu has been used extensively in recent years (Balzacq, 2005; Bigo, 2000; Guzzini, 2000; Huysmans, 2002b; Leander, 2005; Pouliot, 2010; Villumsen, 2008). For an overview, see Villumsen (2009).
9. Buzan et al. (1998) also focus on the production of natural-science facts.
10. The Paris School has mapped the security field from a perspective that combines Bourdieu and Foucault (Bigo, 2000).
11. These experts are not scientists *per se* but people who occupy positions of expertise within, for example, police forces (Bigo, 2000).
12. Buzan et al. (1998: 73) remind us to balance scientific standards with engagement with practice. Otherwise, one risks 'being stabbed in the back scientifically'.
13. For an overview of science studies, see Pickering (1992).
14. Bourdieu (2004: 52) even argued that scientific agents have an 'interest in disinterestedness'.
15. Hacking (1999) calls this process the 'looping-effect': the categories we use for classifying/naming people interact with people's self-conceptions.
16. All cases contain features relevant to all three mechanisms described. I have chosen to pick different cases in order to show the variety of social and natural science at work in securitization and that controversy in the political realm does not always follow from social science facts.
17. The *habitus* was defined as a temporally situated social structure nested in social agents. In Bourdieu's (1977: 72) words: 'systems of durable, transposable dispositions'.
18. I would like to thank Ole Wæver for directing my attention to this case of objectivation.
19. Quantitative analysis, systems theory, game theory and the use of computers were considered 'scientific': 'Maybe the numbers were questionable, but they were tangible' (Kaplan, 1983: 121).
20. The doxa is shared by both orthodox and heterodox positions and is therefore only changed extremely rarely (Bourdieu, 1977: 164–9).
21. On this point, see the work of the Paris School.
22. In security, the stake has been argued to concern the definition of the 'real threat' (Bigo, 2002) or the meaning of security (Huysmans, 2006; Villumsen, 2008).
23. Though generally accepted by the political level, instances of controversy in the scientific field did spill over into the political field (e.g. in the events that have become known as 'Climategate').
24. For Bourdieu (1990: 16), strategizing is *social*. It is a 'more or less conscious pursuit of the accumulation of symbolic capital'.
25. Cultural and scientific capital were exclusive because they required apprehension before they could be appropriated or 'consumed' (Swartz, 1997: 76).
26. On practical reflexivity, see Bourdieu (2004: 90); Villumsen and Büger (2010).

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