# Numbers in global security governance

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## Abstract

The use of numbers has been remarkably effective at pressing global claims. While research has documented the historical processes through which numbers gained such prominence, and has examined the political and ethical consequences of this omnipresence, very little is known regarding the specific ways in which numbers create the outcomes that sustain governance. This article proposes to close that gap. Building on the literature that acknowledges that numbers not only describe things but also have profound impacts on things themselves, this article offers an integrated account of the working dynamics of numbers in the governance of security. To do so, the article identifies three distinct but connected vectors of power through which numbers shape security governance: persuasion, (de)politicisation, and standardisation. These insights are exemplified through the prism of different empirical examples, the variety of which aims to display the advantages of the approach we propose.

> The political world, just like the physical world, in many respects may be regulated by weights, number and measure.
>
> Diderot (1751)

## Introduction

Certain writers, among them Michael Blastland and Andrew Dilnot, have argued that numbers are 'today's preeminent public language – and those who speak it rule'.[1] This view outlines, as it were, the leverage of quantification on social, political, and economic realms. Judging by recent scholarly

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[1] Michael Blastland and Andrew Dilnot, *The Numbers Game: The Commonsense Guide to Understanding Numbers in the News, in Politics, and in Life* (London: Penguin, 2009), p. x.

outputs, security, too, is increasingly *numbered*. This is not, of course, an entirely new trend. While Robert McNamara famously introduced statistical reasoning as a chief element of US security policymaking during the 1960s, the same decade saw on the academic side one of the first explicit connections between numbers and security under the auspices of the Correlates of War Project, which proposed the '1,000 battle-related deaths' threshold as the level of hostilities that differentiates war from other types of conflict.[2]

New within the purview of security scholarship, however, is the metrical sense growingly accorded to the elaboration and assessment of security policies and the concomitant impact these numbers have on security practices. To date, most of the rare international relations or political science scholarship on numbers has explored two main questions.[3] First, some have sought to document the modern-liberal *roots or context* of the proliferation of numbers in international politics. For instance, Sotiria Grek and Risto Rinne have depicted the EU's 'rapid change of policy discourses and practices', moving from constructing a 'European culture to a Europe governed by numbers'.[4] Second, others have focused on the (political) *consequences* of the use of numbers. Asking 'What do numbers do in transnational governance?', Hans Krause Hansen and Tony Porter have for example uncovered the significant effects of quantitative reasoning and communication on governance,[5] highlighting the ways through which numbers constitute the things they measure and redefine the interactions between political groups.

However, the mechanisms underpinning this proliferation and effects remain largely in the background. To be sure, a series of scholars have provided important insights, yet their contributions tend to be limited in scope and remain fragmented. Kelly Greenhill highlights that the enduring impact of numbers derives, if only in part, from the inertia they convey (once adopted, they become hard to dislodge),[6] while Joel Best adds that 'numbers laundering' – that is, the gradual oversight of statistics' origins and initial purpose, leading them to become treated as accurate facts – invests numbers with an authoritative force that resists questioning, producing inertia in the domain within which they work or the object upon which they exert their sway.[7] In a different vein, Mathias Leese has argued that the use of advanced algorithmic analytics erodes the power of the anti-discrimination

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[2] Joel David Singer and Melvin Small, *The Wages of War, 1816–1965: A Statistical Handbook* (New York: Wiley, 1972).

[3] The problem of numbers is not limited to a single subfield; in fact, the study of numbers is a vast research domain in the humanities and social sciences. Hence, our aim in this article is not to provide a unique paradigm upon which to conduct research on numbers in society at large, but rather to specify the working mechanisms of numbers in global security governance. See Joel Best, *More Damned Lies and Statistics: How Numbers Confuse Public Issues* (Berkeley: University of California Press, 2004); Alain Desrosières, *The Politics of Large Numbers: A History of Statistical Reasoning* (Cambridge, MA: Harvard University Press, 1998); Wendy Nelson Espeland and Mitchell L. Stevens, 'A sociology of quantification', *European Journal of Sociology*, 49:3 (2009), pp. 401–36; Martha Lampland and Susan Leigh Star (eds), *Standards and their Stories: How Quantifying, Classifying, and Formalizing Practices Shape Everyday Life* (Ithaca NY: Cornell University Press, 2009); Alain Badiou, *Number and Numbers* (Cambridge: Polity Press, 2008); Theodore M. Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton: Princeton University Press, 1995).

[4] Sotiria Grek and Risto Rinne, 'Fabricating Europe: From culture to numbers', in Jenny Ozga et al. (ed.), *Fabricating Quality in Education: Data and Governance in Europe* (London: Routledge, 2011), p. 19.

[5] Hans Krause Hansen and Tony Porter, 'What do numbers do in transnational governance?', *International Political Sociology*, 6:4 (2012), pp. 409–26.

[6] Kelly M. Greenhill, 'Counting the cost: the politics of numbers in armed conflict', in Peter Andreas and Kelly M. Greenhill (eds), *Sex, Drugs, and Body Counts: The Politics of Numbers in Global Crime and Conflict* (Ithaca, NY: Cornell University Press, 2010), pp. 127–58.

[7] Joel Best, 'Promoting BAD statistics', *Society*, 38:3 (2001), p. 11.

framework in the European Union, which has subsequently little option but to construct a new type of knowledge if it is to revert, or at least control this trend.[8] While these insights are important, they do not sufficiently investigate the distinctive mechanisms involved in political practices using numbers. In other words, a sustained theoretical effort on this question is much needed in order to make few steps in filling the gap between the context-focused and effects-focused enquiries on numbers in politics. The present article attempts to provide such a theoretical framework of the working dynamics of numbers in politics, by focusing on international security governance.

In the field of security studies, scholars working on the quantification of different aspects of security often rely upon the axiom that numbers are used to strengthen the power of states or international institutions, but similarly leave the cogs of quantitative data unspecified. In one of the initial attempts to recover the influence of numbers in the politics of security, Mark Salter highlighted the new security practices that the proliferation and exploitation of numbers has induced in the field of aviation.[9] Lara J. Nettelfield showed that over-counting casualties on the reconciliation process in the aftermath of the Bosnian War is part of political narratives about victimhood and the character of the conflict,[10] while Winifred Tate demonstrated, in contrast, that under-counting the atrocities has helped to create a dominant narrative to explain the conflict in Colombia and thus to propose particular policies as inevitable and legitimate.[11] In each of these cases, the underlying idea is that numbers reveal their power through persuasion. Of course, as this article suggests, any consideration of numbers' effects must include persuasion, because it is one of the primary mechanisms through which actors induce others to adhere to their views. But numbers, we argue, also work in different ways and have various manifestations that cannot be exhausted by a single mechanism. Further, these studies pertinently situate quantification within exigencies for objectivity that took a distinctive turn with the emergence of liberal and bureaucratic systems of governance.[12] In this respect, they are significant contributions that have paved the way for the current article. At the same time, this literature leaves open the question of how, and the conditions under which numbers are so powerful – or in some cases useless – in security governance.

This is surprising, as some scholars have tried to account for how number steer security governance. However, they did so essentially by widening the scope of numbers' power, resorting to concept such as benchmarking.[13] The problem is that, they posed their view as an alternative to persuasion or, in most extreme cases, gave short shrift to it. The tendency to treat these mechanisms in silos, partly owes to the fact that authors are simply asking different sets of questions. Typically, scholars who strive to capture the disciplinary, if unconscious, effects of numbers on people, distance themselves from persuasion, which they see as granting too much space to conscious agency.[14] In contrast, those

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[8] Mathias Leese, 'The new profiling: Algorithms, black boxes, and the failure of anti-discriminatory safeguards in the European Union', *Security Dialogue*, 45:5 (2014), pp. 494–511.

[9] Marc B. Salter, 'Imagining numbers: Risk, quantification, and aviation security', *Security Dialogue*, 39:2–3 (2008), pp. 243–66.

[10] Lara J. Nettelfield, 'Research and repercussions of death tolls: the case of the Bosnian Book of the Dead', in Andreas and Greenhill (eds), *Sex, Drugs, and Body Counts*, pp. 158–87.

[11] Winifred Tate, 'Accounting for absence: the Colombian paramilitaries in U.S. policy debates', in Andreas and Greenhill (eds), *Sex, Drugs, and Body Counts*, pp. 215–46.

[12] Lorenzo Fioramonti, *How Numbers Rule the World: The Use and Abuse of Statistics in Global Politics* (New York: Zed Books, 2014), p. 20.

[13] See, for example, Broome, André, and Joel Quirk, 'The politics of numbers: the normative agendas of global benchmarking', *Review of International Studies*, 41:5 (2015), pp. 813–18.

[14] See, for example, Ian Hacking, 'Biopower and the avalanche of printed numbers', *Humanities & Society*, 5:3-4 (1982), pp. 279–95.

who want to see how actors win the mind of individuals generally abstain from examining the – invisible – sway that numbers exert on individual thoughts, behaviours, and actions.[15]

Standing in this emerging literature that acknowledges that numbers not only describe things but also have profound impacts on things themselves, the aim of this article is therefore to offer a theorisation of the relational workings of numbers in the governance of security.[16] It does so by providing security studies with a framework for integrating different mechanisms that aim to account for the power of numbers, including *persuasion*, *standardisation*, and *politicisation*. The failure to explore the specificities of these mechanisms and to see the connection among them, limits the ability of security scholars to analyse how and why using numbers in global security governance produces specific dynamics, and the circumstances within which these dynamics are more or less decisive. The article thus provides a better and fuller account of the working dynamics of numbers. We argue that scholars should employ a multiple conception of the mechanisms in which numbers release their effects, in order to generate a more robust understanding of how and why numbers succeed or fail in altering existing ways of thinking, behaviours, and practices in security governance. Our contention is not that numbers have power in and of themselves but rather that numbers become powerful through mechanisms of persuasion, politicisation, and standardisation. Thanks to these three mechanisms, numbers possess constraining and enabling powers. Our analysis reveals that numbers do much more than substantiate policies and practices – they relate them to each other, and in this sense they drive security governance.

The article is divided into five sections. A first section clarifies the role of numbers in governance generally, paving the way for the more detailed theorisation of their working dynamics in security governance more specifically. The next three sections are dedicated to the role of numbers in the three mechanisms through which they shape security governance. Thus, Section II scrutinises the role of numbers in *persuasion*, showing that numbers can enhance, under some circumstances, security arguments. Focusing on the supposed objectivity and value-neutral position of numbers, Section III conceptualises the role of numbers in mechanisms of *politicisation*, understood as, following Michael Zürn and colleagues, the growing public awareness of an issue and increased public mobilisation of competing political preferences regarding the issue.[17] We show that even though the objective of some agents might be to depoliticise an issue, numbers often increase the political saliency of an issue. Section IV highlights the specific role of numbers in *standardisation*, understood here as the process of establishing reference points in order to create uniformities across time, cases, and space. We underscore that standardisation offers an alternative to binding directives and legal rules in

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[15] See, for example, Dan Kahan et al., 'The polarizing impact of science literacy and numeracy on perceived climate change risks', *Nature Climate Change*, 2 (2012), pp. 732–5.

[16] By studying the origin of numbers in piracy governance, Christian Bueger shows that quantification is one of the most common 'epistemic practices' (process of knowledge generation) in International Relations. While we do not enquire into how a phenomenon is turned into numbers, we extend Bueger's argument by asking: 'When numbers have been constructed, how do they achieve they effects that they realize, and under what conditions?' See Christian Bueger, 'Making things known: Epistemic practices, The United Nations, and the translation of piracy', *International Political Sociology*, 9:1 (2015), pp. 1–18.

[17] Michael Zürn, Martin Binder, and Matthias Ecker-Ehrhardt, 'International authority and its politicization', *International Theory*, 4:1 (2012), pp. 69–106. This understanding stands in line with most of the literature on politicisation, for example, Aaron McCright and Riley Dunlap, 'The politicization of climate change and polarization in the American public's views of global warming', *The Sociological Quarterly*, 52 (2011), pp. 155–94; Pieter De Wilde, 'No polity for old politics? A framework for analyzing the politicization of European integration', *Journal of European Integration*, 33:5 (2011), pp. 559–75.

security governance: numbers induce agents to comply with a particular set of security practices rather than coerce them into doing so. Finally, Section V emphasises the need to understand these three mechanisms as deeply interconnected in order to gain an integrated view of numbers' role in security governance. While the present article is first and foremost a conceptual effort to provide a theoretical framework for the analysis of numbers in security governance, we nonetheless provide numerous examples to illustrate and reinforce our claims throughout the article, with special attention given to the rise and problems of the human security agenda.

## I. How numbers steer governance

The concept of governance is an elastic one. Typically, contributions to the literature on governance can be articulated around two classes of studies. While the first examines ways of marking out governance from government, the second class turns the arrows of explanation in another direction, to focus on different theoretical approaches to governance. This is not the place to adjudicate any of those issues, but we want to clarify the way in which we use the concept in this article. It is drawn mainly from James Rosenau, who argues that governance 'refers to any collectivity, private or public, that employs informal as well as formal steering mechanisms to make demands, frame goals, issue directives, pursue policies and generate compliance' – in other words, governance concerns 'ways of doing things'.[18] Governance insists less on institutions that govern than on methods and processes of governing (hence its crucial, but not only, difference with government).[19]

Relatedly, we concur with constructivism's (largely defined) processual and intersubjective understanding of security. Security is not a fixed attribute but a dynamic and eclectic process with multiple referent objects; different communities might perceive differently which issues should become security issues. In that sense, it is important to note that while the power of numbers can find specific support in the governance of security, they also influence the administration of global education, the promotion of development policies, and so on.

With this in mind, it becomes clear that numbers have become prodigious instruments of governance.[20] In security governance, the role played by numbers is most clearly understood when placed within a broader set of questions around 'the mechanisms through which (policy) programs … are articulated and made operable'.[21] 'To *count* a problem', as Nikolas Rose argues, 'is to define it and make it amenable to government'.[22] The domain of governance is, in other words, numerically constituted and delineated, at least since modernity.[23] More precisely, and following Paul Starr, it is

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[18] James N. Rosenau, 'Governance in the twenty-first century', *Global Governance*, 1 (2004), p. 31.

[19] Rod A. W. Rhodes, 'The new governance: Governing without governance', *Political Quarterly*, 65 (1986), pp. 652–53. See also Gerry Stoker, 'Governance as theory: Five propositions', *International Social Science Journal*, 155 (1998), pp. 17–28.

[20] Nikolas Rose, 'Governing by numbers: Figuring out democracy', *Accounting, Organisation & Society*, 16 (1991), p. 675; Peter Miller, 'Governing by numbers: Why calculative practices matter', *Social Research*, 68:2 (2001), p. 380.

[21] Miller, 'Governing by numbers', p. 380.

[22] Rose, 'Governing by numbers', p. 691.

[23] Desrosières, *The Politics of Large Numbers*. Our view is that if we associate 'ways of doing things' and 'the programmes that attempt to invest them with particular purposes' (Mitchell Dean, *Governmentality. Power and Rule in Modern Society* (London: Sage, 1999), p. 22), we come a little bit closer to, even if we don't map exactly, the terrain covered by governmentality (Ole Jacob Sending and Iver B. Neumann, 'Governance to governmentality: Analyzing NGOs, states, and power', *International Studies Quarterly*, 50:3 (2006), pp. 651–72).

useful to observe that the power of numbers extends two separate structures of the 'statistical system': social and cognitive.[24] On the one hand, the 'social organization (of a statistical system) consists of the social and economic relations of individuals respondents, status agencies, private firms, professionals, international organizations [IOs] and others involved in producing flows of data from original sources to points of analysis, distribution and use'; on the other hand, the 'cognitive organization refers to the structuring of the information itself, including the boundaries of inquiry, presuppositions about social reality, systems of classification, methods of measurements, and official rules for interpreting and presenting data'.[25] But numbers can be presented in a variety of ways – graphs, tables, pictures, etc. None of these forms of presenting numbers contains a performative power, that is, just by displaying a graph, for instance, the effect would be produced. In fact, the power of numbers is relative to they way they are embedded in a story, a narrative, or an argument.

This section argues that to excavate the workings of numbers in security governance, one must comprehend the extent to which they participate in the transformation of agents' subjectivities and capacities, as well as the relations they entertain with one another within the international system.[26] Numbers, as Rose argues, 'are integral to the problematizations that shape what is to be governed, and to the unrelenting evaluation of the performance of government that characterizes modern political culture'.[27] In other words, numbers have to be understood as particular signifiers that powerfully alter other actors' ways of thinking and behaviours. More precisely, numbers discharge their power in two critical ways: one, they *contribute to the fabrication of agents' subjectivities*; and two, they *produce or enable distinctively new behaviours and practices*. Thus, our aim here is to emphasise the extent to which numbers underwrite both institutional and productive characteristics of power.[28]

First, the power of numbers concerns the productive constitution of subjects and their capacities through systems of knowledge. Though less often discussed than the abstract power-knowledge nexus, many scholars concur that Foucault developed an inspirational take on the relationship between numerical operations and power.[29] In particular, according to Foucault, the development of the science of statistics, in the eighteenth century, has been coextensive with the state's growing desire to acquire knowledge in order to deploy its power. Statistics displaced the mandate of state agencies, transforming executive bodies into apparatuses of knowledge, that is, gathering data about resources and the forces necessary for a state's sovereign power to subsist.[30] Ian Hacking also associates the development of states' strategies with the demands for control and coordination.[31] In other words, numbers appear both as a mentality of government and a technology of power; political arithmetic

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[24] Paul Starr, 'The sociology of official statistics', in William Alonso and Paul Starr (eds), *The Politics of Numbers* (New York: Russel Sage, 1989), p. 8.

[25] Ibid., p. 8.

[26] Though this can be shown through standardisation, it must be noted that the task of tracing the effects of numbers on agents' capacity and subjectivity is not always as easy as thought. We thank the referees for drawing our attention to this point.

[27] Rose, 'Governing by numbers', p. 675.

[28] Michael Barnett and Raymond Duvall, 'Power in international politics', *International Organization*, 59 (2005), pp. 51–7.

[29] Oded Löwenheim, 'Examining the state: a Foucauldian perspective on international "governance indicators"', *Third World Quarterly*, 29:2 (2008), pp. 255–74.

[30] Michel Foucault, *Sécurité, territoire, population: Cours au Collège de France, 1977–1978* (Paris: Gallimard, 2004), pp. 280–4.

[31] Ian Hacking, 'Biopower and the avalanche of printed numbers', pp. 279–95; Patricia Cline Cohen, *Calculating People: The Spread of Numeracy in Early America* (Chicago: University of Chicago Press, 1982); Desrosières, *The Politics of Large Numbers*.

arose out of the need to apply 'rational calculation to the understanding, exercise, and measurement of state power'.[32] But to the extent that studying arithmetic sought to 'discipline the mind',[33] increasing numeracy also aimed at the emergence of a subject able to analyse, judge, and contest authorities in power.

Second, and institutionally speaking, numbers rarely exert their power directly on the target subjects. They are often, first, turned into 'traces that are (then) mobilized and accumulated'.[34] This is often done mainly through standards, a point we address below.

Though they generally overlap, productive and institutional powers rely on different qualities of numbers. The first depends, to a great extent, on the capacity of numbers to order and convey precision.[35] The latter depends, on the other hand, in the qualities identified by Keith Robson:[36] 'mobility' (the capacity of numbers to be used by different people in different settings), 'stability' (the capacity of numbers to fix meaning and establish stable 'facts') and 'combinality' (the capacity of numbers to be effectively assembled in different ways, for different purposes, and render objects counted comparable). Together with mobility and stability, combinality allows numbers to operate as decisive 'technologies of distance, communication and surveillance'.[37] In the fight against transnational crime, for instance, states increasingly design complex networks of global cooperation among police forces that are mediated by powerful database, that is, systems of aggregated numbers that are translated and traded among the actors involved in the network.[38] Thus, inscriptions and collections of numerical traces provide institutional power with new space-time coordinates.

There is therefore a conspicuous need to establish how exactly numbers, precisely as they possess these qualities and characteristics, enable global political actors to efficiently shape governance. Of course, substantiating the role of numbers in governance in full would require more space than the format of an article can allow. Below our more limited aim is to develop lines of enquiry that enable us to clarify how numbers affect security governance. In particular, we argue that the persuasive effect of numbers is a powerful leverage that can both enhance political actors' chances to politicise an issue and create the possibility to trigger standardised practices, thereby increasing their ability to change perceptions and practices without coercion. Although the intermingling character of these processes means that they reinforce one another, it is equally important to acknowledge their non-linear character – as our discussion below explains, numbers do not automatically persuade, ensure politicisation, or lead to standardisation.

## II. *Persuasion*: Counting arguments

Although there are instances of standardisation without initial persuasion, most cases of politicisation and standardisation rely on at least some amount of persuasion, understood as the capacity of a

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[32] Starr, 'The sociology of official statistics', p. 14.

[33] Catharine Esther Beecher, *Respecting Improvements in Education* (Hartford: Packard & Butler, 1829), p. 145.

[34] Rose, 'Governing by numbers', p. 676.

[35] Hansen and Porter, 'What do numbers do in transnational governance?', p. 414.

[36] Keith Robson, 'Accounting numbers as "inscription": Action at a distance and the development of accounting', *Accounting, Organizations and Society*, 17:7 (1992), pp. 685–708.

[37] Hans Krause Hansen, 'The power of performance indices in the global politics of anti-corruption', *Journal of International Relations & Development*, 15:4 (2012), p. 510.

[38] Antoinette Rouvroy and Thomas Berns, 'Le nouveau pouvoir statistique', *Multitudes*, 40:1 (2010), pp. 88–103.

political actor to alter another actor's way of thinking about an issue. Crucially, numbers – quantitative arguments – today seem to have gained the status of skeleton key to political persuasion, and we show here that under specific social circumstances numbers become powerful 'rhetorical weapons'.[39]

As we explore in this section, explorations in cognitive science over the past twenty years or so have demonstrated that numbers have the potential to increase persuasion for reasons that are increasingly better understood. Since Richard Petty and John Cacioppo's initial formulations of the 'dual route' theory of information-processing in 1981,[40] a dominant view considers that when someone is confronted with a new piece of information, their brain processes this new data through either a 'peripheral' or a 'central' cognitive route. Taking the central route, information is processed in a normal way, whereas taking the peripheral route the individual dismisses the information itself, relying instead on indirect cues linked to the new piece of information (for example, the characteristics of its source). Several circumstances lead individuals to process new information through the peripheral route: they may lack the time, motivation, or cognitive resources that are needed to process information in a normal way.

These insights are crucially important for our understanding of the persuasiveness of numbers, especially when it comes to assessing the circumstances under which they are more or less persuasive. Empirical evidence in psychology supports the idea that numbers are more likely to be processed through the peripheral route because their understanding requires more attention, motivation, and numbers literacy, which means that presence of numbers in a piece of information (for example, a speech, a news article, an advertisement) augments the probability of it being processed peripherally. In other words, people tend to treat quantitative arguments through the peripheral route, and thereby tend to rely on alternative cues – which can be manipulated in order to enhance persuasion. In a landmark paper, Richard Yalch and Rebecca Elmore-Yalch have provided the first empirical demonstration of this argumentative force of numbers as a function of secondary cues.[41] This study was followed by a number of similar ones in cognitive psychology and marketing, and over ten years after a meta-analysis conducted by Allen and Preiss concluded that there is sufficient statistical evidence supporting the hypothesis of the superior persuasiveness of numbers over qualitative messages.[42] This force, however, is only present when three conditions related to the secondary cues are met.

First, legitimacy of the source is important. Yalch and Elmore-Yalch have showed that quantitative claims put forward by a legitimate source of knowledge are more apt at persuading than non-quantitative claims made by the same source, whereas no difference exists between quantitative and non-quantitative claims advanced by a non-legitimate source.[43] Nancy Artz and Alice Tybout supported this result and explained that audience expects expert sources to provide quantitative

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[39] Hugo Bréant, 'Démontrer le rôle positif des migrations internationales par les chiffres: une analyse de la rhétorique institutionnelle du Système des Nations Unies', *Mots, Les Langages du Politique*, 100 (2012), p. 156.

[40] Richard E. Petty and John T. Cacioppo, *Attitudes and Persuasion: Classic and Contemporary Approaches* (Dubuque: William C. Brown, 1981); Richard E. Petty and John T. Cacioppo, 'Central and peripheral routes to persuasion: Application to advertising', in Larry Percy and Arch Woodside (eds), *Advertising and Consumer Psychology* (Lexington: Lexington Books, 1983), pp. 3–23.

[41] Richard F. Yalch and Rebecca Elmore-Yalch, 'The effect of numbers on the route to persuasion', *Journal of Consumer Research*, 1:1 (1984), pp. 522–7.

[42] Mike Allen and Raymond W. Preiss, 'Comparing the persuasiveness of narrative and statistical evidence using meta-analysis', *Communication Research Reports*, 14:2 (1997), pp. 125–31.

[43] Yalch and Elmore-Yalch, 'The effect of numbers on the route to persuasion'.

arguments and non-expert sources to provide qualitative arguments; persuasion is greater when these expectations are met.[44] Yet in politics perhaps more than elsewhere, legitimacy is a matter of perception: as Dan Kahan and Donald Braman crucially showed in their study of the gun control debate in the US, when actors who enjoy legitimacy within one side of the debate use numbers, they only enhance their persuasion among their devotees, not among the opposing side.[45] Some authors have added that the numeracy of the audience mediates this legitimacy effect. For example, Ilwoo Ju and Jin Seong Park showed that quantitative arguments tend to be more persuasive among low-numeracy individuals,[46] a finding that built on S. Ratneshwar and Shelly Chaiken's evidence that a greater ability to understand a message reduces the persuasive impact of source expertise.[47] Testing these factors in the realm of security and risk communication, Kahan and his colleagues[48] further revealed that the effect of numeracy is not unidirectional but rather *polarising*, as 'more numerate subjects use their quantitative-reasoning capacity selectively to conform their interpretation of the data to the result most consistent with their political outlooks'.[49]

Second, and under these conditions of legitimacy and numeracy, numbers with a complex and more accurate appearance are more persuasive. Drawing on Lisa L. Massi Lindsey and Kimo Ah Yun who observed that numbers must look credible and seemingly verifiable in order to be persuasive,[50] Robert Schindler and Richard Yalch documented the supremacy of what they call 'sharp' numbers (for example, 79.68 per cent) over round numbers (for example, 80 per cent) in persuasion, suggesting not only that sharp numbers give a greater impression of accuracy and verifiability but also that their more complex outlook encourages peripheral information-processing.[51] This suggests that not all presentations of numbers are equally persuasive. Numbers can be presented in many different ways, from statistical tables to numbers embedded in text, and each step towards greater complexity increases the chances of peripheral reasoning. At the extreme, it might be argued that some of the most visual representations of numbers can be akin to images, whose role in security politics and governance has also recently started to be examined.[52]

[44] Nancy Artz and Alice M. Tybout, 'The moderating impact of quantitative information on the relationship between source credibility and persuasion: a persuasion knowledge model interpretation', *Marketing Letters*, 10:1 (1999), pp. 51–62.

[45] Dan M. Kahan and Donald Braman, 'More statistics, less persuasion: a cultural theory of gun-risk perceptions', *University of Pennsylvania Law Review*, 151:4 (2003), pp. 1291–327.

[46] Ilwoo Ju and Jin Seong Park, 'When numbers count: Framing, subjective numeracy, and the effects of message quantification in direct-to-consumer prescription drug advertisements', *Journal of Promotion Management*, 19:4 (2013), pp. 488–506.

[47] S. Ratneshwar and Shelly Chaiken, 'Comprehension's role in persuasion: the case of its moderating effect on the persuasive impact of source cues', *Journal of Consumer Research*, 18:1 (1991), pp. 52–62.

[48] Kahan et al., 'The polarizing impact of science literacy and numeracy'; Dan Kahan et al., 'Motivated Numeracy and Enlightened Self-Government', Yale Law School Public Law Working Paper No. 307 (2013), p. 1.

[49] Ibid.

[50] Lisa L. Massi Lindsey and Kimo Ah Yun, 'Examining the persuasive effect of statistical messages: a test of mediating relationships', *Communication Studies*, 54:3 (2003), pp. 306–21.

[51] Robert Schindler and Richard F. Yalch, 'It seems factual, but is it? Effects of using sharp versus round numbers in advertising claims', *Advances in Consumer Research*, 33 (2006), pp. 586–90.

[52] See, for example, Roland Bleiker, 'Pluralist methods for visual global politics', *Millennium: Journal of International Studies*, 43:3 (2015), pp. 872–90; Roland Bleiker, David Campbell, Emma Hutchison, and Xzarina Nicholson, 'The visual dehumanisation of refugees', *Australian Journal of Political Science*, 48:4 (2013), pp. 398–416; Lene Hansen, 'Theorizing the image for security studies: Visual securitization and the Muhammad Cartoon Crisis', *European Journal of International Relations*, 17:1 (2011), pp. 51–74; Lene Hansen, 'How images make world politics: International icons and the case of Abu Ghraib', *Review of International Studies*, 41 (2015), pp. 263–88.

Third, numbers have a particularly significant impact when they are used in an attempt to stress the positive action of a product, and less so if they support an attempt to highlight the negative consequences of not taking the product, as emphasised in the abovementioned study by Ratneshwar and Chaiken.[53]

In sum, these studies and others insist on the fact that numbers can increase persuasion, but only under specific circumstances where favourable secondary cues are present. To maximise persuasion, numbers must be: (1) provided by an expert source who matches the audience's prior beliefs; (2) be 'sharp'; and (3) stress the direct positive consequences of the action. In this sense, the persuasive power of numbers should not be understood as an intrinsic, unambiguous feature, but rather as a socially-determined element that further strengthens already existing dynamics of political legitimacy, perceptions and attitudes, each already shaped by language and practices. Numbers reinforce the security narratives, practices, discourses, and speech acts to which they are attached, which guide their construction, and without which they would be meaningless.

As a result, numbers further reinforce both the *substantiating* and *legitimising* functions of expert knowledge in politics.[54] First, 'statistics can be an important rhetorical device'[55] that helps actors to directly *substantiate* their claims, 'lending authority to particular policy positions, helping to substantiate organizational preferences in cases of political contestation'.[56] For example, Tom Conley showed how 'value-neutral' narratives about globalisation based on 'hard' quantitative reports and communication have been essential in persuading an initially unenthusiastic Australian public of the unavoidable character of the liberal economic policies implemented in the 1990s.[57] In this regard, IOs occupy a privileged position; as Kenneth Abbott and Duncan Snidal highlighted, IOs are indeed increasingly characterised by centralisation and independence, two characteristics that help them to create common understanding and information seen as more credible and less biased than those provided by individual states.[58] Therefore when they produce numbers they tend to be more credible than states, which helps them to substantiate claims in both transparent deliberation and tactical arguments. As a general rule, under a setting of transparent deliberative arguing – which as Thomas Risse observed is far from absent in international politics[59] – it could be said that numbers help actors to demonstrate the pertinence of their standpoint and ensuing solutions. In such circumstances, because actors aim at constructing common knowledge on social-political issues following this social interaction rationale, the actor with the most robust numbers – that is, that withstand contest – gets the edge. However, in a more traditional setting of tactical argumentation challenge,[60] numbers may be more or less manipulated by actors in their attempts to persuade others

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[53] Ratneshwar and Chaiken, 'Comprehension's role in persuasion'.

[54] Christina Boswell, 'The political functions of expert knowledge: Knowledge and legitimation in EU immigration policy', *Journal of European Public Policy*, 15:4 (2008), pp. 471–88; Christina Boswell, *The Political Uses of Expert Knowledge: Immigration Policy and Social Research* (Cambridge: Cambridge University Press, 2009).

[55] Boswell, *The Political Uses of Expert Knowledge*, p. 89.

[56] Boswell, 'The political functions of expert knowledge', p. 472.

[57] Tom Conley, 'Globalisation and the politics of persuasion and coercion', *Australian Journal of Social Issues*, 39:2 (2004), pp. 183–200.

[58] Kenneth W. Abbott and Duncan Snidal, 'International "standards" and international governance', *Journal of European Public Policy*, 8:3 (2001), pp. 345–70.

[59] Thomas Risse, '"Let's argue!": Communicative action in world politics', *International Organization*, 54:1 (2000), pp. 1–39.

[60] See, for example, Neta C. Crawford, 'Homo politicus and argument (nearly) all the way down: Persuasion in politics', *Perspectives on Politics*, 7:9 (2009), pp. 103–24.

to reconsider old policies or launch new ones. In such circumstances, the mastery of numbers is instrumental in framing success at the global level. For example, Hugo Bréant exposed how the United Nations strengthened its positions on the issue of international migration by shifting the logics of its recommendations from moral arguments to quantitative demonstrations during the 1980s, again to substantiate its own policy recommendations.[61] Robert Hunter Wade exposed how the World Bank voluntarily changed data-collection procedures – and therefore its numbers – in order to offer a different picture of the evolution of poverty and inequality – hence enabling the bank to make a strong political statement on its role and the kinds of policies to be advocated.[62]

Second, numbers also conversely consolidate actors' *legitimacy*, therefore strengthening their positions and agenda vis-à-vis rival organisations and their very ability to produce further numbers. This is not only due to stronger substantiation. Expert knowledge is indeed valued in its own right, 'symbolically, as a means of demonstrating the credibility of the organization or its decisions',[63] and quantification is today the hallmark of expertise. François Molle and Peter Mollinga similarly count legitimation of institutional action among the four functions of quantitative indicators.[64] In this regard, it is expected that political actors seeking to gain international legitimacy will tend to publicise as much quantitative expertise as they can or at least to provide proof that they heavily rely on such expertise. However, since – as noted above – quantitative arguments are only persuasive when exposed by an already legitimate source, actors entering this game face a paradoxical race of number production: they need legitimacy to advance successful quantitative arguments but can only build this legitimacy by showing their very ability to produce large amounts of numbers. Combining Antoine Vauchez's and Rachel Vanneuville's studies on the French Conseil d'Etat (the highest administrative court in France) provides a clear example of such a race.[65] Vanneuville showed that the Conseil's abnormally quantitative 1991 report on legislative inflation was above all a strategic attempt to remain the reference expert organisation on law in a context of emerging critiques, and Vauchez detailed the 'quantification frenzy' that prevails in the French judicial sphere since the early 1990s triggered by the initial move from the Conseil d'État.[66] Similarly, Bréant's abovementioned study revealed that as soon as UN experts on international migration started to include quantitative observations in their reports in the 1980s, they increasingly relied on numbers in their ensuing reports.[67] However, it is clear that not all actors can be equally successful with numbers as a means of legitimisation. As Molle and Mollinga highlight, initial factors such as the size of the institution, its budget, or the volume of expertise it produces are key in determining their starting-point legitimacy and hence the persuasive potential of their numbers.[68] In global governance, a well-established, prestigious international reputation is a less palpable yet crucial factor of legitimacy. In extreme cases, an organisation may happen to implement the numbers strategy so heavily that it obtains a de facto monopolistic expertise on an issue and gains almost absolute legitimacy. Such has become the

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[61] Bréant, 'Démontrer le rôle positif des migrations internationales par les chiffres'.

[62] Robert Hunter Wade, 'Is globalization reducing poverty and inequality?', *World Development*, 32:4 (2004), pp. 567–89.

[63] Boswell, 'The political functions of expert knowledge', p. 471.

[64] François Molle and Peter Mollinga, 'Water poverty indicators: Conceptual problems and policy issues', *Water Policy*, 5 (2003), pp. 529–44.

[65] Antoine Vauchez, 'Un argument de poids: le chiffre dans le "gouvernement" de la justice', *Revue Française d'Administration Publique*, 125 (2008), pp. 111–21; Rachel Vanneuville, 'Le chiffre au service du droit ou le droit au service du chiffre?', *Mots, Les Langages du Politique*, 100 (2012), pp. 123–36.

[66] Vauchez, 'Un argument de poids', p. 4.

[67] Bréant, 'Démontrer le rôle positif des migrations internationales par les chiffres'.

[68] Molle and Molinga, 'Water poverty indicators', p. 537.

position of the World Bank on poverty and inequality issues: its data is used by governments and scholars alike, despite their highly contestable construction.[69]

The case of the initial rise of the 'human security' agenda illustrates this role of numbers in enhancing persuasion, and how this role is constrained by various factors. The initial UNDP 1994 'Report on Human Development', coordinated by Mahbub ul Haq (then Special Advisor to the Administrator of the UNDP), triggered an impressive wave of discussions in the academic, non-governmental, and policy arenas. A search on Google Scholar reveals the scope of the impact of this report:[70] where the concept of 'human security' matches 480 documents in the twenty-year timeframe preceding the report (1973–93), it matches 34,400 results in the twenty-year timeframe following the report (1995–2015). More impressive still, is the success of the concept in the policy and NGO circles. As Gary King and Christopher Murray observe, human security 'rapidly moved to occupy center stage in discussions of foreign policy', and quickly 'became something of a benchmark for an emerging new model of "security"'.[71] Two of the leading advocates of human security, Canada and Norway, jointly announced in 1998 that human security would become the driving principle of their foreign policy, and subsequently launched a 'human security network' with a series of partner states. A year later, the communiqué of the G7/G8 meeting in Cologne in 1999 emphasised the importance of human security. In sum, the UNDP report bolstered the intellectual profile and policy impact of the human security agenda. While this impact can be attributed to state's and NGOs' interests in instrumentalising the new agenda,[72] interests alone do not suffice in explaining why this particular concept exposed in a single UNDP report has been picked up so quickly and expansively. Our contention is that the strategic use of numbers in the UNDP report played a crucial role in the success of the human security concept and agenda: numbers helped to both substantiate UNDP's claims and further established the UNDP's (and the UN more generally) legitimacy on development and security issues, at least initially. ul Haq's team indeed used numbers in a specifically strategic fashion that mostly corresponds to the main factors proven to increase persuasion. First, ul Haq made sure that the report had very obvious secondary cues in terms of legitimacy. He decided to list a number of Nobel Price laureates and feature their analyses and comments alongside the many numbers inserted in the report, and used statistics collected by respected NGOs such as the Red Cross or IOs enjoying high scientific credentials like the World Bank. In turn, and because of the initial success of the report, the UNDP further strengthened its own legitimacy and prescriptive power beyond its expertise on issues related to development and poverty. Second, the UNDP report used a lot of very precise, 'sharp' numbers in addition to round numbers, which gave a sense of exactness and objectivity. However, the UNDP mostly used numbers to describe the gravity of a situation produced by a lack of well thought-out and targeted policies, and only rarely to stress the positive effects of potential action.[73]

In sum, numbers enhance persuasion under specific social circumstances, which provides extra leverage to the political actors who can create these circumstances in order to increase their power by

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[69] Wade, 'Is globalization reducing poverty and inequality?'.

[70] Arguably not the most rigorous tool yet nonetheless sufficient to reveal broad trends like this one.

[71] Gary King and Christopher Murray, 'Rethinking human security', *Political Science Quarterly*, 116:4 (2001), p. 585.

[72] King and Murray, 'Rethinking human security'; Astri Suhrke, 'Human security and the interests of states', *Security Dialogue*, 30:3 (1999), p. 266.

[73] The following quote from the report exemplifies this: 'In developing countries, the major causes of death are infectious and parasitic diseases, which kill 17 million people annually, including 6.5 million from acute respiratory infections, 4.5 million from diarrhoeal diseases and 3.5 million from tuberculosis. Most of these deaths are linked with poor nutrition and an unsafe environment.'

substantiating their claims and gaining legitimacy. In other words, numbers tap into existing mechanisms of persuasion – substantiation and legitimacy – thereby contributing to reshape security governance in sometimes significant ways.

## III. *Politicisation*: Numbers wars

The second way through which numbers shape security governance is politicisation. Through persuasion, numbers facilitate the process of putting an issue within the realm of argumentative politics. For a prominent political actor, publicly raising a strong quantitative argument on a previously low-saliency issue could indeed give this issue significant visibility in the agenda. For example, Hansen illustrated how newly constructed performance indices of anti-corruption policies have been instrumental in attempts to politicise the issue.[74]

Political actors are especially tempted to use numbers to politicise an issue not only because of their superior persuasiveness, but paradoxically also, because the stability of numbers[75] may simultaneously produce a 'depoliticisation' effect. Numbers fix the meaning of the debated issue, closing the discussion by giving the impression that values and ideologies have been kept at bay in favour of an 'objective' solution. This effect is particularly probable in technocratic politics, defined by the project of building value-free policies, where numbers produce a 'restricted array of scenarios about how the world can or cannot be changed and how the future ought to look'.[76] Prominent authors as different as Weber (who linked modern statecraft with rational-instrumental reason), Foucault (who documented the concomitant rise of the social and economic sciences and the modern state), or Bauman (who defined modernity as the rejection of ambivalence in favour of clear-cut classifications and counting), have all highlighted the rise of technocratic politics, understood as an essential feature of the modern project. In this context, as Christina Boswell notes, 'it has become "de rigueur" for governments and international organizations to stress the need for "evidence-based" policy',[77] and quantitative information occupies a crucial place in this trend: 'in the same process in which numbers achieve a privileged status in political decisions, they simultaneously promise a depoliticization of politics, redrawing the boundaries between politics and objectivity by purporting to act as automatic technical mechanisms for making judgments, prioritizing problems and allocating scarce resources'.[78] As Molle and Mollinga explain, numbers such as quantitative indicators 'are supposed to be generated by a processing of numbers independent from passions and opinions, that is, based on scientific procedures that are seen as warranting objectivity and dissolving idiosyncrasies. This can be done only through a highly impersonal language, where ethics and politics are absent.'[79] This trend has been further developed in the 'new public management' agenda, whose doctrinal basis rests on the ideal of expanded quantitative evaluations.[80] IOs, which are always engaged in a struggle for independence vis-à-vis states, have a greater incentive to instrumentalise numbers for the purpose of depoliticisation. Purging a debate from values has facilitated the transfer of a number of issues from politics to the kind of bureaucracy conducted by specialised IOs, especially as IOs were large and therefore possessed the ability to produce and use numbers to gain further legitimacy and power.

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[74] Hansen, 'The power of performance indices'.
[75] See above Robson, 'Accounting numbers as "inscription"'.
[76] Consuelo Cruz, 'Identity and persuasion: How nations remember their pasts and make their futures', *World Politics*, 52:3 (2000), p. 275.
[77] Boswell, *The Political Uses of Expert Knowledge*, p. 3.
[78] Rose, 'Governing by numbers', p. 674.
[79] Molle and Mollinga, 'Water poverty indicators', p. 538.
[80] Christopher Hood, 'A public management for all seasons?', *Public Administration*, 69:1 (1991), pp. 3–19.

Numbers have played a crucial role in the already well-documented rise in the ability of IOs to create both new referential knowledge and patterns of action.[81]

Yet the two other characteristics of numbers – mobility and combinality[82] – mean that depoliticisation attempts often fail to occur. As soon as numbers bring an issue to argumentative politics, other actors may contest them, either by distorting them or by producing rival numbers. As a result, a 'numbers war' emerges whereby the political saliency of the issue increases. Hence, depoliticisation becomes laborious. Take, for example, what followed France's former Minister of the Interior Brice Hortefeux's declaration in November 2014 that

> foreigners' naturalizations are maximized (plus 14%), regularizations are encouraged (plus 51% due to the Prime Minister Manuel Valls Bill), and expulsions are diminished (minus 26.6%) – altogether, this produces a 7% increase in legal immigration, which means in concrete terms that every year more than 300,000 people arrive, an amount equivalent of the population of the city of Nantes.[83]

The next day, numerous associative platforms vigorously rejected Hortefeux's message, and fact-checking platforms were set up to assess his claims. This example illustrates the potential of quantitative language-based securitising attempts to generate rejection, polarise political lines and politicise an issue, rather than closing its discussion.[84]

Nowhere are these dynamics better illustrated than in the case of the International Panel on Climate Change (IPCC). Reiner Grundmann explains that the IPCC was initially established with strong hopes that 'greater scientific consensus and wider participation would ensure a stable political outcome'.[85] In other words, founders thought that scientifically-produced numbers would both at once politicise the issue and depoliticise it on the basis of a sound consensus leading to objective policies: 'the Intergovernmental Panel on Climate Change (IPCC) [… holds] the belief that objective knowledge can in principle be translated into policies, and that policies should be based on "sound science"'.[86] Yet what happened proved them wrong, as IPCC's conclusions have prompted all major stakeholders to produce their own rival quantitative knowledge backing sometimes completely

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[81] On the ability of IOs to create referential knowledge and patterns of action, see, for example, Suzan Ilcan and Lynne Phillips, 'Making food count: Expert knowledge and global technologies of government', *Canadian Review of Sociology/Revue Canadienne de Sociologie*, 40:4 (2003), p. 441; Michael N. Barnett and Martha Finnemore, 'The politics, power, and pathologies of international organizations', *International Organization*, 53:4 (1999), pp. 699–732.

[82] Robson, 'Accounting numbers as "inscription"'.

[83] Translated from the French 'élargir au maximum les naturalisations, plus de 14 %, encourager les régularisations, plus de 51 % du fait de la circulaire Valls, et diminuer le nombre des reconduites, moins 26.6 %, tout ceci aboutit à une augmentation de l'immigration légale qui est de 7 %. Ça signifie que concrètement dans notre pays arrivent chaque année près de 300,000 personnes, c'est-à-dire l'équivalent de la ville de Nantes.' Available at: {http://www.europe1.fr/politique/juppe-siffle-hortefeux-retient-l-enthousiasme-des-adherents-2297281}.

[84] For a discussion of what constitutes a securitising attempt, see Barry Buzan, Ole Wæver, and Jaap De Wilde, *Security, A New Framework for Analysis* (Boulder: Lynne Rienner, 1998), Thierry Balzacq, Sarah Leonard, and Jan Ruzicka, 'Securitization revisited: Theory and cases', *International Relations*, 30:4 (2016), pp. 494–531; Philippe Bourbeau, 'Moving forward together: Logics of the securitisation process', *Millennium*, 43:1 (2014), pp. 187–206; Stéphane Baele and Olivier Sterck, 'Diagnosing the securitisation of immigration at the EU level: a new method for stronger empirical claims', *Political Studies*, 63:5 (2015), pp. 1120–39.

[85] Reiner Grundmann, 'Climate change and knowledge politics', *Environmental Politics*, 16:3 (2007), p. 416.

[86] Ibid., p. 415.

opposite policies.[87] Numbers are increasingly instrumentalised to create a seemingly value-neutral position and therefore to gain an apolitical, expert legitimacy above the partial, political positions of other stakeholders. For this reason, numbers are used particularly intensively in highly contentious issues, in which values now tend to be depreciated in favour of quantitative data. Molle and Mollinga argue that providing a 'gloss of scientificity' to a political message is crucial when the issue at stake has non-consensual character.[88] For example, noticing that its highly normative reports on the benefits of international migration on development were systematically contested, the UN made increasing use of 'quantitative observations' in view of cutting short contestation,[89] yet is now increasingly challenged as this initial move not only prompted other actors to provide their own data, but also more importantly, as a result of the persuasion dynamics evoked above, further polarised public opinion.[90]

The human security agenda provides another case of numbers' role in politicisation dynamics. The 1994 UNDP report was intended to bring a wealth of issues to high politics, chiefly to shape the discussions for the 1995 Copenhagen UN Conference on Social Development and more broadly to promote the UN's action in the field of security.[91] In this sense, numbers in the report not only intended to play a key role in pushing more specific problems to high politics (politicisation), but always simultaneously implied or explicitly advocated an 'obvious' particular solution (depoliticisation).[92] While numbers have indeed been instrumental in pushing the many issues coalesced under the umbrella of human security to the level of high politics, forcing a political discussion on many of the issues covered by the report (see earlier). Various actors (primarily Canada and Norway) jumped in to advance their own ideas on human security in order to gain legitimacy on the issue, launching and funding initiatives, research centres and foundations, funding international conferences, or commissioning prestigious high-level reports (like Japan and the influential 2003 Ogata-Sen Human Security Now report). This arrival of new actors provoked long debates on the definition of human security, which resulted in a battle of numbers. NGOs and states such as Japan came up with their own conceptions, definitions, and measurements of human security, while Canada and Norway narrowed their understanding of it, thereby distancing themselves from the initial all-encompassing definition of the UNDP. In a way, the UNDP's original attempt to politicise the issues covered in its report through quantification worked too well, as the increase of its political saliency countered the initial objective of creating a standardised perception and behaviour of human security (see below on this aspect). Where it was expected that measuring human security would both at once trigger a debate and serve as a basis to settle it through standardisation, quantification conversely induced an increase in the political saliency of human security, with various political actors contesting UNDP's numbers or even creating their own measurements.

In sum, while numbers can potentially depoliticise issues by offering a seemingly apolitical, objective depiction of reality that closes potential debate, their strategic instrumentalisation and their

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[87] Constantine Boussalis and Travis Coan, 'Text-mining the signals of climate change doubt', *Global Environmental Change*, 36 (2016), pp. 89–100.

[88] Molle and Molinga, 'Water poverty indicators', p. 537.

[89] Bréant, 'Démontrer le rôle positif des migrations internationales par les chiffres', p. 154.

[90] Kahan et al., 'The polarizing impact of science literacy and numeracy'.

[91] King and Murray, 'Rethinking human security'.

[92] For example, by systematically using large numbers emphasising the global dimension of these issues, the report sought to imply that supranational efforts led by the UN, and ultimately a reinforcement of the UN (at a critical time for the organisation) were the obvious solutions.

polarising effect in security communication very often make them exacerbate the politicisation of issues, triggering 'numbers wars' between competing political actors.

## IV. *Standardisation*: Enacting uniformity

Once an individual, or group of individuals, has instrumentalised numbers with the goal of establishing a particular dynamic of persuasion and politicisation – as the previous sections describe – they can capitalise further on those numbers by *setting standards* to create a pattern of non-coercive behavioural constraints.

Drawing on Nils Brunsson and Bengt Jacobsson and Desmond King and Marc Stears, we understand standards as social reference points that seek to induce uniformity and compatibility across time, cases, and space.[93] As a process designed to establish uniformity and similarity, standardisation is blind to contingencies and particularities.[94] As instruments of social regulation[95] that numerically quantify expertise,[96] standards can induce compliance far more readily than binding laws and formal regulations; as such, they have become a core aspect of contemporary security policies. Although standardisation aims for decontextualisation, it is an inherently social act; neither standards nor standardisation are objectively given or created in a social vacuum. While social entrepreneurs and experts are often involved in the originating of a particular standard, many standardisation processes also operate at the state level.[97] Both private and state-produced standards involve expert knowledge. Of course, the phenomenon of standardisation is not new; nevertheless, few would disagree that globalisation and the ease of communication and ideas exchange over vast distances have brought standards and standardisation to the forefront of contemporary world politics.[98]

A central power of numbers in our contemporary world stems from their involvement in all four types of standardisation currently identified in the literature.[99] First, *design standards* define – through numbers – the properties and structural specifications of a social system. They offer measurement. These standards are important for ensuring a high degree of agreement on core elements of a particular domain. Some design standards are made explicit, while others are left implicit. For example, design standards have played an important role in forging the European Union's

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[93] Nils Brunsson and Bengt Jacobsson, *A World of Standards* (Oxford: Oxford University Press, 2000); Desmond King and Marc Stears, 'How the U.S. state works: a theory of standardization', *Perspectives on Politics*, 9:3 (2011), pp. 505–18.

[94] We do not want to suggest, however, that all standardisation attempts are successful or that standardisation is a smooth and uncontested process.

[95] James C. Scott, *Seeing Like a State* (New Haven: Yale University Press, 1998).

[96] We do not argue that all standards are numerical; the aim here is rather to show the particular mechanisms produced by numbers-based standardisation.

[97] Michèle Lamont et al., 'What is missing? Cultural processes and causal pathways to inequality', *Socio-Economic Review*, 12 (2014), pp. 573–608.

[98] Abbott and Snidal, 'International "standards" and international governance'; Walter Mattli, 'The politics and economics of international institutional standards setting: an introduction', *Journal of European Public Policy*, 8:3 (2001), pp. 328–44; Walter Mattli and Ngaire Woods (eds), *The Politics of Global Regulation* (Princeton: Princeton University Press, 2009); Yahouda Shenhav, *Manufacturing Rationality* (Oxford: Oxford University Press, 1999); Hendrik Spruyt, 'The supply and demand of governance in standard-setting: Insights from the past', *Journal of European Public Policy*, 8:3 (2001), pp. 371–91.

[99] Stefan Timmermans and Steven Epstein, 'A world of standards but not a standard world: Toward a sociology of standards and standardization', *Annual Review of Sociology*, 36 (2010), pp. 69–89.

armaments cooperation by ensuring the inter-operability of military equipment and by developing common equipment standards.[100]

Second, *terminological standards* seek to crystallise the meaning of a term/concept across time and space. Take the concept of 'war', for example. Under the auspices of the Correlates of War Project, J. David Singer and Melvin Small sought to establish a standard definition of war;[101] they proposed the '1,000 battle-related deaths threshold' as the level of hostilities that differentiates war from other types of conflict. Singer and Small's effort was not just about describing in the best possible way their own particular understanding of war and security; rather, it was an explicit attempt to make uniform, to structure, and to standardise the meaning of war and security.[102]

Third and more importantly for us, *performance standards* provide outcome specifications. These standards have regulatory roles by publicly establishing expectations regarding a particular issue. This is similar to what Judith Kelley and Beth Simmons (2015) call 'performance indicators' and what Andre Brome and Joel Quirk (2015) call 'benchmarking'.[103] For Brome and Quirk 'global benchmarking involves the classification of relative performance or value [… It is] an umbrella term for a wide range of comparative evaluation techniques that systematically assess the performance of actors, populations.'[104] For example, numbers participate in standardising democracy by specifying the level of consensus (50 per cent plus one) necessary for democracy to function. The importance of this particular numbered standard is observed by many citizens around the world every four or five years, while the fallout of non-respect for this standard is sharply understood by citizens in other areas. Thus, some performance standards are essential to the maintenance of order in our societies.[105] Performance standards give governments the opportunity, if they are so inclined, to ensure social control. Not only do they translate diverse and recondite processes into comparable numbers, but they also play a distinctive role in drawing the boundaries of 'normality' and, hence, of deviation.[106] The power of performance standards is that they facilitate the fabrication of governable subjects, but not so much from the outside in than from the inside out, that is, by 'harnessing their interests'.[107] Subjects thus act autonomously, yet in accordance with the standards. Though constraints and incentives to comply are usually steered by the most powerful agents of a domain,

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[100] Marc R. DeVore, 'Organizing international armaments cooperation: Institutional design and path dependencies in Europe', *European Security*, 21:3 (2012), pp. 432–58; Phillip Taylor, 'Weapons standardization in NATO: Collaborative security or economic competition?', *International Organization*, 36:1 (1982), pp. 95–112.

[101] Singer and Small, *The Wages of War, 1816–1965*.

[102] Although this terminological standard has been highly influential, it has also been criticised. See, for example, Nicholas Sambanis, 'What is civil war? Conceptual and empirical complexities of an operational definition', *Journal of Conflict Resolution*, 48:6 (2004), pp. 814–58; Bethany Lacina and Nils P. Gleditsch, 'Monitoring trends in global combat: a new dataset of battle deaths', *European Journal of Population*, 21 (2005), pp. 145–66.

[103] Judith G. Kelley and Beth A Simmons, 'Politics by number: Indicators as social pressure in International Relations', *American Journal of Political Science*, 59:1 (2015), pp. 55–70; André Broome and Joel Quirk, 'The politics of numbers: the normative agendas of global benchmarking', *Review of International Studies*, 41:5 (2015), pp. 813–18.

[104] Broome and Quirk, 'The politics of numbers', p. 815.

[105] King and Stears, 'How the U.S. state works'.

[106] Hans Krause Hansen and Arthur Mühlen-Schulte, 'The power of numbers in global governance', *Journal of International Relations & Development*, 15:4 (2012), pp. 455–65.

[107] Albert O. Hirschman, *The Passion and the Interests: Political Arguments for Capitalism before its Triumph* (Princeton: Princeton University Press, 2013).

the target subjects embrace them in an attempt to live up to the exigencies of 'normalcy' that are supposed to characterise an ethical and responsible subject.[108] Contemporary world politics offers countless examples of performance standards, including expected gross domestic product annual growth, an acceptable unemployment level, and the proportion of a country's budget dedicated to international development (0.7 per cent). In addition, any academic who has worked in the United Kingdom will know too well the power and importance of the Research Excellence Framework performance standard. In security governance, an example is that of French policy for expelling illegal immigrants, under both the Chirac and Sarkozy presidencies. While then Interior Minister Nicolas Sarkozy's 22 October 2003 *circulaire* explicitly asked local governors (*préfets*) to double the number of deportations in their districts, Dominique de Villepin (then prime minister) put forward on May 11 2005 an action plan against irregular immigration (*plan d'action de lutte contre l'immigration irrégulière*) that heavily pressurised districts to effectuate set amounts of deportations: 15,000 nationally for 2004, 20,000 for 2005, 24,000 for 2006, and 28,000 for 2007. These numbers, which had little factual pertinence but only served to enhance initial securitising attempts, have then been transposed as performance standards and indeed actually reached as secondary actors successfully sought to 'fulfil the metrics'. The fight to establish these potentially powerful performance standards can therefore lead to furious political competition, as exemplified in the EU's 'open method for cooperation', whose principle is precisely to set common performance standards that allow the benchmarking and monitoring of member states' performances.[109]

Fourth, *practice standards* concern how processes are to be performed. Practice standards translate the actions and decisions of social regulation into unreflective habits; they create routines.[110] Standards are embedded into shared scripts that socially regulate disparate societal elements. The 'taken-for-granted-ness' of some of these standards is so high that they become invisible, undisputed, unchallenged – but continuously abided by. Precisely because it is a habit-producing process, standardisation through numbers offers an alternative to binding directives and to legal rules in security governance; numbers induce rather than coerce agents to adopt particular behaviours in a given security domain without having to rely on a regulatory authority. For example, Ole Jacob Sending and Iver Neumann documented how the World Bank's practices of (necessarily quantitative) expertise allowed them to structure issues by advancing hardly contestable 'reference-points for interaction [… which] renders some "strategies for action" available, and closes off others'.[111]

Seen in this lineage, standardisation through numbers considerably reduces the modalities and potentialities of organised resistance to the instrumentalisation of numbers in security governance. On the one hand, it is not clear what mechanisms are available to contest, debunk, and delegitimise the use of numbers in the standardisation process. Once numbers have been instrumentalised to persuade, to politicise (and potentially depoliticise), and to standardise a given issue, it becomes strenuous to revisit

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[108] Graham Burchell, 'Liberal government and techniques of the self', in Andrew Barry, Thomas Osborne, Nikolas Rose (eds), *Foucault and Political Reason: Liberalism, Neo-Liberalism and Rationalities of Government* (Chicago: University of Chicago Press, 1996), pp. 19–36.

[109] Claudio Radaelli and Fabrizio De Francesco, *Regulatory Quality in Europe: Concepts, Measures and Policy Processes* (Manchester: Manchester University Press, 2011).

[110] Ted Hopf, 'The logic of habit in International Relations', *European Journal of International Relations*, 16:4 (2010), pp. 539–61; Lamont et al., 'What is missing?'; Vincent Pouliot, 'The logic of practicality: a theory of practice of security communities', *International Organization*, 62:2 (2008), pp. 257–88.

[111] Ole Jacob Sending and Iver Neumann, 'Banking on power: How some practices in an international organization anchor others', in Emmanuel Adler and Vincent Pouliot (eds), *International Practices* (Cambridge: Cambridge University Press, 2011), p. 232.

and dislodge them, apart from promoting alternative measurements.[112] On the other hand, this relates to the issue of responsibility of standardisers – that is, those who produce, revise, and diffuse standards.[113] Although standards are vessels of expert knowledge, standardisers have been particularly efficient at keeping responsibility at arm's length. Indeed, standardisers are, at one and the same time, those who produce standards and those who ascertain whether compliance with the standards is valid or correct.

By cloaking standards with the language of neutrality and objectivity, experts subvert the 'chain of accountability'.[114] In other words, standards establish both the conditions and rules of accountability. However, since the regulatory capacity of standards does not usually rest on their authority or hierarchy but on their perceived usefulness, it has indeed proven difficult to direct organised resistance toward standardisers themselves or toward the instrumentalisation of numbers that has led to standardisation. Instead, opponents of a given standard will fight that standard by suggesting a new one; they will become standardisers themselves. Take international university rankings, for example. Using a combination of measures including research excellence, influence, demographics, and other criteria, three rankings publications – the QS World University Rankings, the Times Higher Education World University Rankings, and the Academic Ranking of World Universities – have established much-discussed performance standards across universities, countries, and disciplines. The European Commission has publicly voiced its dissatisfaction with the results received by most European universities and with the performance standards employed by these three ranking systems – yet, crucially, the Commission has not rejected the instrumentalisation of numbers nor the standardising attempt in and of itself. Rather, the Commission has responded by creating its own set of performance standards and ranking – the U-Multirank – that supposedly offers 'better' measurement and comparison of universities.

Once again the case of the Human Security agenda illustrates the role of numbers in standardisation processes, but also the potential for numbers-based challenges to standardisation efforts, highlighting the interplay and potential tensions between numbers-based mechanisms of politicisation and standardisation. To achieve its objectives of ameliorating the many dimensions of human security (access to healthcare, limitation of legal small weapons trade, etc.), the report relied upon the development of standardised practices, which could then be compared alongside a different set of measurable criteria. The compilation of quantitative data on the many issues covered by the report encouraged initiatives that paved the way for future comparative inquiries, and the report's final chapter emphasised the need to reform classical indicators of development and to monitor them more closely. Therefore as Des Gasper notes, the human security discourse was from the start 'connected to an accountability structure' via a monitoring of humanitarian crises, regular evaluations of progress towards the millennium development goals, and yearly reports; all of which shape security policies through benchmarking.[115] It was therefore clearly hoped that the new concept of human security would reshape national foreign and security policies not only through persuasion, but also through a standardisation of policies on specific issues, as states would be willing to 'perform' in later human security assessments – which was initially achieved with several states harmonising their policies on this basis, chiefly Canada and Norway. This would not have been

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112 Greenhill, 'Counting the cost'.
113 Nils Brunsson et al., 'The dynamics of standardization: Three perspectives on standards in organization studies', *Organization Studies*, 33:5–6 (2012), pp. 613–32.
114 Patricia Day and Rudolph Klein, *Accountabilities: Five Public Services* (Tavistock: Seiten, 1987), p. 244; Fioramonti, *How Numbers Rule the World*.
115 Des Gasper, 'Securing humanity: Situating "human security" as concept and discourse', *Journal of Human Development*, 6:2 (2005), p. 239.

possible without an extensive use of numbers. However, the very effort that sought to objectify human security through the creation of a series of quantitative indexes opened new fronts of very diverse initiatives to measure human security 'objectively' in different ways that challenged the UNDP's effort. Different measurements have been generated by rival institutions that have developed competing indexes based on different methodologies. In 2003, Taylor Owen already observed that at least 'six existing methodologies [coexist] for measuring human security', and noted that these six indexes result from the fact that the 'six proponents of human security have developed measurement methodologies [each using] a different definition of human security and therefore uses a different list of indicators'.[116] The scattered measurements offered by the likes of King and Murray's 'General Poverty' index (2000), Bajpai's Human Security Audit (2000), the Index of Human Security offered by the Global Environmental Change and Human Security Project (2000), or later by the Human Security Report Index offered by the Human Security Centre (2005), Owen's own Human Security Mapping approach (2003), or Hasting's human security indicator based on a series of already existing proxy databases (2009) produce massively diverging results, hence preventing any successful standardisation. As Alexandra Homolar emphasises 'given the current lack of a global "global standard" in human security performance metrics and index ranking, the focus … is on a set of seemingly disparate indexes'.[117] Moreover, the strategic instrumentalisation of these numbers by states and non-state organisations active on the issue has further solidified the competing positions as to which of these indexes provide a more accurate terminological standard of human security, providing a clear example of how providing alternative numbers might be an efficient – and maybe the only efficient – strategy to counter numbers-based standardisation initiatives.

These examples show that in spite of contestation numbers have the potential to augment standardisation dynamics by fixing the meaning of norms, thereby accentuating their self-fulfilling effect and reducing the scope of potential opposition. All in all, standardisation through numbers is not neutral, but that does not mean that all standards are negative.[118] Contra some scholars who bracket (or politely neglect) the positive aspects of numbers and standardisation (and thus display an a priori normative bias), we contend that our understanding of numbers as a vector of standardisation must include the full spectrum of 'positive and negative' standardisation, thus avoiding analytical closure.

## V. Towards an integrated view

It is neither accurate nor productive to understand the consequences of numbers on security governance as reducible to a particular mechanism, or a referring to a single set of conditions. Rather, our argument is that to examine the role of numbers in security governance is to conduct an analysis in the plural: there is a plurality of mechanisms in play, each bringing in its train a diversity of heterogeneous conditions, articulated in multiple fashions. The point of importance here is none of these mechanisms exhausts the power attributed to numbers; nor are they, for that matter, mutually exclusive. Indeed, our analysis reveals that rather than possessing some sort of inherent power, numbers become vectors of power when articulated to dynamics of persuasion, politicisation, and standardisation, and that their impact is neither unambiguous nor direct.

[116] Taylor Owen, 'Measuring human security: Overcoming the paradox', *Human Security Bulletin*, 2:3 (2003), p. 2.
[117] Alexandra Homolar, 'Human security benchmarks: Governing human wellbeing at a distance', *Review of International Studies*, 41:5 (2015), p. 845.
[118] Lamont et al., 'What is missing?'; Timmermans and Epstein, 'A world of standards but not a standard world'.
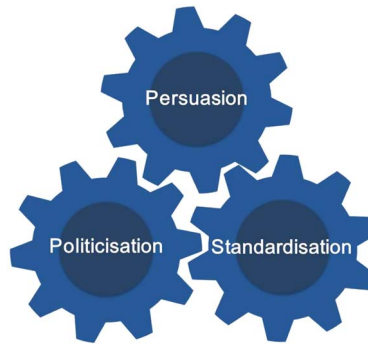
**Figure 1.** The working dynamics of numbers in governance.

In other words, these mechanisms are autonomous, yet reciprocally conditioning (Figure 1). Numbers may strengthen persuasion under specific circumstances, initially benefiting a particular political agenda yet later undermining it by accelerating politicisation to unmanageable levels. They may politicise issues and open discussions yet at the same time constraining the range of possible political interventions. As such, our study of the working dynamics of numbers in security governance is not deterministic: it rather showed how numbers have become a potentially powerful political instrument whose long 'life cycle' is a site of contention that needs to be managed through very specific tactics.

Though each represents a specific way of acting on security issues to elicit a particular effect, numbers' impact cannot be reducible to any one of these mechanisms. Of course, a successful politicisation can facilitate a persuasion attempt but the qualifications we discussed along the way suggest that the link between persuasion and politicisation is far from straightforward.[119] In contrast, it is difficult to come across a successful standardisation that does not rely upon an effective persuasion.[120] Yet a relation of presupposition is not a relation of causality.

To some extent, the case of human security tallies with this argument. We have shown that while persuasion have been decisive in furthering human security claims in gaining international saliency, the attempt to optimise common practices through standardisation has grown stale and, with it, the spread of human security agenda. This is not meant to imply that actors question the 'facts' portrayed by human security numbers as such. While that is unquestionably one of the things that it enables, our argument is instead that the failure to create a shared human security standard stems from the realisation that more than one manner of aligning behaviours is possible because more than one standard regime is available, and this means, in turn, that there is a range of potentially relevant standards. However, the possibility of having various standards shatters the project of establishing a unique, valid measure of human security. In this way, the evolution of human security agenda teaches us that there is no logical connection between the credibility of numbers as truth claims and their ability to coordinate activities they purport to measure.

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[119] See, for instance, Giandomenico Majone, *Evidence, Argument and Persuasion in the Policy Process* (New Haven: Yale University Press, 1992).

[120] Theodore M. Porter puts it in slightly different terms: 'Adequate description counts for little if the numbers are not also reasonably standardized. Only in this way does calculation establish norms and guidelines by which actors can be judged and can judge themselves.' Porter, *Trust in Numbers*, p. 44.

## Conclusions

The main objective of this article was to account for and theorise the authority of numbers in security governance. Although most of our empirical vignettes focus on security governance, we believe our conclusions might apply to other instances of governance. Partly because our approach foregrounds some of the mechanisms through which numbers and the technologies that embody them percolate through social structures and set off their effects: persuasion, politicisation, and standardisation. We have shown how numbers acquire power through these interdependent mechanisms, sometimes accelerating and strengthening them, sometimes producing divergent results and triggering alternative dynamics.

Whether they are techniques of communication or signifying tools, normative guidelines or management techniques, numbers have a power that is highly dependent upon the assumption of objectivity, that is, on the view that numbers are independent from those who fashioned them. In this light, quantification is seen as a cure against the vagaries of subjective judgements. Numbers work in ways that are similar across the globe; they challenge distances. To an important extent, this explains why numbers have emerged as well suited for global forms of governance. The upshot of this argument is that an otherwise adequate description of security problems tends to encounter more resistance unless it provides numbers accepted as valid by those whose activities they are intended to represent. But numbers alone cannot project power and coordinate security practices. They need to be an integral element of standards before they can give direction to the activities they purport to measure. Only in this way are numbers more effective in steering governance.

The growing pressure of quantification on security governance stems primarily from the belief that its success is determined unambiguously by the validity of the numbers it relies upon. The appeal of numbers grows, by and large, out of the pressure to develop a kind of evidence-based security governance. No numbers, it seems, means no evidence and no credible argument. With numbers, by contrast, hotly debated security issues, are turned into problems that can be managed, if not solved. Put simply, reliance on numbers is preeminent among the means by which actors strive to minimise if not silence the clash of values and interests that often pervades security debates. Hence there are two paradoxes: First, what is special about the language of numbers is that actors are compelled to produce numbers if they want to be part of the discussion, but on the other hand, numbers neutralise discussions and filter the types of arguments that are admissible. Second, quantitative evidence enables different actors including local, states and international organisations, to present their evidence, but on the other hand, a small group of experts ends up deciding whether the evidence is reliable and acceptable. The result, in contrast to the governance ethos, is that the decision-making process is centralised and left to a very limited group of quantitative experts. Unpacking these paradoxes should remain a central project of the study of security governance in years to come, especially as the logic of 'big data' – which will only exacerbate the dynamics highlighted in the present article – is due to permeate the field of security. The highest purpose of numbers is to establish validity, that is, to instil power. Nevertheless, as standards set limits upon what in numbers can steer governance, persuasion and politicisation set limits upon what may be taken to be valid or credible.

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