
https://researchrepository.murdoch.edu.au/id/eprint/59909

Copyright: © 2019 Springer Nature Switzerland AG. It is posted here for your personal use. No further distribution is permitted.
Securitization through the schoolbook? On facilitating conditions for and audience dispositions towards the securitization of climate change

Abstract:
This article contributes to the literature on securitization in a twofold way. Firstly, it argues that school textbooks reveal the consolidated discursive realms of a given society and convey them to the next generation. Focusing on school textbooks can thus enrich the analysis of facilitating conditions for securitization processes. The second and main contribution of this article is that it addresses the lack of empirical studies on the audience in securitization research. After an analysis of climate change discourses in Germany, we test whether students exposed to vastly different positions of the same consolidated discursive realm are more prone to accept the securitization of climate change. In order to do so, we use a quasi-experimental research design and a closed questionnaire. Results show that young people who read school textbooks using an alarmist logic are indeed more likely to conceive climate change as an urgent threat necessitating extraordinary measures, and are thus more likely to accept the securitization of climate change.

Keywords: securitization; climate change; audience; facilitating conditions; education; discursive realm

Introduction
Securitization theory is among the most prominent approaches in (especially European) security studies and International Relations. Is has been used to study a wide range of phenomena, including minority education (Collins 2005), security controls on airports (Salter 2008), water conflicts in the Middle East (Fröhlich 2012), transnational crime (Emmers 2003), the Arab Spring (Greenwood and Wæver 2013), or international terrorism (Amin-Khan 2012). Securitization theory has also been the object of intense theoretical and conceptual debates (Balzacq et al. 2015). The initial formulation by the Copenhagen School (Buzan, Wæver and de Wilde 1998) has been criticized for various reasons (Doty 2007; McSweeney 1997), extended (Hansen 2011; Heck and Schlag 2012), or challenged by alternative conceptions of securitization, such as those put forward by the so-called Paris school (Aradau and van Munster 2007; Bigo 2002).

This article aims to contribute to this growing literature on securitization in a twofold way. Firstly, it picks up the argument that processes of securitization are embedded into, and thus simultaneously enabled and restricted by a ‘consolidated discursive realm’ (Stritzel 2011: 345). School textbooks, which have so far hardly been considered by securitization theory, are expressions of deeply sedimented and frequently reproduced sets of knowledge. They are therefore
well-suited to shed light on consolidated discursive realms and to enquire the ‘facilitating conditions’ (Buzan et al. 1998: 33) of securitization processes.

Secondly, this is one of the first studies focusing on audience receptions of securitization processes from an empirical perspective (Léonard and Kaunert 2011). More specifically, we investigate whether audiences which are exposed to vastly different positions within a discursive realm (a hypothesized facilitating condition) are more or less prone to accept processes of securitization. As we concentrate on an audience of students and the impact of school textbooks, we also contribute to the everyday turn in International Relations (IR) and security studies (Solomon and Steele 2017; Vaughan-Williams and Stevens 2015). The results of the empirical analysis further enable us to contribute some remarks to the debate about whether securitization is a positive or a negative concept (Roe 2012). Empirically, we draw on the example of climate change, which is one of the issues most frequently – and most controversially – discussed by securitization theory (Oels 2012).

The remainder of this paper is structured as follows: The next section provides a short introduction to securitization theory and discusses the theoretical and empirical shortcomings addressed by our study in greater detail. The debate on the (supposed) securitization of climate change is summarized as well. The following section discusses the depiction of the links between climate change and security in the German discursive realm. Afterwards, we investigate whether exposure to different positions within this discursive realm facilitates the acceptance of the securitization of climate change by means of a closed questionnaire and a quasi-experimental research design. The findings are analyzed in further details in the discussion section. By means of conclusion, we summarize our results and develop suggestions for future research.

**Securitization Theory**

**Copenhagen and beyond**

The most widely used version of securitization theory has been developed by the so-called Copenhagen School (Buzan et al. 1998). It claims that security is not an objective condition, but the result of a process of social construction. Securitization is defined as a speech act ‘through which an intersubjective understanding is constructed within a political community to treat something as an existential threat to a valued referent object, and to enable a call for urgent and exceptional measures to deal with the threat’ (Buzan and Wæver 2003: 491). If the audience addressed does not agree on the relevance of the referent object, on the existence or urgency of the threat, and/or on the necessity of measures beyond established political or societal rules, the securitization move fails and no securitization takes place. The success of a securitization move is strongly dependent on a set of facilitating conditions, which include the social capital of the speaker,
the attributes of the threat claimed, and the historical/discursive embedment of the respective issue.

Stritzel (2007) and Balzacq (2011) distinguish between two readings of the Copenhagen school’s approach. The internalist/philosophical reading claims that securitization takes place through a performative speech act of a securitizing actor, thus emphasizing the power of political and military elites. The externalist/sociological reading, by contrast, conceives securitization as an intersubjective process. The success of a securitization is consequentially not dependent on a well-crafted speech act by social capital-rich actor, but the result of a process in which various securitization moves, audience reactions and dominant societal discourses interact. Accordingly, not a single securitization move, but several moves (articulated from different positions for a certain time period) can precipitate a successful securitization. Securitization is thus conceived as the result of a consecutive chain of speech acts and audience reactions.

Recent writings by members of the Copenhagen school (Buzan and Wæver 2009; Greenwood and Wæver 2013) as well as attempts to refine or extent securitization theory (Salter 2008; Stritzel 2011) frequently highlight the importance of various and diverse audiences, of the processual dimension of securitization, and of a broad set of contextual factors. Also, various studies have shown how elite decisions not only shape (as suggested by an internalist/philosophical reading), but are also shaped by (dominant) public discourses (Goldsmith and Horiuchi 2012; Moshirzadeh 2007). Finally, it is hard to image how exceptional measures can be successfully justified and implemented if they do not resonate with pre-existing knowledge structures of the relevant audience(s), being it the general public, technocrats or political elites. Consequentially, this study is based on an externalist (or sociological) reading of securitization theory.

Facilitating conditions and audience reactions

Securitization theory has been the object of intense theoretical and empirical controversies, and scholars have discussed several weaknesses and blind spots of its theoretical framework (Balzacq et al. 2015). In this article, we will focus on two related issues which are quite frequently discussed in the literature: consolidated discursive realms as facilitating conditions and audience reactions to securitization moves and processes.

Facilitating conditions, discursive realms and school textbooks

Facilitating conditions refer to the contexts which shape whether, how and when a securitization process is successful. They are not sufficiently theorized by the original works of the Copenhagen school (Salter 2008). Buzan et al. (1998: 33) only refer to the ‘grammar of security’ (existential
threat, valued reference object, urgent measures necessary), the ‘social capital of the enunciator’ and some vaguely defined ‘features of the alleged threats’.

Several authors thus highlight that processes of securitization are embedded into and their success is strongly dependent on ‘consolidated discursive realms’ (Stritzel 2011: 345) or ‘basic discourses’ (Hansen 2011: 362). Such discursive realms structure the intersubjective constitution of referent objects, their assessment as valuable and seriously threatened, as well as perceptions about the urgency and prospects of certain policy measures. Consolidated discursive realms are (re-)produced over the long term by verbal and non-verbal practices, some of which include securitization moves, while others are routinized and deeply embedded into everyday life (Abrahamsen 2005; Mavelli 2013).

We argue that school textbooks are important objects of analysis when studying consolidated discursive realms for at least two reasons.

The first reason is that school textbooks are well-suited to trace the consolidated discursive realms of a given society because they are seismographic indicators of political, public and academic discourses (Ide 2016). They reflect dominant political discourses because they are either published by the state or structured along state-defined permission schemes, curricula or examination content. All of these are strongly influenced by the dominant political forces (Ingrao 2009). In order to appear attractive to teachers and students, school textbooks usually pick up issues and values considered salient in a given society, especially in countries (like Germany) where textbooks are produced by competing private publishers (Fukuoka 2011). Finally, school textbooks reflect dominant academic knowledge as they are almost always written by academics or authors which received some academic training (Klerides 2010). Lässig (2009: 1) thus concludes: ‘Anyone inquiring into the ways and settings in which knowledge is acquired, stored, applied and altered must have an interest in consulting educational media.’

Like all other media, the content of school textbooks is influenced by the contexts in which they are produced. These include not only dominant political and societal discourses and disputes (Ingrao 2009), but also the process of selecting authors (Macgilchrist 2012), the availability of textual and visual content (Campbell 2007), and neoliberalization trends in the educational system (Brown 2011), among others. Analyzing these factors, which are certainly important for the content and usage or school textbooks, are beyond the scope of this study.

The second reason for considering school textbooks in the study of consolidated discursive realms is their wide distribution and usage, particularly in countries with a medium- to high level of economic development (EDU.DATA 2017). Studies suggest that school textbooks can have a crucial impact on the knowledge of young people (Christou and Spyrou 2016) and even influence their political worldviews as adults (Voigtländer and Voth 2016). However, it is important to note
that the impact of school textbooks is strongly dependent on the ways they are used by the teachers (vom Hau 2009), while families and peer groups (Staeheli and Hammett 2013) as well as local socio-political realities (Pain et al. 2010) are likely to have a greater impact on political socialization. Still, several scholars consider educational media in general, and of school textbooks in particular, as essential for strengthening democracy (Brown 2011) and sustaining the social order (Griswold, Lenaghan and Naffziger 2011).

Despite a growing interest of security studies and international relations in children and in education (Beier 2015; Nguyen 2014), school textbooks have so far hardly been considered by securitization theory. This is unfortunate given (a) their high potential to reveal the consolidated discursive realms of a given society, (b) their wide distribution and (potential) impact on young people, and thus (c) their considerable potential to indicate/shape the facilitating conditions which enable or impede the acceptance of securitization moves, and eventually the success of securitization processes. This study addresses this shortcoming by analyzing how German school textbooks shape the facilitating conditions for a securitization process.

**Audiences and discursive realms**

Securitization theory as developed by the Copenhagen school has been criticized for failing to provide an elaborated theoretical understanding of the audience (Hansen 2011). This shortcoming is especially critical since the audience has to accept a securitization process in order to be successful, thus making the audience a central component of the theory (Léonard and Kaunert 2011). Scholars have for instance pointed out that no distinction is made between various relevant audiences (Balzacq 2005), that passiveness of the audience is confused with acceptance (Watson 2012), or that acceptance is not defined and hard to operationalize (Stritzel 2007). However, recent years have seen considerable developments in the conceptualization of the audience. Among others, scholars have distinguished between different forms of audience support (Balzacq 2005), different stages of acceptance (Roe 2008), or different kinds of audiences (Salter 2008).

But despite such theoretical progress, empirical research on the audience is still underdeveloped. Many studies either pay marginal attention to the audience or focus on broader reactions of the general public (Côté 2016). Only a few scholars investigate the concrete receptions and responses of specific persons or groups (e.g. Gillespie and O’Loughlin 2009; Hammerstad 2012; Salter 2008). These studies largely agree that the audience is ‘active and engaged’ and has a remarkable capability to reflect, challenge and influence securitization processes (Côté 2016: 543). This is in line with the findings of the critical geopolitics and the everyday security literatures, which also emphasize that elite geopolitical visions are frequently ignored or received in creative and location-specific ways (Benwell 2014; Mac Ginty and Firchow 2016).
While these streams of research are highly important, it is also crucial to investigate if and how political and societal elites affect processes of securitization. In other words, a sole focus on critical and reflective audiences risks to lose sight of the power some actors have in influencing the security considerations of an audience. Media studies frequently find that the content and framing of news media can influence political attitudes (e.g. Brader, Valentino and Suhay 2008; Gadarian 2010; Prince, Tewksbury and Powers 1997; Sampei and Aoyagi-Usui 2009). Similarly, the few studies conducted on this issue from a securitization perspective show that securitized media coverage produces a greater sense of urgency, threat, and government support in certain audiences (Vultee 2011; Vultee, Lukacovic and Strouffer 2015). Focusing on the influence of securitization moves/processes on the audience also creates opportunities for interaction between research on securitization and the literature on framing, which has a long tradition of empirical research on audience reactions (Watson 2012).

Investigating audience reactions to securitization moves and processes could not only yield interesting empirical insights, but also provide new impulses for conceptual controversies about the audience in securitization theory. Important questions to consider (and so far hardly investigated) in this context include: What are the factors that facilitate the identification of a threat, its consideration as urgent, or the support for extraordinary measures? Is there a relationship between considerations of importance, perceptions of urgency, and support for extraordinary measures? Are there differences between various audiences? And what roles play consolidated discursive realms in this context?

The latter question is of particular importance in the context of the issues discussed here. There are convincing theoretical arguments that consolidated discursive realms facilitate or impede securitization processes by creating more or less responsive audiences (Balzacq 2011; Hansen 2011; Stritzel 2011). But so far, there is little research investigating whether and to which extent these claims hold true empirically, especially in the everyday contexts considered more and more important by scholars of international politics (Solomon and Steele 2017; Stanley and Jackson 2016). Our study addresses this issue by analyzing whether a concrete audience (German students) is more prone to accept the securitization of climate change when being exposed to different positions circulating in the consolidated discursive realm of Germany.

By focusing on school students and how their security perceptions are shaped by everyday media like school textbooks, this study also contributes to the literature on the everyday (or vernacular) turn in International Relations and security studies. These approaches criticize that ‘security studies in both “traditional” and “critical” guises has for the most part privileged the rhetoric, speech acts and (in)securitizing moves of politicians, policymaking communities, security professionals, private security companies and other elites’ (Vaughan-Williams and Stevens 2015: 241). Consequently,
they suggest focusing stronger on how security problems are conceived by non-elite actors in
everyday settings, because such conceptions set the table for the acceptance of macro-/elite politics
(Jackson and Hall 2016; Solomon and Steele 2017). A focus on young people, such as the students
that participated in our research, is especially relevant in this context. Though youths can be
significant political actors (Bosco 2010), little research has been devoted to their perceptions on
threat and security (and how these are formed) (Pain et al. 2010).

Climate Change and Security
Because it serves as the empirical example of our study, we will now give brief overviews about the
debates of climate change and securitization in general and about climate-security discourses in
Germany, both of which are based on the existing literature. Afterwards, we present the design and
findings of our empirical study on audience receptions.

Securitizing climate change
With some precursors dating back at least to the early 1990s, the debate around climate change as
a security threat has intensified since 2007. In that year, the fourth report of the Intergovernmental
Panel on Climate Change (IPCC) documented a large scientific consensus about the existence of
climate change, its causation by human activities, and its potentially grave societal consequences.
Nearly simultaneously, the IPCC and Al Gore received the Nobel Peace Prize for their engagement
against climate change and the UN Security Council held its first (of four) debates on climate
change and security (Gleditsch and Nordås 2014). Since 2007, various NGO publications,
government reports and high-ranking policy makers have identified climate change as a severe
security threat (McDonald 2013; Rothe 2015).

Such securitization moves address various referent objects, which can be located at different levels
(or scales) (von Lucke, Wellmann and Diez 2014): First, the individual level, which refers to the
security of humans (e.g. more intense/frequent storms threaten many lives) or communities (e.g.
Pacific islanders cannot sustain their livelihoods due to rising sea levels). Second, the national level,
which mainly refers to the security of the state, for instance vis-à-vis climate-induced migration or
reductions in economic growth caused by natural disasters. And third, the global level, to which
depictions of climate change as a threat to global ecosystems refer.

There is a general consensus in the literature that the securitization of climate change has been
attempted by several actors, but was not successful. Neither was agreement on extraordinary
measures reached nor were such measures implemented (Brzoska 2012). But this does not imply
that such securitization moves had no relevant political effects. They increased public attention for
climate change as well as support for ordinary measures to deal with this problem (Karafoulidis 2012).

Some scholars even diagnose a “'[c]limatization’ of the security field” (Oels 2012: 185), implying that the attempted securitization of climate change has led to a shift of traditional security policies towards precaution, integration and human security (Trombetta 2008). Others argue that climate change is much more often discussed from a risk rather than from a security perspective. Such a ‘riskification’ renders an issue one of governing a valued referent object to control conditions of possibility for harm against it’ (Corry 2012: 256) and thus focuses on potential threats, long-term perspectives, and prevention (rather than on acute threats, urgent responses, and emergency measures, as a securitization would imply).

The normative implications of securitization moves regarding climate change are contested. Many authors consider even an attempted securitization of climate change to be problematic as it could legitimate Western interventions in the global South (for instance, to preserve states from failing or to promote clean technologies) (Boas 2014), facilitate democratically not legitimized emergency measures (Aradau 2004), portray the victims of climate changes as threats (in the form of mass-migration or social instability) (Methmann and Oels 2015), and fails to support the long-term, routinized mitigation/adaptation measures necessary (McDonald 2013).

Other authors emphasize the (potentially) positive effects of such securitization moves. Efforts to portray climate change as a security threat since 2007 resulted in a marked increase in support for climate change mitigation and adaptation efforts, also among more conservative groups (Floyd 2008; Karafoulidis 2012). Another positive effect might be a stronger focus of security practices on shared threats, long-term developments and human security (Detraz and Betsill 2009; Floyd 2008). In the Israeli-Palestinian context, for instance, some NGOs try to facilitate peace by portraying climate change and water scarcity as shared long-term threats that need to be addressed by cross-border cooperation (Ide 2017).

**Climate-security links in the German discursive realm**

Climate change also gained increasing prominence in the German discourse since the mid-2000s, and especially since 2007, with attention reaching peak levels during large international climate conferences or when prominent political actors pick up the issue (Reusswig 2010; Schäfer, Ivanova and Schmidt 2013). Generally speaking, climate change is most frequently discussed as an exceptional threat on which urgent measures need to be taken in the German discursive realm. A security logic is hence more prominent than a risk logic. The by far highest number of discursive fragments refer to individual level referent objects, especially in the global south, such as Pacific island communities or the victims of natural disasters in Africa and Asia. Some locations in the
global north, such as coastal megacities, are mentioned as well. References to the global level are of secondary relevance in the German consolidated discursive realm (Diez, von Lucke and Wellmann 2016: 65-95).

A remarkable number of actors and statements also link climate change to risks and especially to security threats on the national level. These warn that climate-induced natural disasters, political instability and mass migration can exceed the coping capacities and even threaten the existence of several states in the global south, but might also cause associated problems (migration, spread of instability) in Europe (Brzoska 2009; Methmann and Rothe 2014). Climate-related risks and threats that affect Germany more directly, such as more extreme weather events or reduced economic growth, are mentioned as well (Diez et al. 2016: 65-95).

When it comes to potential responses, the German consolidated discursive realm considers a mix of mitigation and adaptation measures (Reusswig 2010). Political (e.g. climate summits, development aid) and technological (e.g. solar energy) measures are more frequently discussed than ‘radical’ solutions, such as changes of personal lifestyles (Grundman and Krishnamurthy 2008; Methmann and Rothe 2012). Consequentially, far-reaching political changes are hardly suggested and even more rarely implemented, leading Brzoska (2012) to conclude that the securitization of climate change has failed.

A full analysis of the depiction of climate change in German school textbooks is beyond the scope of this study. But our initial reading of these textbooks as well as the more detailed analysis of Ide (2016) revealed a high degree of agreement between the German consolidated discursive realm and the representation of climate change in German school textbooks.iii However, this discursive realm shows considerable internal heterogeneity (Diez et al. 2016: 65-95), and accordingly, the depiction of climate change varies considerably between (and sometimes even within) the books. Some textbook passages mention climate change as one problem among others, focus on technical details (e.g. explaining the greenhouse effect), emphasize a long-term perspective, and advertise everyday mitigation measures, for instance to ‘replace light bulbs with energy-efficient bulbs’ (Mattes et al., 2013: 280). Others, by contrast, even refer to climate change as ‘the end of the world’ which can cause ‘mass mortality, mass migration, widespread lingering illness’ (Grabowski, 2012: 319) and calls for urgent, far reaching measures.

Heterogeneous Discursive Realms and Audience Dispositions

Methods and data

As discussed in the last paragraph, different positions on climate change and security exist in the consolidated discursive realm of Germany (although some positions are clearly dominant), which is reflected in the school textbooks as well. We utilized this internal heterogeneity to analyze
empirically whether exposure to such different positions facilitates the acceptance of a securitization process by a given audience (German students aged 14-19). In order to do so, we employed a quasi-experimental research design, which is widely used by similar studies in the research on framing (e.g. Prince et al. 1997; Vultee 2011).

We first created two samples of schoolbook text passages, each containing two texts. The first text was the same in both samples. It describes the causes of climate change with special reference to the greenhouse effect and mentions some general consequences for humans and the earth, including glacier melting, rising sea levels, loss of biodiversity and an increased frequency of natural disasters. The second text differed strongly between both samples. In the first sample (the ‘everyday sample’), no further (potential) consequences of climate change are discussed by the second text. Rather, the text encourages students to stop climate change by modifications of their everyday behavior, such as turning out the light when leaving a room. The second text in the second sample (the ‘alarmist sample’), by contrast, already identifies climate change as a security risk in the heading. It goes on to claim that climate change is very likely to cause a decrease in living conditions on the earth for most people, a loss of freshwater and fertile soil in some regions, the sinking of many islands in the Pacific, and eventually mass migration as well as violent conflicts. The war in Darfur is considered as the first example of such conflicts."

Though both samples focus, just like the German consolidated discursive realm, primarily on individual level referent objects, they are very different from a securitization perspective. According to the everyday sample, climate change is a possible risk in the future. However, as the emphasis on minor changes of everyday lifestyle indicates, the risk is rather small and can be addressed relatively easy. The alarmist sample, by contrast, portrays climate change as a severe security threat, which can not only cause human misery and mass migration in the future, but is already partially responsible for the brutal war going on in Darfur today. The two samples thus reflect not only extreme positions of the consolidated discursive realm in Germany, but also very different facilitating conditions for a securitization process.

Once the samples were prepared, we went to various school classrooms together with the teachers in charge. We asked students to read one of the samples carefully (the samples were distributed randomly in each class) and to fill out a closed questionnaire afterwards. The questionnaire included two questions asking the students whether they consider climate change as an important and immediate problem (items ‘C.C. is a problem’ and ‘When problem’), one question about students’ perception of the urgency with which climate change needs to be addressed (item ‘Urgency to act on c.c.’), as well as three questions asking students’ about their stance on more specific mitigation measures: whether they would limit their consumption to combat climate change (item ‘Change own lifestyle’), whether German politicians should enact stricter laws to slow down climate change
(item ‘Change policies’), and whether Germany should interfere in the affairs of countries unwilling or unable to protect the climate (item ‘Intervention’). These questions, we believe, are well suited to assess whether students that are exposed to more alarmist depictions perceive climate change as a more important issue and as a more urgent threat, and whether these students show greater support for extraordinary measures to combat climate change. Such students should be more prone to accept the securitization of climate change.

In addition to the above items, the questionnaire also asked students about their general level of interest in politics (item ‘Interest in politics (st.)’), as well as their personal commitment to preserve the environment (item ‘Environment is important (st.)’). We assume both, political interest and commitment to environmental protection, to influence students’ perception of climate policy issues and therefore included them as control variables in our analysis. We also asked students how they perceive their parent’s interest in politics and in protecting the environment. For each question, students’ answers were ordered on a four point scale ranging from weak to strong identification with the probed item (e.g., answers to the question of perceived urgency to act on climate change range from ‘not urgent’ to ‘very urgent’, with ‘somewhat urgent’ and ‘urgent’ as intermediary levels).

In order to recruit students for participation in the research project, we contacted all schools in the city of Braunschweig as well as in the neighboring cities Salzgitter and Wolfenbüttel (all in the state of Lower Saxony, Germany), explained them the rational of our study, and asked whether they would be motivated to participate in the study. The region was chosen as we had pre-established contacts to schools and teachers there. We limited our inquiry to classes 8 (students being around 14 years old) to 12 (students being around 18 years old) as the issue of climate change was not discussed in school textbooks designed for younger students. Similarly, we excluded private schools from our study as these are very rare in Germany.

Altogether, we contacted 44 schools. Six schools were willing to take part in the research project, and for five of those, we could obtain the necessary permissions from the local school authorities, the principal, and the parents. The German secondary education system is divided along three streams according to the academic merit/potential of the students, but at least one school from each stream took part in the study. The schools and especially the respective teachers were responsible for choosing the classes that would eventually participate in the study. Altogether, 359 students from five different schools, four different age levels (classes 8-11, aged between 14 and 19) and 23 different classes returned a questionnaire in the period between March and June 2016. Descriptive statistics and a correlation table for all relevant variables are provided by table 3 and table 4 in the appendix.

Results
In a first step we assessed whether students that have read the alarmist sample of texts perceive climate change as a bigger and/or more urgent threat, and show higher support for climate change mitigation actions. When doing so, we controlled for general interest in politics and commitment to environmental protection. To account for the ordered nature of our dependent variables, we used ordinal logistic regression. The results are shown in Table 1.

The coefficients of our control variables behave generally as expected. Commitment to environmental protection is positively and significantly associated with all dependent variables, whereas the coefficient for interest in politics is consistently positive and at least marginally significant (p<0.1) in the majority of models. This suggests that students which care about environmental protection and are more interested in politics are also more likely to be concerned about climate change and support climate change mitigation actions. Moreover, we observe that students which perceive climate change as a problem that generally requires urgent action also tend to support more specific climate change mitigation measures. The coefficient of ‘Urgency to act on c.c.’ is positive and highly significant in models 4, 5 and 6. A similar, albeit less consistent effect can be observed among students that perceive climate change as an important (model 4) and imminent problem (model 5).

More interestingly, we observe in model 3 that students which have read the alarmist sample are also more likely to perceive climate change as a problem that requires urgent action (p<0.01). Holding all other variables constant at their mean, these students are 16% more likely to consider climate change as a ‘very urgent’ problem (with a 95% confidence interval between 5% and 26%). This result remains robust when including additional controls for parental interest in politics and environmental protection (which were also variables covered by our questionnaire), when including random effects to account for unobserved heterogeneity between classes, and when using a linear model specification (see table 5 in the appendix). This supports our intuition that exposure to different depictions of climate change in school textbooks (and hence, to different positions of a consolidated discursive realm) can alter students’ general stance on the urgency of countermeasures.

On the other hand, perceptions of climate change as an important and imminent risk do not seem to differ markedly between students that were exposed to different samples (see models 1 and 2). Similarly, we obtain only weak support for a direct association between alarmist depictions of climate change and students’ inclination to change their lifestyle (model 4), to support more drastic environmental policies at home (model 5), or to accept interventions in other countries aiming to
mitigate climate change (model 6). Yet, given the positive association between the latter variables and the perceived urgency of climate change mitigation - which itself is sensitive to different depictions of climate change - we do not rule out an indirect effect at this point.

To further explore this possibility, we adopted an instrumental variables approach, using sample membership (in the group of students which read a certain sample of texts) as an instrument for the perceived urgency of climate change mitigation. Model 7 (Table 2) reports coefficient estimates for the first stage regression equation, in which 'Urgency to act on c.c.' was modeled as a linear function of sample membership and other variables. Consistent with our above findings, sample membership is positively and significantly associated with the perceived urgency to act on climate change.

Models 8 to 10 (Table 2) report coefficient estimates for three distinct second stage regression equations, in which 'Urgency to act on c.c.' is replaced by the fitted values of Model 7. We find tentative support for an indirect effect of sample membership on students’ support for limitations of their personal lifestyles and for stricter climate protection laws in Germany (mediated by the perceived urgency). In both model 8 and model 9, coefficient estimates for the instrumented urgency variable are positive and significant at the 5% level. Yet, given our limited sample size, they remain somewhat imprecise and should be met with some caution. Students’ attitudes on interventions in other countries aiming to mitigate climate, on the other hand, do not seem to differ markedly between our two samples, even when accounting for an indirect effect (model 10).

Finally, we wanted to know whether the effect we observe in model 3 is consistent for different groups of students (see Table 6 in the appendix). We tested if exposure to the alarmist sample has a stronger effect on younger students (in classes 8-9, compared to students in classes 10-11), on students whose parents are more committed to the protection of the environment (‘somewhat’ or ‘very’ committed), and on students in more prestigious schools (Gymnasiums, see also endnote 6). Scholars have assumed that high concerns about everyday insecurities such as socio-economic deprivation or ethnic discrimination reduce worries about post-modern threats like climate change (Ridout, Grosse and Appleton 2008). Hence, we considered whether the effect of the alarmist sample is conditioned by higher unemployment rates (above the state mean of 6.2%) or by more people with a migration background in the school’s catchment areas. Finally, we tested whether students attending schools whose catchment areas show higher levels of support (above the state mean of 13.7%) for the green party (the political party most concerned about climate issues in Germany) during the 2013 state election reacted differently to the alarmist sample. Data were
obtained from the election supervisor of Lower Saxony (2013) and the cities of Braunschweig (2015) and Salzgitter (2014).

None of our interaction terms yielded a statistically significant coefficient, suggesting that exposure to the alarmist text has a similar effect on students regardless of their age or socio-political environment.

**Discussion**

Altogether, we find evidence that exposure to different positions circulating in a consolidated discursive realm can facilitate or inhibit processes of securitization. In our study, students exposed to school textbook passages framing climate change as an urgent and acute security threat perceived climate change as a more urgent problem than students exposed to depictions of climate change as a manageable risk. As an indirect effect (mediated by the perceived urgency), students who read more alarmist textbook passages also showed greater support for (potentially) extraordinary measures in national politics and their personal life. Moreover, the impact of alarmist texts does not seem to be dependent on (or conditioned by) personal characteristics or socio-political contexts of the respondents.

These findings are partially in line with the literature on the political effects of media representations in general (e.g. Dunn, Moore and Nosek 2005; Gadarian 2010; Stevens and Vaughan-Williams 2014) and of securitized media content in particular (Vultee 2011; Vultee et al. 2015). Both agree that the content and framing of news media significantly impact the political attitudes and security perceptions of the recipients.

However, most studies in these research fields also find that such an ‘impact is largely conditional on the characteristics of the individual’ (Ridout et al. 2008: 575), while we could not detect such a conditional effect. There can be multiple reasons for this disagreement. Differences in age (around 67% of the respondents were 15-17 years old) and socio-political environment (all respondents lived in the greater Braunschweig region) might have been too small, while the measures for political interest and importance of environmental issues could have been too subjective (though we would doubt this interpretation). Alternatively, we might have studied young people whose political worldviews were in most cases not yet fully developed, hence making them susceptible to be influenced by ‘authoritative’ school textbooks, independent of their personal, social and political backgrounds.

The empirical results also have important theoretical implications. Securitization theory (Côté 2016), but also the study of everyday security discourses (Gillespie and O’Loughlin 2009) or critical geopolitics (Benwell 2014), increasingly highlight the active role of various audiences in appropriating, resisting and shaping interpretations of security issues. We do not deny the validity
of these claims. But according to our findings, the selective exposure to certain positions within a consolidated discursive realm can still have a considerable impact on securitization processes (see also Christou and Spyrou 2016; Stevens and Vaughan-Williams 2014; Vultee et al. 2015). Future research on securitization needs to consider in greater detail this ambivalent role of the audience as actively receiving/shaping securitization processes on the one hand, and being influenced by certain positions circulating in the consolidated discursive realm on the other hand. In this context, it is also relevant to focus on the power certain actors (such as security professionals, textbook publishers or journalists) have by selectively exposing particular audiences to certain positions circulating in a discursive realm.

A second interesting result from a theoretical perspective is that students’ exposure to the alarmist sample increases perceptions of urgency, while conceiving actions to combat climate change as urgent increases acceptance for some extraordinary measures. Such a link could not be detected for perceptions of climate change and an important or imminent problem. This suggests that the perceived urgency of an issue is more important for the success of a securitization process than the perceived importance. However, this conclusion is not yet backed up by theoretical considerations or other empirical studies and thus remains tentative.

Finally, the findings of this study speak to the vivid debate about the normative consequences of attempts to securitize climate change (see section ‘Securitizing climate change’). Among students who participated in the survey, the alarmist (securitizing) sample of texts did not increase support for German interferences in the affairs of other countries unable or unwilling to combat climate change. Our results thus do not lend support for claims that attempts to securitize climate change provide legitimation resources for external interventions by the global north or militarized foreign policies (Boas 2014; Hartmann 2010). Furthermore, students who perceived the issue of climate change to be more urgent (a direct effect of reading the alarmist sample) were also more willing to limit their personal consumption patterns and to accept the enactment of laws restricting climate-damaging activities (car driving and heating are examples mentioned in the questionnaire).

This supports the position of Floyd (2008) and Karafoulidis (2012), who argue that using a security framework can raise support for ordinary (and desperately needed) actions to prevent dangerous climate change. It remains to be investigated whether our results hold for securitization processes involving different issues, audiences and contexts. Leiserowitz (2004), for instance, concludes that watching the movie ‘The Day after Tomorrow’ (clearly a securitized portrayal of climate change) increases individuals’ motivation to mitigate climate change. Stevens and Vaughan-Williams (2014), also find potential positive impacts of high threat perceptions, for instance an increasing willingness to vote. Other studies, by contrast, point out that fearful representations of climate change have no impact on individual or collective actions (O’Neill and Nicholson-Cole 2009).
Before concluding, a note of caution is required. Though we did not have this impression, it remains possible that schools and teachers considering environmental/climate issues very important were more willing to participate in our study. This would have resulted in a sample of students already sensitive to the (securitization of) climate change. As there are still few empirical studies on audience receptions in the securitization literature, we also cannot assess whether our results are valid beyond the specific sample studied (students in the greater Braunschweig region). In addition, we only investigated the impact of school textbooks on the chances for a successful securitization in the short term, while such an influence might vanish over time (Porat 2004; Sampei and Aoyagi-Usui 2009).

Conclusion

This study picked up and contributed to two important discussions on securitization theory. Firstly, it agreed with Balzacq (2011), Stritzel (2011) and others that securitization is a process which is shaped by consolidated discursive realms. We identified school textbooks as important media which reflect consolidated discursive realms and play a crucial role in transmitting them to future generations. This is the case for climate-security debates in Germany as well. Secondly, while theoretical conceptualizations of the audience in securitization theory are becoming more and more elaborated, there is still a lack of studies focusing on the audience from an empirical perspective. In this study, we addressed the question whether exposure to different positions within a consolidated discursive realm can facilitate or impede the success of a securitization process. We find that the depiction of climate change as an acute and severe security threat (creating misery, mass-migration and violence) in school textbooks increases the odds that students perceive the necessity of urgent action on climate change. We also find tentative evidence for an indirect link between such depictions and increased support for some extraordinary measures, such as lifestyle changes and stricter environmental protection laws.

Based on our theoretical considerations and empirical insights, we can now identify several promising directions for future research. As school textbooks are likely to reflect consolidated discursive realms and to have some influence on the political worldviews of young people, future studies should investigate if and how they discuss other security issues, for instance terrorism or migration. In this context, one could conduct diachronic studies investigating how the importance of various referent objects has changed over time, and how such changing discursive realms shape securitization processes (Ditrych 2013). Comparing school textbooks from the global north and the global south would yield similar insights from a postcolonial point of view (Bilgin 2010). Furthermore, additional empirical studies on audience dispositions and receptions in the context of securitization processes would be highly valuable. While this study has mostly focused on very
short time-scales, one could investigate the medium- and long-term impact of (short- or long-term) exposure to different (positions within) consolidated discursive realms. Cultivation theory, for instance, suggests that the cumulative effect of continuous exposure to certain media content on people’s worldviews is considerable (Gerbner et al. 1986). It would also be interesting to see whether the results differ when different media (other than school textbooks), different audiences (other than students), different issues (other than climate change), and different situational contexts (other than German classrooms) are studied.

In line with a sociological approach to securitization (Balzacq 2011), it would be particularly promising to investigate how individuals make sense of the security claims of various positions circulating in consolidated discursive realms, and consequentially how the latter interact in practice. Students, for instance, have to make sense of various security-related discourses presented to them by school textbooks, teachers, peers, parents, news media, movies, video games and so on (Staeheli and Hammett 2013). These discourses can portray the salience as well as the cognitive and affective attributes of different (security) issues in various (contradictive) ways (McCombs and Ghanem 2001). Investigating processes of sense making in such settings is a promising endeavor on which securitization theory and research on everyday political narratives (Stanley and Jackson 2016) could join forces.

Empirical studies on the audience can generate insights about the factors shaping the success of a securitization process. But they also add flesh to the bones of theoretical controversies around securitization theory. Examples include the power and active role of the audience in a securitization process, the relationship between importance, urgency and extraordinary measures, and the debate about the consequences and normative implications of the securitization of climate change. Though this study contributes to all three debates, more empirical evidence on these issues is clearly needed.

Future studies on audiences and securitization can combine quasi-experimental research designs with structured questionnaires (as we did), but also with semi-structured interviews of focus group discussions. But the impact of different (positions circulating within) consolidated discursive realms and of specific securitization moves can also be examined in situ, for instance by participatory observation or by a discourse analysis of relevant documents. When doing so, studies of securitization might join forces with critical geopolitics (e.g. Dittmer and Gray 2010), framing (Watson 2012) or media effects (e.g. Gillespie and O’Loughlin 2009), all of which have shown some interest in how audiences react to depictions of threat and insecurity.

Eventually, we would like to encourage scholars of securitization to contribute to the growing literature on children in security studies, International Relations and political geography (Beier 2015; Skelton 2013; Watson 2006) by analyzing how children are agents, recipients and/or subjects
of securitization processes. Doing so would enrich debates about consolidated discursive realms, audiences and referent objects. But it would also allow securitization theory to contribute to the everyday turn by analyzing children and young people ‘[as] political beings active in their everyday lived worlds and as political becomeings whose agency unfolds also in the future societies’ (Kallio 2014: 211).

School textbooks cited:

References:
Amin-Khan, Tariq (2012) 'New orientalism, securitisation and the Western Media’s incendiary racism', Third World Quarterly 33(9): 1595-1610.
Brzoska, Michael (2012) 'Climate change as a driver of security policy' in: Jürgen Scheffran, Michael Brzoska, Hans Günter Brauch, Peter Michael Link and Janpeter Schilling eds., Climate change, human security and violent conflict: challenges for societal stability, 165-184, Berlin/Heidelberg: Springer.


Christou, Miranda and Spyros Spyrou (2016) 'Children's emotional geographies and the geopolitics of division in Cyprus' in: Matthew C. Benwell and Peter Hopkins eds., Children, young people and critical geopolitics, 75-90, London: Ashgate.


McCombs, Maxwell and Salma I. Ghanem (2001) 'The convergence of agenda setting and framing' in: Stephen D. Reese, Oscar H. Gandy and August E. Grant eds., Framing public life:
perspectives on media and our understanding of the social world, 67-81, Mahwah: Lawrence Erlbaum.


Nguyen, Nicole (2014) 'Education as warfare?: mapping securitized education interventions as war on terror strategy', Geopolitics 19(1): 109-139.


Oels, Angela (2012) 'From 'securitization' of climate change to 'climatization' of the security field: comparing three theoretical perspectives' in: Jürgen Scheffran, Michael Brzoska, Hans Günter Brauch, P. Michael Link and Janpeter Schilling eds., Climate change, human security and violent conflict: challenges for societal stability, 185-206, Berlin/Heidelberg: Springer.


Solomon, Ty and Brent J. Steele (2017) 'Micro-moves in International Relations theory', European Journal of International Relations 23.


---

1 We are grateful to all teachers and students which supported this study and participated in the survey. We also thank Ingrid Boas and Delf Rothe for helpful comments on earlier versions of the paper as well as Johanna Ahlrichs and Patrick Mielke for advice on designing research in classrooms contexts.

2 For readers not familiar with the theory, we provide a brief introduction in the next section.

3 Though we feel that German textbooks more frequently employ a risk (rather than a security) logic. They also pay somewhat less attention to conflict and migration while discussing behavioural changes more frequently, especially when designed for younger students.
Both textbooks quotes were translated into English by the authors.

The appendix contains full translations of both samples.

A translation of the questionnaire is provided by the appendix.

More specifically, three Gymnasiums (highest academic prestige), one Realschule (medium academic prestige) and one Hauptschule (lower academic prestige) participated in the study.

As migration background has a very high correlation with unemployment rates and the impacts are similarly insignificant, results have not been included in Table 6.

Fukuoka (2011) found similar results when explicitly studying the reception of political content in school textbooks.