

The Cartographic Production of Territory: mapping and Danish state formation 1450-1650

PRESENTED AT THE BISA CONFERENCE
UNIVERSITY COLLEGE CORK
18-20 DECEMBER 2006

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Abstract

In this paper I argue that International Relations (IR) needs to engage more specifically with the concept of space in order to improve its understanding of political territory. I present a theoretical proposition concerning the relationship between cartography and space suggesting that historically the reality of space has been established through cartographic means. This argument is illustrated via a historical exposition of the mapping of Danish territory 1450-1650. It is shown how so-called modern cartography changed the nature of space in a way that allowed the state; firstly, to identify itself in spatial terms as territory, and secondly, to enhance its control and utilisation of the territory. In conclusion, the paper suggests that the formation of modern political territory depended on a specific cartographic representation of space, and furthermore, that the development of the modern state was conditioned by the specific cartographic reality provided by the map. The implications for the way in which we discuss territory in IR are threefold: Firstly, we ought to stop considering territory as something being either 'natural' or 'social' - it is both. Secondly, and in continuation hereof, we ought to focus specifically on the practices of knowledge production concerning space when we discuss possible changes to the current territorial political order, because thirdly, the cartographic production of reality is not neutral but neither is it distorting a pre-existing spatial reality; the reality of space is established on the surface of the map.

*Maps are the undergarment of a country*¹

Intro²

We often take for granted that we know what space is, and likewise we treat territory as in itself fairly unproblematic. In the world of International Relations (IR) territory is a well-defined piece of land governed from a single centre of authority. The space of the world is one that is neatly divided into territories like this, and what is considered significant is how these territories interact, not how they are constituted and what they are made out of. In opposition, this paper argues that in order to understand territory we must engage with the concept of space and the way it has been transformed historically. Currently, there is no shortage of arguments claiming an end to geography, great transformations of the international territorial order, and even changes to the territorial identity of the state.³ But surprisingly little attention is paid to what provides the state with a spatial identity in the first place, and how this relation – between space and the state – could, or should, be understood. The concept of space itself is generally understood as an unproblematic feature which has conventionally received minimal attention in IR.

This is true, I argue, even though the spatial order of the international system – the modernist settlement⁴ of time and space in IR – has been called into question in recent years.⁵ After the end of the cold war the billiard ball image of the state, and the stability it entails, has resonated less and less well with events. A series of civil wars and ethnic conflicts in the wake of the ‘fall of the wall’, the impetus of the notion of globalisation, and over the last five years, the ‘Long War on terror’⁶ has raised questions about the status of the international territorial order. These events have provided openings for theoretical questions about the international order, the territorial state, and on a more philosophical level, the status of space and time of IR. Unfortunately, I argue, the challenge has only been picked up to a degree: the openings are being investigated but there remains in IR a reluctance to engage seriously with the concept of space itself. Part of the problem lies in a typical conflation of space as an analytical category with the reality of space.

¹ Morgan ‘the goat’ explains the importance of maps to Betty in the film ‘The Englishman who walked up a hill and came down a mountain.’

² I owe great thanks to Gurminder K Bhambra for reading and commenting on a draft of this paper.

³ References will occur subsequently.

⁴ I take the notion of a modernist settlement from Bruno Latour (1999). *Pandora's hope : essays on the reality of science studies*. Cambridge, Mass. ; London, Harvard University Press.

⁵ Famously by Rob Walker (1993). *Inside/outside : international relations as political theory*. Cambridge, Cambridge University Press.

⁶ The notion of Long War is inspired by a workshop on the Long War with David Campbell, Martin Shaw, and Martin Coward; Sussex University, May 5, 2006

This paper is a specific contribution to an engagement with space. I argue that we ought not to discuss the reality of space as an abstract universal category but instead we ought to investigate the social production of space. It distinguishes between the three concepts space, territory and the state in order to get a clearer understanding of how they relate to each other. Specifically, this is done by providing a number of theoretical propositions concerning the relationship between cartography and space, and in addition, a historical analysis of mapping and state formation processes in Europe. I argue that we cannot understand the relationship of space, so-called modern territory, and the state without grasping the significance of cartography. Based on this, I make two suggestions: first, that modern political territory depends on a specific cartographic image of the world. Secondly, that the development of the modern state depends on this specific cartographic reality provided by the map.

I illustrate my argument through an historical exposition of the mapping of Danish territory 1450-1650. I show how cartography as a fairly autonomous enterprise changed the reality of space, and in a sense provided the condition of possibility for modern territory by altering the reality of space. That is to say that the movement towards the formation of the modern state required space to be produced in novel terms. From the mid 16th century, the state made increasing attempts to control the mapping process in order to control both the process in which this knowledge was created and also because mapping increased the centralising state's ability to exercise control over space. Denmark is chosen as example because, being (then) a moderately large state it illustrates a general transformation which took place in Europe regarding mapping and state formation beyond the immediate jurisdiction of the Habsburgs who adopted cartography somewhat earlier. It thus provides an example of European state-formation processes leading to absolutism which was introduced in 1660.⁷

This paper begins with a short but critical investigation of the state of space in IR theory. Following from here, it discusses the concept of space, the notion of the 'reality of space', and subsequently it presents cartography as a way to engage 'space.' Then it turns to the analysis of early modern production of state territory through cartography in Denmark 1450-1650. I conclude with reflection on the implications of my argument for the way in which we conceptualise the relationship between politics and territory in IR theory. I conclude with reflection on the implications of my argument for the way in which we conceptualise the relationship between politics and territory in IR theory.

Space in IR

The history of space within the IR discipline is peculiar; from occupying a central ground, it disappeared, only now to resurface. From the late 19th century, 'space' played a central role in attempts to establish a science of political geography and geopolitics which played a significant role for the understanding of the state and international relations prior to World War II. Whereas Friedrich Ratzel plays the role as the "spiritual grandfather" of

⁷ It should be noted that I do not equate absolutism with modern politics. Nevertheless, in terms of political space, the transition towards absolutism encapsulates features which are later associated with modern territory, and can thus be considered a step towards modern politics.

geopolitics⁸, the Swede Rudolph Kjellen coined the term in 1899 for the study of the relationship between geography and the character of states and their interaction.⁹ After the war, geopolitics and political geography came to be associated with the Nazi regime, and the widespread notion of Lebensraum,¹⁰ and was widely delegitimised in academia.¹¹ Hence, the concept of space started to vanish from social science and IR especially.¹² Intriguingly, the very concept that was the basis of a geopolitical science before the world war completely vanished as Political Science with positivist and universal aspirations gained ground. In Waltz' classical Neorealism, neither space nor territory features in the system that is otherwise made up by states conceptualised similar to Max Weber's famous definition of the state.¹³ In a peculiar fashion, territory seems to be a significant assumption in *Theory of International Politics*, yet it remains taken for granted to the extent that it is not even mentioned.¹⁴ Generally, there was no room for 'space' within the universal science branch of post-Second World War IR, where a specific territorial order constituted the stage on which East and West could compete during the Cold War. Within this understanding it was implicitly assumed, that spatial differentiation across the globe did not play a role for the study of IR. And furthermore, discussions about the constitution of the spatial bodies of states were left for domestic disciplines such as Sociology and Political Science. What counted was instead the interaction between like units – states – within an international territorial order.

⁸ Bassin, M. (1987). "Imperialism and the nation state in Friedrich Ratzel's political geography." Progress in Human Geography **11**: n. 15 p. 490.

⁹ O'Tuathail, G. (1996). Critical geopolitics. London, Routledge. For a contemporary definition of geopolitics, see Agnew who describes it as "[t]he study of the impact of geographical distributions and divisions on the conduct of world politics. In its original usage it referred to the impact on the inter-state relations of the spatial disposition of continents and oceans and the distribution of natural and human resources. Today, however, the term also covers examination of all the geographical assumptions, designations and understandings that enter into the making of world politics (as in critical geopolitics)" Agnew, J. A. (1998). Geopolitics : re-visioning world politics. London, Routledge: 128.

¹⁰ One of the key arguments in geopolitics was that the state, as a natural organism, required an ever increasing space in order to accommodate an increasing population. Only alternative to growth would be stagnation Bassin, M. (1987). "Imperialism and the nation state in Friedrich Ratzel's political geography." Progress in Human Geography **11**: 473-495. also 477, n7. Klaus Haushofer (1869-1946) allegedly played a central role in associating the notion with Nazi ideology O'Tuathail, G. (1996). Critical geopolitics. London, Routledge: 45 & 117.

¹¹ See Heffernann in Holloway, S. L., S. P. Rice, et al. (2003). Key concepts in geography. London ; Thousand Oaks, Calif., SAGE Publications.

¹² With the exceptions of Morgenthau, H. J. (1964). The Purpose of American politics ... With a new introduction by the author, pp. 359. viii. Alfred A. Knopf; Random House: New York., and Kissinger (see Bassin, M. (1987). "Imperialism and the nation state in Friedrich Ratzel's political geography." Progress in Human Geography **11**: 473-495, O'Tuathail, G. (1996). Critical geopolitics. London, Routledge.) and Aron Aron, R. (1966). Peace and war : a theory of international relations, Weidenfeld & Nicolson.

¹³ "a state is that human community which (successfully) lays claim to the *monopoly of legitimate physical violence* within a certain territory, this 'territory' being another of the defining characteristics of the state" Weber, M. (1994). The Profession and Vocation of Politics. Weber: political writings. P. Lassman and R. Speirs. Cambridge ; New York, Cambridge University Press: 309-369. 310-311.

¹⁴ What defines the state for Waltz is sovereignty. This is what constitutes states as like units Waltz, K. N. (1979). Theory of international politics. Reading, Mass. ; London, Addison-Wesley.: 93-97). However what this sovereignty covers or its boundaries are not mentioned. Not even when he argues that domestic governments have a monopoly on the legitimate use of force does he mention territory. This is odd because Waltz's definition seems to be inspired by Max Weber's seminal definition of the state (Hoffman, J. (1995). Beyond the state : an introductory critique. Cambridge, Polity Press.: 3).

After the fall of the Berlin wall, space started its re-ascent on the research agenda. Especially the assumptions about territory informing the dominant Neorealism were questioned. John Ruggie informed us that the modern notion of territoriality was a specific historical product and that its time might have come to an end;¹⁵ John Agnew, warned us against the territorial trap and assumptions about the nation state;¹⁶ and a series of writers associated with Poststructuralism, and more specifically Critical Geopolitics critically highlighted the geo-political assumptions underwriting conventional theory and practice of global politics.¹⁷ In the words of Gearóid O'Tuathail: "Territory [...] is no longer the stable and unquestioned actuality it once was. Rather than assumed given, its position and status is now in question".¹⁸ The significance of territory in the post-Cold war world is thus being questioned, as is the function it plays within the international system of governance. Our understanding of political space is especially challenged in the context of European studies, where alternatives to modern territorial practice is sought¹⁹, and the notion of 'new medievalism' seeks to illuminate current trends by drawing parallels to the Medieval (European) organisation of political space²⁰.

¹⁵ Ruggie, J. G. (1993). "Territoriality and Beyond - Problematizing Modernity in International-Relations." International Organization 47(1): 139-174.

¹⁶ Agnew, J. A. and S. Corbridge, Eds. (1995). Mastering space : hegemony, territory and international political economy. London, Routledge.

¹⁷ As examples see Ashley, R. K. (1987). "The Geopolitics of Geopolitical Space: Toward a Critical Social Theory of International Politics." Alternatives 12: 403-434, Ashley, R. K. and R. B. J. Walker (1990). "INTRODUCTION Speaking the Language of Exile: Dissident thought in International Studies " International Studies Quarterly 34: 259-268, Ashley, R. K. and R. B. J. Walker (1990). "CONCLUSION Reading Dissidence/Writing the Discipline: Crisis and the Question of Sovereignty in International Studies, in International Studies Quarterly." International Studies Quarterly 34: 367-416, O'Tuathail, G. (1996). Critical geopolitics. London, Routledge. Walker, R. B. J. (1993). Inside/outside : international relations as political theory. Cambridge, Cambridge University Press, Walker, R. B. J. (1995). History and Structure in the Theory of International Relations. International Theory - Critical investigations. J. D. Derian. London, Macmillan Press: 308-339. For a more specific geopolitical perspective see Agnew, J. A. and S. Corbridge, Eds. (1995). Mastering space : hegemony, territory and international political economy. London, Routledge, Agnew, J. A. (1998). Geopolitics : re-visioning world politics. London, Routledge, Agnew, J. (1999). "Mapping Political Power Beyond State Boundaries: Territory, Identity, and Movement in World Politics." Millennium-Journal of International Studies 28(3): 499-521, and Dalby, S. and G. O'Tuathail (1998). Rethinking geopolitics. New York, Routledge.

¹⁸ O'Tuathail, G. (1999). "Borderless Worlds: Problematizing Discourses of Deterritorialization." Geopolitics 4(2): 139-149, O'Tuathail, G. (2000). Borderless Worlds: Problematizing Discourses of Deterritorialization. Geopolitics at the End of the Twentieth Century: The Changing World Political Map. N. Kliot and D. Newman. London, Frank Cass. 4: 139.

¹⁹ Jönsson, C., S. Tagil, et al. (2000). Organizing European space. London, SAGE, Ham, P. v. (2001). European integration and the postmodern condition : governance, democracy, identity. London, Routledge, Jensen, O. B. and T. D. Richardson (2004). Making European space : mobility, power and territorial identity. London, Routledge.

²⁰ See Anderson, J. (1996). "The shifting stage of politics: new medieval and postmodern territorialities?" Environment and Planning A 14: 133-153. Deibert, R. J. (1997). "'Exorcismus theoriae': Pragmatism, metaphors and the return of the medieval in IR theory." European Journal of International Relations 3(2): 167-192, Ham, P. v. (2001). European integration and the postmodern condition : governance, democracy, identity. London, Routledge. As argued by Ham, Hedley Bull is usually quoted for discussing alternatives to the present form of organising states. In *The Anarchical Society* he states that sovereign states are at present the principle actors but this might not always be so. As an example, he suggests that we could envisage a world in which the sovereign state is substituted by a political organisation similar to a medieval structure (so-called 'new medievalism'). In the face of such a development absolute territorial sovereignty

Yet, despite the voluminous questioning of territory, a crucial concept remains largely neglected: that of ‘space’ itself. As Stuart Elden poignantly points out: “work proposing an idea of deterritorialization requires an explicit theorization of what territory is” in order to adequately grasp what is supposedly changing, and Elden remarks that for “such a crucial issue, territory is undertheorized to a remarkable degree.”²¹ And this is largely, I would suggest, due to a neglect, or failure to engage with ‘space’, and its reality. Generally, IR theory either takes for granted that territory is simply carved out of terrestrial space, or – in order to avoid the straightjacket of a self-explanatory physical notion of space – the focus is turned to the meaning and significance given to space. The disadvantage of this is that the analysis tends to focus on discourses writing meaning into space and thus leaving the ‘spatial stuff’ behind. This is the case in Ashley and Walker’s otherwise intelligent critique of ‘mainstream IR’; even though they both call for an investigation into how modern political spaces have come into being, their usage of space remains highly abstract and metaphorical to the extent of obfuscation.²² Even within Critical Geopolitics, which is the current trend in IR most clearly devoted to a scrutiny of space, the emphasis often remains on the textual writing of meaning into spaces.²³

Much of the trouble with ‘space’ derives from a frequent distinction between physical and social space;²⁴ following this, physical space would be considered a stable ‘natural fact’ whereas social space would appear as a ‘social fact’ and could thus be ‘anything’. But, and this is my contention, territory is not well understood by following this distinction: territory is both a social and a natural fact. The reality of space is neither rooted in nature (devoid of social) or in the social (devoid of nature) but is best understood as a product of both. In order to understand territory better, I argue that we must investigate, also, the production of the reality of space.²⁵ To put this argument into

would be abandoned; instead we would see overlapping patterns of authority and sovereignty in which no single institution would have the absolute authority, it would always be dependent on others. This is essentially to go beyond sovereignty. Bull, H. (1995). The anarchical society : a study of order in world politics. London, Macmillan. See Ham, P. v. (2001). European integration and the postmodern condition : governance, democracy, identity. London, Routledge: 113-114.

²¹ Elden, S. (2005). "Missing the point: globalization, deterritorialization and the space of the world." Transactions of the Institute of British Geographers 30(1): 10.

²² Space seems to signify anything from a metaphorical description of a room in a textual universe in which one can think ‘non-mainstream’ to a universal condition of human existence Ashley, R. K. (1987). "The Geopolitics of Geopolitical Space: Toward a Critical Social Theory of International Politics." Alternatives 12: 403-434, Ashley, R. K. and R. B. J. Walker (1990). "INTRODUCTION Speaking the Language of Exile: Dissident thought in International Studies " International Studies Quarterly 34: 259-268, Ashley, R. K. and R. B. J. Walker (1990). "CONCLUSION Reading Dissidence/Writing the Discipline: Crisis and the Question of Sovereignty in International Studies, in International Studies Quarterly." International Studies Quarterly 34: 367-416. Walker, R. B. J. (1993). Inside/outside : international relations as political theory. Cambridge, Cambridge University Press, Walker, R. B. J. (1995). History and Structure in the Theory of International Relations. International Theory - Critical investigations. J. D. Derian. London, Macmillan Press: 308-339.. For a related critique, see O’Tuathail, G. (1996). Critical geopolitics. London, Routledge. p168-177.

²³ As is the case O’Tuathail, G. (1996). Critical geopolitics. London, Routledge.

²⁴ Informs the distinction between human and natural geography.

²⁵ My critique of distinction between ‘social’ and ‘nature’ as well as the focus on the ‘reality of space’ are inspired by the writings of Bruno Latour (1987). Science in action : how to follow scientists and engineers through society. Milton Keynes, Open University Press, Latour, B. (1999). Pandora’s hope : essays on the reality of science studies. Cambridge, Mass. ; London, Harvard University Press, Latour, B. (2005).

the right context, the subsequent section of this paper will present a brief discussion of 'space' in social theory which will lead to a discussion of the relationship between space and cartography, which will then eventually provide the optics through which I read the history of the mapping of Danish territory.

Space Theory

The 1970s gave birth to a new generation of 'space' research (re-)constituting space as a research area and seeking to incorporate space into social theory.²⁶ Henri Lefebvre published his seminal *La production de l'espace* in 1974²⁷ which highlighted that space is never simply there but always political and ideological.²⁸ Significantly, this move undermined the notion that space is stable background against which social life takes place but instead, we must acknowledge an intriguing relationship between 'social' and 'space', where space – on a very general level – is both a result of social practices but also enabling of these. In addition, these arguments force us, first, to examine both the production and re-production of what appear as spatial entities, and second, to abandon a rushed universalism but instead recognise spatial differentiation.

The discipline devoted to the study of space, geography, is conventionally divided into a 'human' and 'physical' branch. Mirroring this distinction, space is often understood *either* as 'social' *or* as 'physical', thus forcing a choice between either a spatial reductionism, in which the social is explained according to space; or, a social reductionism, in which space is explained according to the social.²⁹ This distinction feeds into IR, and the trend mentioned above, to either understand territory as something physical lying beyond the social, or as something social not paying much attention to space as an independent factor.³⁰ Part of the trouble is that the concept itself is an abstraction from the lived environment, the landscape, our location in world etc. It is difficult then to capture both spatial practices, a notion of spatial environment, and the abstract concept of space within the same analysis. Consequently, studies either tend to go 'the social way', or 'physical way' and thus reproducing either of the two mentioned reductionisms. But, if the concept immanently denotes an abstraction, what do we do?³¹ How do we avoid falling either into the pitfalls of the social | physical dichotomy?

Reassembling the social : an introduction to actor-network-theory. Oxford, University Press.. It would be beyond the scope of this paper to give a thorough introduction to his writings but his writings clearly inform my ideas on these matters.

²⁶ Tonboe, J. (1993). Rummets sociologi kritik af teoretiseringen af den materielle omverdens betydning i den sociologiske og den kulturgeografiske tradition. København, Akademisk forlag: ix-x.

²⁷ Lefebvre, H. (1991). The production of space. Oxford, Basil Blackwell. – English translation in 1991. Gave impetus to a voluminous Anglo space studies over the last 10-15 years, Massey, D. B. (2005). For space. London, SAGE.

²⁸ Lefebvre, H. (1991). The production of space. Oxford, Basil Blackwell.

²⁹ For a critical discussion see Tonboe, however, he also wants to maintain the distinction between social and material space in order to be able to analyse the interplay between the two.

Tonboe, J. (1993). Rummets sociologi kritik af teoretiseringen af den materielle omverdens betydning i den sociologiske og den kulturgeografiske tradition. København, Akademisk forlag: 7.

³⁰ It should be noted that many has given up this distinction and analyse social-space 'properly', see Massey, D. B. (2005). For space. London, SAGE.

³¹ As Doreen Massey points out, space is impossible to represent by which should be understood that space cannot be locked in a static understanding but must always be investigated – not as an opposite – but as a companion to time (Ibid.: 48). In a related fashion Agnew & Corbridge argue that to understand space and

Lefebvre's take is that space is a concrete abstraction, and it can thus be captured dialectically; "The concrete abstraction is simultaneously a medium of social actions, because it structures them, and a product of these actions"³². He thus maintains space as an abstract category but at the same time concretises it as an occurrence of everyday life. Space is both a condition of possibility but also an effect of social agency: "Itself the outcome of past actions, social space is what permits fresh actions to occur, while suggesting others and prohibiting yet others."³³ The production of space is thus important for understanding the character and possibilities of, and in, a certain society. It is to avoid this reduction of space to either something mental or physical³⁴ that Lefebvre suggests that we look into the *production* of space rather than relying on concepts or a notion of undisturbed nature.³⁵ In order to achieve this, he presents a triad of space instead of keeping it in the singular. It would be beyond the scope of this paper to discuss Lefebvre's understanding of space in detail; suffice to point out a strength and a weakness.

The strength of Lefebvre's notion of space is its division into different aspects: the triad of space consists of: spatial practice, representations of space, and representational space. Very simply speaking, practice embraces particular locations and spatial sets of characteristics of each social formation; representations are tied to knowledge, signs, and codes; and representational spaces embody 'complex symbolism' and is linked to the underground site of social life. It is also a site for resisting order; i.e. space contains a possible antagonism and is thus neither uniform nor coherent nor unambiguous.³⁶ Thus, both practice, representation, and resistance become part of 'space'; we cannot reduce space to one of its dimensions. Attacking the contemporary emphasis on space as a concept³⁷, he states that knowledge ought not to make representation the basis of social life "The *object* of knowledge is, precisely, the fragmented and uncertain connection between elaborated representations of space on the

social practice, we must have a historical approach; see Agnew, J. A. and S. Corbridge, Eds. (1995). Mastering space : hegemony, territory and international political economy. London, Routledge. Also, denying the use-value of analysing space as abstraction, Paul Hirst suggests that "it makes little sense to theorize about the properties of 'space' in general." Hirst argues further that we must always study definite space-power systems. Following these arguments, it makes little sense to discuss the nature of space purely as an abstract concept Hirst, P. (2005). Space and Power - politics, war and architecture. Cambridge, Polity: 3.

³² Shields, R. (1998). Lefebvre, love and struggle : spatial dialectics. London, Routledge, 1999: 160, quoted from Gottdiener, M. (1985). The social production of urban space. Austin, University of Texas Press.

³³ Lefebvre, H. (1991). The production of space. Oxford, Basil Blackwell: 73.

³⁴ In Lefebvre's diagnosis, this conventional split is labelled 'a double illusion' which conceals that (social) space is a (social) product: the illusion of transparency implying that space is an unproblematic presence – "innocent, free of traps or secret places" Ibid. 28 –in which action occur unrestrained. The realistic illusion – or the illusion of opacity – ascribes an own natural 'substantiality' to space. The illusion of transparency is associated with philosophical idealism, and the illusion of opacity is associated with philosophical materialism Lefebvre, H. (1991). The production of space. Oxford, Basil Blackwell: 27-30.

³⁵ Hansen, F. and K. Simonsen (2004). Geografiens videnskabssteori - en introducerende diskussion. Frederiksberg, Roskilde Universitetsforlag: 170.

³⁶ Lefebvre, H. (1991). The production of space. Oxford, Basil Blackwell: 33, 39 and 230-233.

³⁷ "Not so many years ago, the word 'space' had a strictly geometrical meaning: the idea it evoked was simply that of an empty area. In scholarly use it was generally accompanied by some such epithet as 'Euclidian', 'isotropic', or 'infinite', and the general feeling was that the concept of space was ultimately a mathematical one. To speak of 'social space', therefore, would have sounded strange" (Ibid: 1).

one hand and representational spaces (along with their underpinnings) on the other; and this ‘object’ implies (and explains) a *subject* – that subject in whom lived, perceived and conceived (known) came together within a spatial practice.”³⁸

However, a weakness in Lefebvre’s analysis is that maintains a somewhat romanticised notion of space. In his diagnosis of modern capitalism, and the history of space there is a sense in which the modern trajectory of space is one that has corrupted the ‘true’ substantial space of a more fully lived life. This gets clear in the closing chapter of *The Production of Space*: “The initial basis or foundation of social space is nature – natural or physical space. Upon this basis are superimposed – in ways that transform, supplant or even threaten to destroy it – successive stratified and tangled networks [...]”³⁹ To my mind it is problematic to maintain this notion of an original (more authentic) space because this will inevitably create an exogenous standard against which one can judge ‘social production’. In accordance with a Foucauldian take on history, we should abstain from the search for ‘essential’ origins, because, and this is a key to my argument, the reality of space is not something we should look for as a historical origin (nature, physical space) but something that is established continuously in a social process.

Space has no reality outside its representation *as space*.⁴⁰ Lefebvre notes that representations of space have been considered the truth about space – regrettably – and in response he introduces the spatial dialectics of the triad just described. Diverging from Lefebvre, I believe we will have to give up a notion of space as something with an origin, or something that has been corrupted. On the contrary, to my mind we can gain from keeping the focus on representations of space as a truth, or a reality of space. We can thus investigate the social practices involved in establishing these representations. Hence, where Lefebvre opens the concept of space to denote something political, ideological, and something produced, I would like to maintain the notion of realities (in the plural!) of space – because other socio-political practices depends on how this reality is established; and thus on the form space takes. I would propose that this is the only way space can be included in social theory avoiding it becoming an external factor. In addition this also avoids the fairly common notion that if we can deconstruct or undermine certain notions of space deemed to be bad we can un-cover a deeper reality underneath.

Maintaining the notion of a reality of space should not denote a singular or stable item. The image of the world depends on the eyes that look; the spatial reality of an Aztec in the 15th century varied greatly from that of a military commander during the Thirty Years War or a(n outer) space engineer of the present. But divergences do not imply that it is obsolete to talk about realities of space – only that these will be subject to conditions that vary across time and space, and also as something that can carry a number of realities at the same time. Instead of regretting this ambiguity, we can take it as an opportunity

³⁸ Ibid.: 230.

³⁹ Ibid.: 402-403. Rob Shields also makes this argument, and highlights how the countryside remains a more authentic space than that of capitalism in Lefebvre’s writing: “The ‘second nature’ is laid over the natural topography: a *socially produced* system of capitalist space” (Shields, R. (1998). *Lefebvre, love and struggle : spatial dialectics*. London, Routledge, 1999: 149).

⁴⁰ It is very important to stress that I do not dispute that rocks, cliffs, the environment etc are very real but it is the process in which all of this comes to be understood as space which is significant.

because we can scrutinise the *establishment*⁴¹ of the reality of space as a cultural specific notion that diverges in different societies and/or in different times.

There is an intricate relationship between mapping and knowledge,⁴² and in most societies, cartography has played a crucial role in establishing an official – or inter-subjective – notion of space. In the following section I will discuss cartography as a knowledge technology that allows the reality of space to be established in a certain way that significantly affects notions and organisation of political space. To conclude with a final word on Lefebvre, he notes that political space is not only established by action but also ‘requires’ practice, images and symbols.⁴³ As maps are considered a representation of space⁴⁴ I do not believe that my quest to establish a significant relation between cartography and the production of political spaces is running counter to Lefebvre but I focus on representations as being fundamental for the kind of knowledge of space which is a key to its reality. And this is essential in order to understand the link between space, territory, and state formation which again will allow us to scrutinise the international territorial order of global politics.

Cartography

The cartographic representation of the earth changed dramatically in Europe during the 15th and 16th centuries. Obviously, the encounter with a hitherto unknown continent changed the known scope of the world and shattered the medieval cosmography that divided the world into three continents: Asia, Europe and Africa. But at least as significant was the ‘cartographic revolution’ which altered the way in which space was – and could be – known. From around 1400 the rules of cartography started to change in a process where the medieval emphasis of symbolic significance informed by narratives of creation and time gave way for a ‘scientific cartography’ informed by geometric principles seeking to represent space as it appeared from a single point perspective.⁴⁵ The translation of Ptolemy’s *Geography* into Latin in 1409 is frequently named as the symbolic beginning of this process because it (re-)introduced the principles that inform scientific cartography to Western Europe.⁴⁶ In consequence, knowledge production of space was transformed. In the subsequent section I will describe how the scientific cartography altered the perception of space, and consequently, of territory. Here, I will

⁴¹ I am grateful to Tobias Lindeberg for suggesting this term, which is far better than alternatives such as ‘production’, ‘construction’, and ‘formation’. In contrary to these terms, establishment suggests something that involves agency but at the same time refers to something beyond this agency. The reality of space is something that has to be discovered, settled, and maintained.

⁴² See Turnbull for a thorough discussion of this Turnbull, D. (1993). *Maps are territories : science is an atlas : a portfolio of exhibits*. Chicago, University of Chicago Press; Turnbull, D. (2000). *Masons, tricksters and cartographers : comparative studies in the sociology of scientific and indigenous knowledge*. Australia, Harwood Academic.

⁴³ Lefebvre, H. (1991). *The production of space*. Oxford, Basil Blackwell: 245.

⁴⁴ *Ibid.*: 233.

⁴⁵ See Edgerton, S. Y. (1975). *The Renaissance rediscovery of linear perspective*. New York, Basic Books, Inc, Publishers, and Edson, E. (1997). *Mapping time and space : how medieval mapmakers viewed their world*. London, British Library.

⁴⁶ The translation of Ptolemy into Latin was completed in 1409, though the (re)drawing of the maps following Ptolemy’s data commenced only in the 1460’ies (Skelton, R. A. (1965). *Decorative Printed Maps of the 15th to 18th Centuries*. London, Spring Books: 35).

make a few notes on the general implications of the new mapping practices, and how we can regard the power of maps.

Conventionally, the history of cartography has used the scientific map as a benchmark for all map making and it thus created a teleological history in which the map of today was seen as the natural endpoint.⁴⁷ In consequence, non-European (Aztec, Chinese etc.) as well as 'pre-modern' map traditions were deemed superstitious and interpreted as representing an inferior spatial understanding. More recently, however, writers have opened the understanding of maps for a wider interpretation which does not consider maps as isolated documents unproblematically representing space. Especially the writings by Denis Wood and Brian Harley have significantly influenced the perception of maps⁴⁸ and thus inspired new ways of studying that locates the map properly within its social relations so that we can analyse both the power of maps, and the social role that maps generally play. In the *History of Cartography* Harley argues that virtually all societies have produced maps which should be considered "as images with historically specific codes."⁴⁹ Maps are thus specific cultural expressions of time and space,⁵⁰ and instead of judging all maps according to the standard of the scientific map, we can use maps as a tool to understand notions of time and space in specific societies; including the scientific one.⁵¹

In as much as the map provides an image of the world, the spatial knowledge of a certain culture, it shapes how people think they know the world. As Harley writes "[f]ar from being purely practical documents – surrogates of space or the mind's miniature of real distribution – maps have played an important role in stimulating the human imagination to reach for the very meaning of life on earth."⁵² In this paper, I consider map-making to be a key in establishing a reality of space. As a medium, the map renders

⁴⁷ Traditionally, maps were generally defined as 'representations of things in space' (Edson, 2002: 1); as an example the classic historical cartographer R A Skelton defined the map as: "...a graphic document in which location, extent and direction can be more precisely defined than by the written word; and its construction is a mathematical process strictly controlled by measurement and calculation" Ibid.: 1.

⁴⁸ Harley, J. B. and D. Woodward (1987). The history of cartography. Vol.1, Cartography in pre-historic ancient and medieval Europe and the Mediterranean. Chicago ; London, University of Chicago Press; Harley, J. B. and D. Woodward (1992). The history of cartography. Vol.2. Book 1., Cartography in the traditional Islamic and South Asian societies. Chicago ; London, University of Chicago Press; Harley, J. B. and K. Zandvliet (1992). "Art, Science, And Power In Sixteenth-Century Dutch Cartography." Cartographica 29(2): 10-19; Wood, D. (1992). The Power of Maps. New York, The Guilford Press; Harley, J. B. and D. Woodward (1994). The History of cartography. Vol.2, Book 2, Cartography in the traditional east and southeast Asian societies. Chicago ; London, University of Chicago Press; Harley, J. B. and P. Laxton (2001). The new nature of maps : essays in the history of cartography. Baltimore, MD ; London, Johns Hopkins University Press.

⁴⁹ Harley, J. B. (2001). Maps, Knowledge, and Power in The new nature of maps : essays in the history of cartography. J. B. Harley and P. Laxton. Baltimore, MD ; London, Johns Hopkins University Press: 51.

⁵⁰ Harley, J. B. and D. Woodward (1987). The history of cartography. Vol.1, Cartography in pre-historic ancient and medieval Europe and the Mediterranean. Chicago ; London, University of Chicago Press.

⁵¹ Much of the writings within this 'new' or critical approach to cartography is concerned with demasking the apparent value neutrality, and indeed Harley talked about cartography as ideology. My study is concerned with scrutinising the relationship between mapmaking and state formation in more detail than the assumption of converging interests between cartography and the state which some of these critical studies would sometimes have us believe.

⁵² Harley, J. B. and D. Woodward (1987). The history of cartography. Vol.1, Cartography in pre-historic ancient and medieval Europe and the Mediterranean. Chicago ; London, University of Chicago Press: 4.

space visible and tangible in a way that written text cannot.⁵³ As McLuhan has pointed out, text as a medium is inadequate as representing vision, and although, as discussed above, space is much more than vision and representation, the ability to visualise space – in the abstract – is significant for creating a shared knowledge of space. In the words of Denis Wood, “the map presents us with the reality we *know* as differentiated from the reality we see, hear and feel” (Wood 1992) 6, and in that way the map not only gives a picture of the present, it also issues promises of a future order because they make connections in space. A key example relevant for the present theme is how maps started to represent royal insignia and coats of arms with areas depicted. There are examples of this from portolan-maps dating back to the 14th century,⁵⁴ though, a striking example can be found on Olaus Magnus’ *Carta Marina* from 1539 where the Danish and the Swedish king are portrayed sitting on their thrones facing each other, and each partly hidden behind their royal coats of arms. The map, thus, both affirms the opposition between Denmark and Sweden, and asserts the respective royal authority over the lands of *Dania* and *Gothia*. At the time the authority of the kings was neither settled nor undisputed but the map ‘promises’ that this is so.

⁵³ Although it is frequent to ‘read’ maps as a language, there are obvious difference between the linear arrangement of the written language, and the two-dimensional display of the conventional map Keates, J. S. (1996). *Understanding maps*. Harlow, Longman: 175. I would suggest that the map plays a key role as a medium between space and the written text because the map is able to communicate space in a stable manner compatible with writing. However, this argument would go beyond the scope of this paper.

⁵⁴ Portolans (*port finders*) are maps of Mediterranean origin which showed sailing directions between the main ports appearing from the 13th century.

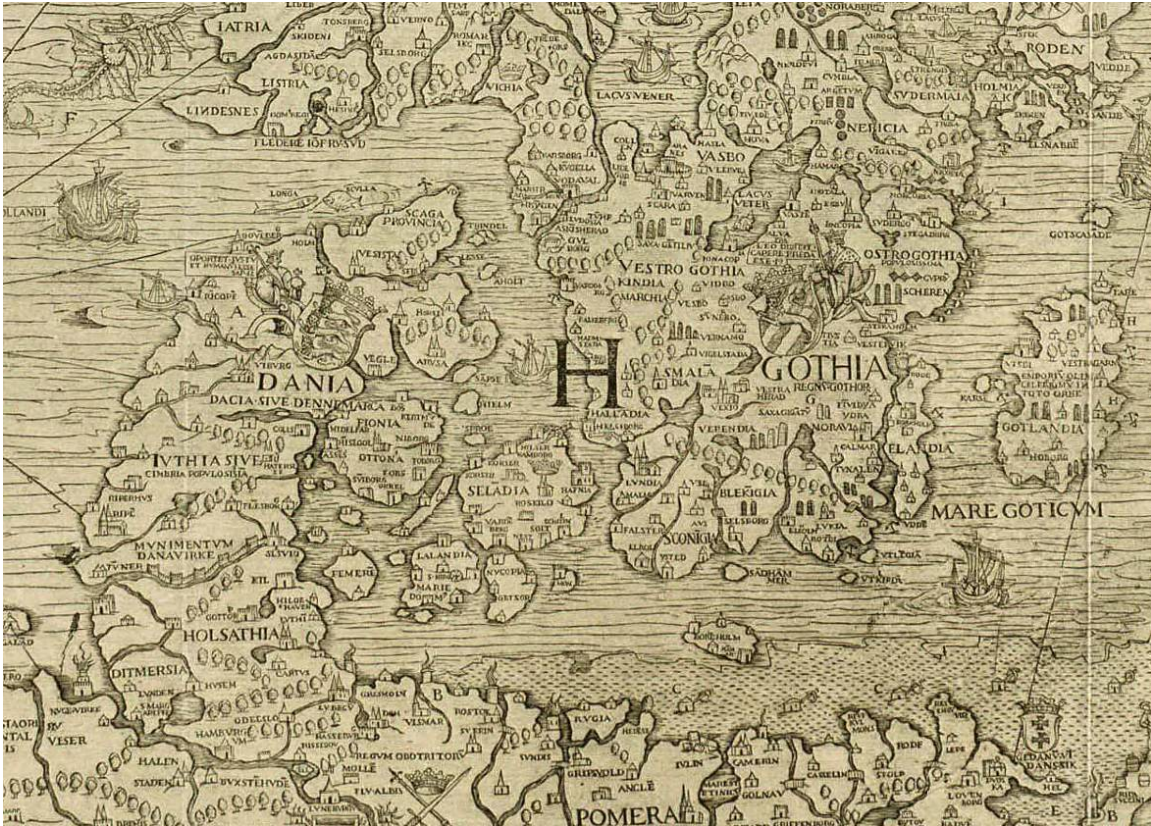


Fig. 1 section of Carta Marina by Olaus Magnus, published 1539. Royal Library, Copenhagen.

The map does not, of course, unilaterally impose an order on the world but it supports certain claims and possibilities and denies others. Drawing on the writings of Brian Harley I would suggest that we should understand the power of maps as being twofold. On the one hand there is ‘epistemic power’ which decides the principle of mapping. In Foucault’s writing, where Harley found his inspiration, the episteme is “the total set of relations that unite, at a given period, the discursive practices that give rise to epistemological figures, sciences, and possibly formalized systems [...]”⁵⁵ In this sense, the episteme is a set of relations that provide the condition of possibility for making the map. Thus, being inscribed in the map the epistemic power relation decides what ‘kind’ of space a certain mode of map making produces. On the other hand, as maps are not isolated documents but are produced in a network of engravers, publishers, surveyors, patrons, technology, financing etc. it is not straightforward who has the access and/or ability to make maps. We thus ought to examine who produce maps, who control, and who are left on the sideline. This is what I would call the ‘power of authorship.’ Simply speaking, epistemic power decides *how* space can be written, whereas authorship decides *who* is, or can be, the author. The relations of ‘the episteme’ and ‘authorship’ are obviously never completely separated. It has exactly been the amalgamation between ‘scientific’ representation of space and the gradual dominance of state institutions in cartography which has made scientific maps such a significant, yet opaque, source of

⁵⁵ Foucault, M. (1989). *Archaeology of knowledge*, London : Routledge, 1989: 211.

power. Nonetheless, it resonates with the purpose of the analysis following subsequently, and the argument I seek to make, to maintain this duality concerning the power of maps.

Mapping Denmark

The remaining parts of this paper will focus on the relationship between the above mentioned cartographic transformation and the development of ‘modern state territory’ as it is known in most IR theory. Analysing scientific cartography I will investigate how this affected ‘knowledge of space’ and how this in turn transformed the notion of territory in Europe. I will then discuss the agency involved in mapping Denmark in the period 1450-1650 focusing on the cartographers, and the role of the state; its degree of control and motivation for entering into the realms of map making. In producing knowledge of space in a novel fashion the scientific map made it possible for the state, one, to refer to itself as a spatial entity and second, to claim possession over the entire territory.⁵⁶ In that respect, the way in which map making establish a reality of space, was a condition of possibility for the image of the state that pervades IR theory and the common understanding of the international order. This image is not necessarily false but this analysis highlights the importance, on the hand, not taking space as ‘a given’ in which social practice takes place; and on the other, not only focusing on ‘the inter-’, or the location vis-à-vis each other, of political entities but also to scrutinise how the space of these entities is produced.

Epistemic change and the transformation of space/territory

Medieval cartography was primarily concerned with visualising the symbolic order of the world.⁵⁷ The great world maps of the *mappaemundi* tradition contained a mix of histories, location of cities, oceans, the continents, as well as paradise. The ordering principle was a stylistic tripartite division of the world into three continents and usually Jerusalem was depicted as the centre of the earth or– in cases where the world was depicted as the body of Jesus – the navel of the earth. These maps were thus based on stylistic convention concerning the composition of the earth; they were based on a symbolic ordering, and did not separate time from space; on the contrary, they were depictions of both.⁵⁸ In diametrical opposition, the principles that inform scientific map-making made distinctions between space and time, between space and its social-symbolic

⁵⁶ Harste, G. (In press). *Krigens og Fredens Sociologi*. Copenhagen Hans Reitzels Forlag.

⁵⁷ This is a truth with modifications – as opposed to modern maps which more or less subscribe to the same purpose (representing space and things in space) there were several modes and functions of medieval maps; some were illustration, some were made for practical usage. Also, there was a less clear distinction between ‘illustration’ and ‘map’. See Harley, J. B. and D. Woodward (1987). *The history of cartography. Vol.1. Cartography in pre-historic ancient and medieval Europe and the Mediterranean*. Chicago ; London, University of Chicago Press, Kupfer, M. (1994). "Medieval world maps: embedded images, interpretive frames." *Word and Image* 10: 262-88, reference at 264-69, Albu, E. (2005). "Imperial Geography and the Medieval Peutinger Map." *Imago Mundi* 57(part 2): 136-148.

⁵⁸ Edson, E. (1997). *Mapping time and space : how medieval mapmakers viewed their world*. London, British Library.

significance, and they combined an abstract mathematical framework with empirical observation and thus challenged the conventional order.⁵⁹

Even though the transition did not take place overnight it is clear that this novel 'knowledge tool' provided new political possibilities. Based on principles of Euclidian geometry, and an ordering code based on a grid system of latitude and longitude,⁶⁰ the scientific map produced space as a void governed by mathematical principles formulated in a universal 'code.' Space was thus turned into a universal sphere in which things can be located by means of the grid. It was isotropic (uniform) and refrained from taking into account bodies or matter that might differentiate space. In consequence, it became possible to imagine the globe as a coherent, empty, and universal space. Though, not only did these principles identify the earth as one world, they also made possible the establishment of new centres since Jerusalem lost its privileged position on the world map. And furthermore; it became possible to carve out pieces of land as separate entities because boundaries could now be draw and redrawn as thin lines without too much consideration about what 'existed on the ground.' As a note, this transformation of space was the condition of possibilities for establishing boundaries as 'lines on the map' rather than the gradual frontier zones and ambiguous delineations that characterised medieval polities.⁶¹

From medieval to modern territory – a question of knowledge

Within IR proper it is a common, yet flawed, assumption that territoriality – or territorial politics – is a modern phenomenon. Modern territory has a specific form but territoriality and the notion of territory has played a role for much longer than this assumption would suggest. In the case of Denmark, there was an established perception of a territory in the 13th century. The clearest evidence of this is 'Kong Valdemars Jordebog' (King Valdemar's cadastra) from 1231, which provided the first surveyance of the land in Denmark made for taxation purposes.⁶² It contains a very specific description of the obligations of each shire whether its payment is in gold or labour. It furthermore contains lists of the size of cultivated land in each shire, the tax burden of towns (købstæder),⁶³

⁵⁹ These distinctions should be accepted with care. They are very much the inscribed into the reason of cartography but not entirely true. As an example the map cannot be independent from time, but it seeks to represent space as being so. The map can not avoid traces of social-symbolic significance but it aims to do so. It is not the purpose of this paper to illustrate these problems but it is important to maintain a sceptical attitude towards the logic of the map.

⁶⁰ This, in cartography, is generally a system attributed to Ptolemy, see Tooley, R. V. (1969). Collectors Guide to Maps of the African Continent and Southern Africa. London, Carta Press: 5.

⁶¹ See Giddens, A. (1985). The nation-state and violence - Volume two of a contemporary critique of historical materialism. London, Polity for the argument that the definition of clearly demarcated boundaries instead of 'fuzzy' frontier zones was an essential feature of the formation of the modern state. For the argument about space being a precondition for boundaries, see Elden, S. (2005). "Missing the point: globalization, deterritorialization and the space of the world." Transactions of the Institute of British Geographers 30(1): 8-19.

⁶² Ulsig, E. and A. K. Sørensen (1981). "Studier i Kong Valdemars Jordebog - Plovtalsliste og Møntskat " Historisk Tidsskrift 81: 1-25.

⁶³ In some instances there is even a choice between '1 nights service' or '5 mark grain'. As a curiosum the book also contains a inventory of the realm's islands and their resources (whether they are inhabited, the

and a description of the king's demesne.⁶⁴ Even the much discussed topics of boundaries is 'present' as the 'jordebog' contains exact descriptions of the locations of the markers which had been set up to indicate the boundary of Halland, then a Danish province.⁶⁵ There was thus a clear written accord of the territory, its divisions, and obligations to the king during the middle ages, and this was – as a note – not an isolated Danish instance. In the case of France, Revel argues that around 1300 "the king had a legal perception of his territory and above all a fiscal one" (Revel 1991) 134. However, what is significant is that the knowledge of the territory is produced as a written text.⁶⁶

Measurement of space was often made according to practical usage, or in units of time. Longer distances were usually measured in travel time: at sea they were measured in 'weeks-at-sea'⁶⁷ and, in an example from France the first half of the 15th century, the king's herald stated that "the length of this kingdom is a twenty-two-day journey, from l'Escluse in Flanders to saint Jehan de Pié de Port at the border of the kingdom of Navarre, and the width is a sixteen-day journey..."⁶⁸ 'Functional land' – such as cultivated land – was measured in units based on labour time or production requirements. A 'barrel' (*tønne*) of land indicated the area which could be sown with the seeds of one barrel whereas a carrucate (*plovland*) denoted the area which could be ploughed in one day.⁶⁹ Thus, although space did have its own 'measures'⁷⁰ these were not used for greater distances or areas at the time, and there were not a general way of measuring all 'spatial relations.' Nevertheless, these examples clearly illustrate that it was possible to have a notion of the territory and its extension without a visual representation of it. The lack of 'scientific mapping' in medieval Europe did not mean that there was an inappropriate knowledge of space, or that there was no territoriality but, as we see, that knowledge of space provided different possibilities for the mode of territory.

Medieval political territoriality is usually described as being overlapping and hierarchical with no clearly defined centre and ambiguous boundaries.⁷¹ This, I would suggest, is to large degree due to the knowledge of space that was available. The reality of space as it were did not allow for sharp boundaries to be drawn, neither did medieval knowledge enable the uniform organisation of large territories which characterise the

different kind of game and resources such as limestone. Aakjær, S. (1980). Kong Valdemars Jordebog udg. af Samfundet til Udgivelse af Gammel Nordisk Litteratur. Kbh., Akademisk forlag. 92 & 120-122.

⁶⁴ Fenger, O. (2000). "Kongelev og krongods." Historisk Tidsskrift **100**(2): 257-284.

⁶⁵ Aakjær, S. (1980). Kong Valdemars Jordebog udg. af Samfundet til Udgivelse af Gammel Nordisk Litteratur. Kbh., Akademisk forlag: 127.

⁶⁶ Parallels are sometimes made to the Doomsday Book produced in the aftermath of the invasion 1066.

⁶⁷ The old unit to measure distance at sea; 'uge-søs'.

⁶⁸ Quoted by Revel, J. (1991). "Knowledge of the Territory." Science in Context **4**: 148.

⁶⁹ For the measure of the land in 'pre-modern' Europe there existed generally two forms: one based on labour time required for ploughing, and one based on the amount of seed required to sow the land Kula, W. (1986). Measures and men. Princeton ; Guildford, Princeton University Press: 29-42.

⁷⁰ Such as 'fod' (length of a foot) and 'alen' (the length of the lower arm); these measures varied greatly in size across the regions. As any means of calculating a standard for these were lacking initiatives for standardisation came via the church, which in some cases would have templates for an 'alen' against which the local population could compare their own measure tools and thus achieve a common measure within the area. Later on, standards for the 'alen' as example was to be found in any city hall – by royal decree in 1521 Petersen, K. (2002). Mål og vægt i Danmark. Lyngby, Polyteknisk Forlag: 23-31.

⁷¹ Ruggie, J. G. (1993). "Territoriality and Beyond - Problematizing Modernity in International-Relations." International Organization **47**(1): 139-174.

modern image of the state. The king depended on the clergy to provide local information,⁷² and in towns shared knowledge of localities were exploited to describe the location of property.⁷³ There were no general templates for spatial knowledge – whether it was generating itineraries over the village or locating property, and spatial knowledge was thus always mediated through personal relations. Control of the territory was achieved and maintained by controlling the towns and, not least, the castles of the country. These were controlled partly by ownership of king, co-operation with the church which owned a significant number of strong castles, and the castle-owing nobility swearing allegiance to the king. These relations were generally personal and had to be renewed with heirs when the noble man died. Control and knowledge over the territory was thus achieved through a web of personal relations and to a large extent depending on the church.

With the advent of scientific cartography, space is transformed, in a sense, to an *a priori* category, defined autonomously from the immediate experience of the environment, and space *in general* gets its own measure based on non-social relations. Hereby, space is transformed into an autonomous category, which in principle can be perceived without reference to experience or time. Locations in space became a matter of the relationship between celestial features, the earth and geometry,⁷⁴ and this provided new possibilities in terms of producing territory. Generally speaking, the ‘mode’ of knowing territorial space changed from a mode based on literacy and tradition to one of mathematics and visualisation.⁷⁵ Rather than ‘being known’ via travel times, location vis-à-vis Jerusalem (the big scheme), and substantiated through itineraries describing the features of the territory; such as is the case with *Valdemars Jordebog*; territory becomes visualised in its own right. Things were thus located vis-à-vis each other, and distances calculated by use of degrees, triangles, and the use of geometry.

This new way of representing space did, firstly, enable a uniform visualisation of territory which rendered it coherent and tangible in its own right, so to speak. Thus being emptied of any other substance than its own, it becomes possible to ‘write things and features into space’ which did not necessarily exist. In other words, it becomes possible for princes and emperors to show their authority over a territory even if they do not control it. It becomes possible to show an area as having certain characteristics even if this is not – or only partly the truth. In that respect, the scientific map also renders space a thing which can be possessed – not as a field, a forest, a mansion, but as space.⁷⁶ It thus

⁷² Ladewig Petersen, E. (1980). *Dansk Socialhistorie 3. Fra standssamfund til rangssamfund 1500-1700*.

⁷³ See Smail, D. L. (2000). *Imaginary cartographies : possession and identity in late medieval Marseille*. Ithaca, Cornell University Press.

⁷⁴ Originally the meter stood for 1/10.000.000 part of the meridian quarter from the North Pole to equator through Dunkerque and Barcelona lying on the same meridian KPetersen, K. (2002). *Mål og vægt i Danmark*. Lyngby, Polyteknisk Forlag. 170.

⁷⁵ Turnbull, D. (2000). *Masons, tricksters and cartographers : comparative studies in the sociology of scientific and indigenous knowledge*. Australia, Harwood Academic. Revel, J. (1991). "Knowledge of the Territory." *Science in Context* 4: 133-161.

⁷⁶ This, no doubt, is the condition of possibility for the predominant view of space identified by Edward W. Soja: “Space is viewed as being subdivided into compartments whose boundaries are “objectively” determined through the mathematical and astronomically based techniques of surveying and cartography” 9 Soja, E. W. (1971). *The Political Organization of Space*. *Commission on College Geography resource paper* Washington DC, Association of American Geographers. 8.

becomes possible to claim sovereign possession evenly over the territory claimed without the need for intermediaries (such as nobles, feudal lords, etc). This is typically the case, when a territorial map is accompanied by the royal insignia – in those cases all authority are typically written out of the map. Secondly, space becomes manipulable in its own right. Based on the spatial reality established by the map it becomes possible for two neighbouring rulers to sit over a table and agree on boundaries and draw them on the map. By means of the grid system, this boundary can then be located on the ground independently of what exist there prior to the agreement. This is an example of how coordination and planning in and off space is facilitated. With a scientific map it is possible – in principle – to meet in any location, even without knowing anything about this place. The ‘meeting point’ does not have to be a known place such as a town or a castle, but can be in the middle of a forest – if only the maps are ‘accurate enough’.

As a consequence of space being turned into a universal autonomous category it became possible to dislocate the notion of universality from political and religious structures and write universality into space. In other words, the church and the empire as the locations of ‘the universal’ lost prevalence and the space of the globe became a universal reference for politics. Within the universal space of the globe it was possible to carve out pieces of territory, within which a particular universal rule could be established over a particular universal space.⁷⁷ Here we recognise the predominant image of sovereignty from IR, and this is part of my argument that the transition to a scientific cartographic practice was a pre-condition for the formation of the modern state and the modern state system. In terms of territory, the cartographic transition broadened the scope of space ‘within reach’ of the state, and generally the scientific map expanded the tax-base of the territorial state in the country side and improved its ability to collect taxes. In Denmark as in many other countries,⁷⁸ the defences of the territory were pushed to the boundaries as the cartographic image of a coherent territory was slowly made real on the ground.

Edward Soya has poignantly described the transition as a shift from a “*social* definition of territory [to a] territorial definition of *society*,”⁷⁹ thus indicating that territory becomes the organisation principle of society.⁸⁰ My argument is that this transition is closely tied up with the transformation in knowledge of space; i.e. a change in the way in which reality of space is established. Yet, even though the cartographic revolution was the condition of possibility for the specific mode of modern territory, and thus for the modern state to take on its particular form, this did not happen automatically or in any straightforward fashion; the remaining section of this paper explores the agency

⁷⁷ During the Renaissance, in Europe, the notion of the earth as a stage on which states could act (as actors) became widespread. See Erik Ringmar’s article on state identity, where he states that once “the earth was fully encompassed it became, just like a Renaissance theatre, a closed graspable and circular space; and just as earth overlaid with grid-lines allowed for the precise calculations of relative movements between actors and things” Ringmar, E. (1996). "On the Ontological Status of the State." European Journal of International Relations 2(4): 445.

⁷⁸ Famously in France, see Mukerji, C. (1997). Territorial ambitions and the gardens of Versailles. Cambridge, Cambridge University Press. Though Harste argues that this process is not complete in Denmark, see Harste, G. (In press). Krigens og Fredens Sociologi. Copenhagen Hans Reitzels Forlag.

⁷⁹ Soja, E. W. (1971). The Political Organization of Space. Commission on College Geography resource paper Washington DC, Association of American Geographers. 8: 13.

⁸⁰ Which is how Soya characterises the (modern) centralised society, Ibid.: 16.

of the mapping of Denmark focusing on the period from 1450-1660. The aim is illustrate some of the dynamics which have been involved in the mapping of modern European states.

Brief notes on the history of the Danish State

Not more than a hundred years after being nearly being dissolved – the country had no king in the period 1332-1340 and most of the territory was mortgaged to German princes and mercenaries,⁸¹ Denmark emerged as the dominant power in Scandinavia during the 15th century. A union had been formed between the Nordic countries in which the councils of each country elected the king, and the Danish ‘candidate’ had been elected by all member states. However, in 1448, king Christopher of Bayern died, and the future political organisation was thrown open. The Swedish nobility disagreed significantly on whether to vote for the Danish king, or put forward an alternative union king.⁸² For the next hundred years or so, Scandinavian ‘international politics’ was dominated by the struggle over the status of the union. Only by the end of the Counts Feud 1535/6, was the union left for dead, and the sovereign territorial state became the future.

After the civil war, Christian III, who was a ‘modern’ German style educated prince, controlled the entire country where the political and religious structures were changed. The catholic bishops, who until then had been the most powerful fraction of the council, were charged with high treason, and the king became head of the new protestant church.⁸³ This brought an end to a long period of the competing territorialities of the church and the state. At the same time, a new meaning of sovereignty materialised. With the restructuring, sovereignty was no longer “unilaterally bound to one or other of the central institutions of power – the monarchy or the state council – and was instead linked to an impersonal, abstract and permanent concept, that of ‘The Crown’”.⁸⁴ This represented a depersonalisation of the notion of sovereignty, and the abstraction and continuity embraced by the notion of the crown facilitated ‘the state’ to exist by virtue of itself; i.e. to achieve an identity as a state.

To the extent that the state was identified with the territory over which it claimed dominion, and as it was able to increase its hold over territory, state territoriality became increasingly significant in defining the bounds of ‘society’. As Christian III centralised authority within the realm, large scale fortification projects were initiated throughout the country. In addition, a law was passed – ‘the castle laws’ – (Slotslovene) which gave the king command over all castles in the realm.⁸⁵ The new fortifications were generally pushing the defences towards the boundaries, and the previous castle owning nobility changed into residences of splendour rather than defence. From around 1500 the nobility

⁸¹ Bagge, S. (1999). "The Structure of the Political Factions in the Internal Struggles of the Scandinavian Countries During the High Middle Ages." *Scandinavian Journal of History* 24: 299-320.

⁸² Gustafsson, H. (1998). "The conglomerate state: A perspective on state formation in early modern Europe." *Ibid.* 23(3-4): 189-213., Gustafsson, H. (2000). *Gamla riken, nya stater statsbildning, politisk kultur och identiteter under Kalmarunionens upplösningsskede 1512-1541*. Stockholm, Atlantis.

⁸³ Jespersen, K. J. V. (2004). *A history of Denmark*, London, Palgrave Macmillan: 33

⁸⁴ *Ibid.*: 34

⁸⁵ Due-Nielsen, C., O. Feldbæk, et al. (2001). *Dansk udenrigspolitik historie*, Kbh., Danmarks Nationalleksikon: 273-277.

was transformed from a warrior class, whose prime responsibility was to defend the realm, into a land owning elite,⁸⁶ and they thus faced a transformation from ‘defenders of the realm’ into civil servants, counsellors, and officers. Generally, all these trends followed the European fashion where, in the words of Elliot, the word state “used to describe the whole body politic, seems to have acquired a certain currency only in closing years of the [16th] century.”⁸⁷ Not surprisingly, the effort to gather cartographic information was increased as well as we shall see subsequently.

The Agents

Nevertheless, to begin, the transition to scientific cartography was not initially state led but instead by scholars and commercial publishers. Initially, the motive force seems to have been an ethos of truth led by a novel notion of space and representation affecting areas such as visual arts, science, warfare, and cartography.⁸⁸ Geometry was seen as the way of reaching the true representation, and thus scientific cartography was the true way of depicting the world. The enterprise was dominated by a private map producing circle of publishers in Europe. Much of the demand came from rich private individuals who wanted maps for decorative purposes. This increased the demand for maps produced; also in the international university environment. By the end of the 15th century, printed maps had become sufficiently popular to provide the basis for specialised map sellers. During the 16th century a more elaborate trade organisation develops centred around Venice, and later Amsterdam becomes the undisputed centre for map making.⁸⁹ Hence, the milieu of map making was international, and the basis of map-making was largely about reproduction of earlier maps. Mapmakers would use an existing map as point of departure, and the innovative among them would then add new information to the map.

Ptolemy’s ‘geography’ was the undisputed authority well into the 16th century as it provided a uniform method and framework for drawing the world. He did include Danish place names but generally Ptolemy’s works contained little knowledge about the Nordic countries. Such knowledge was added however by the first Nordic ‘scientific cartographer’ Claudius Claussøn Svart, who produced a map over Scandinavia, which was added to the standard Ptolemy edition in 1427.⁹⁰ Svart explicitly writes himself into a tradition where he, as an eye witness, possesses knowledge unknown by ‘the authorities’ (read: Ptolemy).⁹¹ The significance of Svart being from Denmark is not that he adds to a Danish cartography, but that this gives him first hand experience which he

⁸⁶ Jespersen, K. J. V. (1974). "Fra Krigerkaste til Godsejeradel." *Krigshistorisk Tidsskrift* **10**(2): 5-19.

⁸⁷ Elliott, J. H. (2000). *Europe divided, 1559-1598*. Oxford, Blackwell: 49.

⁸⁸ For art see Blunt, A. (1968). *Artistic theory in Italy 1450-1600*, OUP., Edgerton, S. Y. (1975). *The Renaissance rediscovery of linear perspective*. New York, Basic Books, Inc, Publishers., for space in science Jammer, M. (1969). *Concepts of Space. The history of theories of space in physics, etc*, pp. xvi. 196. Harvard University Press: Cambridge., war Arnold, T. F. and J. Keegan (2001). *The renaissance at war*. London, Cassell, 2002.

⁸⁹ Skelton, R. A. (1965). *Decorative Printed Maps of the 15th to 18th Centuries*. London, Spring Books: 5-6

⁹⁰ Pihl, M., Ed. (1983). *Det matematisk-naturvidenskabelige Fakultet - 1.del*. Københavns Universitet 1479-1979. København, G-E-C Gads Forlag: 72.

⁹¹ Nørlund, N. E. (1943). *Danmarks Kortlægning en historisk Fremstilling*. Kbh: 13-15.

can add to a general body of knowledge with universal scientific aspirations. He spent most of his time at Italian universities.⁹²

Svart together with Olaus Magnus are the only two exceptions to the rule that up until the middle of the 16th century, Denmark featured only on maps drawn by ‘outsiders’, and they were both part of a universal cosmographic enterprise centred in Italy. Subsequently, Amsterdam became the centre of mapmaking at a time where it also acquired a leading role as economic centre of northern Europe.⁹³ For about a century mapmakers from the Netherlands dominated the development of cartography in Europe, and thus leading the way, Dutch cartographers in the 16th century generally possessed the power of authorship deciding the image of the Danish territory.

The Crown Interferes

Where hardly anyone utilised maps in Europe around 1400 – apart from Mediterranean sailors – in 1600 maps were essential to a wide variety of professions, not last that of state rulers and bureaucrats.⁹⁴ Within the Italian city states, being the exception in Europe, maps were slowly adopted in government during the 15th century,⁹⁵ it was during the 16th century that maps started to play a significant role for the European states generally.⁹⁶ In Denmark, the first map to be published over the country was made by Marcus Jordan in 1552, where he was professor in mathematics at University of Copenhagen. This map was not based on own surveying but was to a large degree based on previous sea charts and the famous Carte van Oostland.⁹⁷ Taking its place in the network of the European cartographic enterprise, Jordan’s map provided the basis for the map of Denmark in Abraham Ortelius’ famous *Theatrum Orbis Terrarum* which was the

⁹² Here, I do not mean to say that there was a strictly bounded European body of knowledge developing. The Arab and Islamic courts were generally more advanced with regard to navigation and cartography than their European counterparts. See for example Brotton, J. (1997). *Trading territories : mapping the early modern world. Picturing history*. London, Reaktion for a good presentation of Arab and Ottoman impact on early modern cartography.

⁹³ Due-Nielsen, C., O. Feldbæk, et al. (2001). *Dansk udenrigspolitik historie*. Kbh., Danmarks Nationalleksikon: 240.

⁹⁴ Buisseret, D. (1992). *Monarchs, ministers and maps the emergence of cartography as a tool of government in early modern Europe*. Chicago, University of Chicago Press: 1.

⁹⁵ In 1440, Giovanni Cavalcanti (Nobleman involved in the cultural and political life of Florence) suggested a longitudinal boundary in the conflict between Florence and Milan in 1440, and this is possible the first instance of imposing an imaginary mathematical line as a political boundary, see Edgerton, S. Y. (1975). *The Renaissance rediscovery of linear perspective*. New York, Basic Books: 114. This development, however, was slow. During the 15th Century, Venice was the only place where maps were generally adopted in government, see Buisseret, D. (1992). *Monarchs, ministers and maps the emergence of cartography as a tool of government in early modern Europe*. Chicago, University of Chicago Press: 2.

⁹⁶ Buisseret, D. (1992). *Monarchs, ministers and maps the emergence of cartography as a tool of government in early modern Europe*. Chicago, University of Chicago Press; Buisseret, D. (2003). *The mapmakers' quest depicting new worlds in Renaissance Europe*. Oxford, Oxford University Press..

⁹⁷ Nørlund, N. E. (1943). *Danmarks Kortlægning en historisk Fremstilling*: 26. This influential map showing Denmark was published in Holland around 1550. Interestingly the split between sea charts and land maps remain even though they converge towards a similar image. Carte Van Oostland of 1550 was probably itself based on old portolan maps and trade route descriptions of the Baltic, see Bramsen, B. (1975). *Gamle danmarkskort en historisk oversigt med bibliografiske noter for perioden 1570-1770*. Kbh, Rosenkilde og Bagger: 42.

first uniform atlas style map-collection to be published in book-form when it was published 1570.

Ortelius' collection of maps is one of the symbolic landmarks in the transition to the new way of representing the world. Knowledge production concerning space focused on providing an accurate 'and true' representation of the world, and constant efforts were made to improve this image by adding new details. It is interesting to note that this did not necessarily constitute a new science opposed to religion, but more likely it marked a transition in the way in which the true meaning of the bible was achieved. After the reformation in Denmark, Copenhagen University was reopened as a Lutheran institution in 1537.⁹⁸ Although theology was still the main subject, chairs were established in mathematics and physics as well, and these were considered as tools to improve the understanding of theology.⁹⁹ Nevertheless, the king became very interested, and not long after the reopening of the university, and only a year after the production of his first map, Marcus Jordan received a request from Christian III to make a general survey and charting of his kingdom. In 1553, he asked Jordan to map "all the kingdom's provinces, islands, towns, castles, monasteries, estates, coastlines, capes and anything else worth noticing."¹⁰⁰ If successful this would provide a very different knowledge of the territory than that contained in *Kong Valdemars Jordebog*.

Yet, this project is never quite completed; Jordan produces a number of maps over regions in Denmark but not all. Nevertheless, in 1585 the result of his work appears in a parallel work to Ortelius' mentioned above. In 1572 Braun's *Civitates Orbis Terrarum* is published, and the first volume of this first city atlas (whose title reflects Ortelius' famous work mentioned above) was ordered by governor of the Duchies Heinrich Rantzau. He was son of Johan Rantzau who was commanding the army of the nobility on mission to crush the rebellion led by Christian II's admiral 'Skipper Clement' in 1534.¹⁰¹ Heinrich himself was involved in Nordic 7 years war (1563-70), and had a general interest in cartography and topography. Rantzau asked Jordan to provide a map over Denmark, and as a result he produces the first map showing Denmark produced in Denmark. This was based on Jordan's own surveying – the job he was employed to do ca. 30 years earlier by the king. Yet it was not the king but a powerful member of the aristocracy who provided the means for the first printed map over Denmark. This is possible the reason that the map is not an 'even picture' of the realm but rather a tribute to Heinrich's father Johan, and a testament to the extension of his lands. The details on the map (mostly Fünen, the duchies, and northern Jutland) are also where Rantzau owned plenty of land.

⁹⁸ Received new statutes under Christian III in 1539, see Jensen, P. J. and L. Grane, Eds. (1992). *Det Filosofiske Fakultet - 1. del*. Københavns Universitet 1479-1979. København, G-E-C Gads Forlag: 4.

⁹⁹ Pihl, M., Ed. (1983). *Det matematisk-naturvidenskabelige Fakultet - 1.del*, Ibid: 3.

¹⁰⁰ (from Bramsen, B. (1975). *Gamle danmarkskort en historisk oversigt med bibliografiske noter for perioden 1570-1770*. Kbh, Rosenkilde og Bagger: 52, my translation).

¹⁰¹ Venge, M. (1981). "Clementsfejden og Caspar Paludan-Müller." *Historie - Jyske Samlinger Ny Række XIV*(1): 1-36.



Fig. 2: Jordan's 1585 map

Compared to previous records of the territory, this map provides a novel representation of the realm, showing boundaries as neat lines, and a short description of the composition of the country. The display of royal arms not only signal as a source of their authority (the system of patronage brought the maps into existence), but more fundamentally, as Helgerson argues, displays like these speak of a relation of power to the land.¹⁰² The map thus signifies the ownership of the king over the entire territory, and renders the nobility and the estates invisible. The only, however noticeable, is the significant tribute to Rantzau and the victories of his father during the civil war which features at length on the map. In that respect the power of authorship is clearly reflected on the map. As the geometric map reduces the complexity of the world, and abstracts space from its 'social reality', it provides an alternative reality; in this case where the territory could be monitored in its totality on a single sheet of paper, and all locations, coastlines etc can be viewed and related to each other in an instant – also to strangers who had never visited country. In *Kong Valdemars Jordebog* the description of the territory was also available

¹⁰² Helgerson, R. (1992). *Forms of nationhood : the Elizabethan writing of England*, Univ.Chicago Press: 111.

to all literate people but the listing of Islands for example would not give much of an idea about their location, shape, size etc unless you knew them already. On the map, the location, the name, the shape etc were all linked and present instantaneously.

Although, Jordan's 1585 map visualised a coherent territory under the arms of the king, it still was not a great success in terms of creating a uniform and detailed mapping of the kingdom. The map did not appear until long after the king's death (1559) and it was published in the outskirts of the realm. So, although a new representation was being established, a unity between authorship and the crown was still not achieved. In the 1580s a new project was launched which was supposed to provide a new and improved map over Denmark as part of the history of the country, which involved Tycho Brahe.¹⁰³ This was supported by the king Frederick II, who ordered that Brahe should have access to all maps held in the king's library. No new map over Denmark was produced, however.¹⁰⁴

When Christian IV was elected as king cartographic activity increased. Under the rule of Christian IV there was an increased preoccupation to develop the territory, the urban environments 'købstæderne', and the significance of the towns for the finances of the state. This was not entirely successful financially but Copenhagen's hegemonic position was secured and permanent advantages for the merchant class of the city.¹⁰⁵ In 1622, the state employed Dutch copper engravers for map publishing, and in 1623 another math professor Hans Lauremberg – who was teaching geometry, surveying, and the art of fortification at Sorø Academy – was appointed to map the realm. Lauremberg was granted access to all areas of the kingdom, and got a regular payment. The king followed the process closely, and in 1639, the head of the financial administration Corfitz Ulfeldt, received an order to make sure that Lauremberg's maps were engraved and published.¹⁰⁶ Despite the effort, the project was never completed, and the maps never printed – in Denmark. A likely reason that the map was never printed was the king's insistence to publish it in Denmark under his control, whereas Lauremberg wanted the Dutch master publishers to do the job.¹⁰⁷ Lauremberg lost the king's favour, and the king's attempt to fully control the process had failed again. Just before Christian's death, the task was handed over to Johannes Mejer and his small crew who were given a deadline of 6 years in 1647. This attempt was slightly more successful. After his appointment in 1647 he produced a large number of maps, and did hand over a general map of Denmark to Christian son's Frederick III who had succeeded his father in the meantime. The map, completed in 1650 was however never published¹⁰⁸ but it did finally provide the king with a uniform map over the country.

¹⁰³ Kragh, H. (2005). Dansk naturvidenskabs historie. Århus, Aarhus Universitetsforlag: 285.

¹⁰⁴ Undertaking this work Brahe was the first ever to utilise the method of triangulation, which later became standard for scientific map making but the only which came out of the effort was a very precise one of Hven, where Tycho Brahe was working, see Nørlund, N. E. (1943). Danmarks Kortlægning en historisk Fremstilling: 45-46.

¹⁰⁵ Ladewig Petersen, E. (1980). Dansk Socialhistorie 3. Fra standssamfund til rangssamfund 1500-1700: 299-301.

¹⁰⁶ Nørlund, N. E. (1943). Danmarks Kortlægning en historisk Fremstilling: 48-50.

¹⁰⁷ And it seems that indirectly Lauremberg got it his way since both of the major Dutch publishing houses – Bleau and Janssonius – began to produce new and more accurate maps of Denmark around this time, and several of these maps were dedicated to Lauremberg's friends, Ibid.: 51.

¹⁰⁸ Ibid. 53.



Fig.3:Mejer's 1650 map

Absolutism & Motives – Towards a Conclusion

Now, why was it so important for the kings to gather and control the production of cartographic information? To my mind, the answer must be a dual one. Reflecting the words of David Turnbull, geometric cartography is a product of joint processes of cognitive and social ordering producing a knowledge space within which the state is organised.¹⁰⁹ On the one hand, the cartographic image conditions a certain mode of territory, and on the other, it provides a new range of possibilities for rulers to control and exploit space; i.e. to control movement, to improve rural taxation, to coordinate movement, and planning space. The unification of authorship and the state would complete the transformation from a literary mode of knowing the territory to a uniform

¹⁰⁹ Turnbull, D. (2000). Masons, tricksters and cartographers : comparative studies in the sociology of scientific and indigenous knowledge. Australia, Harwood Academic: 92, where he also states that “[m]odern cartography is the product of joint processes of cognitive and social ordering resulting in the establishment of the knowledge space within which scientific knowledge is assembled and the state is organised”.

cartographic one in which territorial space could be plausibly be claimed by the sovereign.

Without the transition to what I have called a scientific cartography it would not be possible to conceptualise the state in terms of a uniform clearly bounded territorial space. In that respect, it is the map that provides the state with its spatial identity, because it is through cartography that state and space is merged in one representation claiming to be the truth about space. Considered in this fashion, the map is an agent of spatial change: scientific cartography did not invent the notion of territory but it transformed it. At least from around 1300 a notion of Danish territory existed but it was known in a different form. Yet, it is important to remember that the state did not produce the territory on its own but rather the ‘cartographic revolution’ was driven by an international community of scholars and private publishing houses. Yet, once in place the image made it possible for the state to become an abstract body, independent of personal relations; and not least one that could refer to itself as the entire territory was now available to the observer in an instant. In the words of the famous French cartographer Nicolas de Nicolay who was commissioned by Catherine de Medici to map France: “In little time, in little space, and without great expense, to see with the eye and trace with the finger, in particular and in general, the whole extent, power, and status of the realm.”¹¹⁰

Consequently, it also became possible for the state to ‘become a self-referential’ political body; it was now possible to point at the map and say ‘this is me/mine’.¹¹¹ Around the time when Jordan was working on his 2nd map, the theology professor, Erasmus Lætus published *Res Danica*, which was not only a history but also contained a description of localities and buildings around the country, and is this an example of linking history and geography,¹¹² which is a key for the notion of a territorially bound state (and society) with a continuous identity. During the subsequent decade, Frederick II ordered 43 tapestries large depicting more than a 100 Danish Kings purposively indicating the ancient historical roots of Denmark. The last tapestry showed Frederick II with his son Christian¹¹³ thus representing an unbroken line of kings from a mythical past to the present. The tapestries were ordered with the purpose to decorate the knight’s hall in the newly build Kronborg castle protecting the passage to the Baltic see and ensuring the largest source of income for the Danish state: the sound toll. In 1579, Christopher Saxton published a great collection of country maps in Britain, and with these maps, Richard Helgerson argues, effective visual and conceptual possession of ‘the physical kingdom’ was taken was taken for the first time – never before had any country been mapped in such detail.¹¹⁴ The survey was undertaken at the behest of the Queen’s governance but the display of royal arms did not only signal the source of their authority, but more fundamentally, these displays speaks of a relation of power to the land: The

¹¹⁰ Quoted and translated by Serchuk, C. (2006). "Picturing France in the Fifteenth Century: The Map in BNF MS Fr. 4991." *Imago Mundi* 58(2): 146.

¹¹¹ Harste, G. (In press). *Krigens og Fredens Sociologi*. Copenhagen Hans Reitzels Forlag: 20-21.

¹¹² Published 1573-4 Wolff, T., Ed. (1979). *Det matematisk-naturvidenskabelige Fakultet - 2.del*. Københavns Universitet 1479-1979. København, G-E-C Gads Forlag: 379.

¹¹³ Heiberg, S. (2006). *Supernovaer i dansk åndsliv. Politiken*. Copenhagen: 8.

¹¹⁴ Helgerson, R. (1992). *Forms of nationhood : the Elizabethan writing of England*, Univ.Chicago Press: 107.

royal arms did not only indicate that it was the queens maps: it was her lands.¹¹⁵ Consequently, the map allows the state and its history to be ‘written into’ a settled bounded territory, and this merger between the state, and history, and space legitimises sovereign claims to authority over a specific and neatly demarcated piece of territory, and in effect, I suggest that modern political territory depends on the scientific cartographic representation of the world.

If the rise of absolutism can be seen as a precursor to modern territorial rule, then the novel mode of knowing space was its condition of possibility because it provided the necessary notion of a coherent isotropic territory under a single ruler’s possession. After the defeat to the Swedish armies in the wake of the Westphalia peace treaty, the old political order was abolished and absolutism was introduced in Denmark in 1660.¹¹⁶ The king’s ‘new’ authority descended from God – rather than the estates or the council – as a curious parallel to the new spatial order based on the rules of geometry and observation of celestial objects. In that respect both the political and the spatial order derived its measure from the sky. It is due to the way in which the scientific map stores knowledge and organises it that it becomes possible to view and organise the entire space from the centre. All information within the realm could now be fitted into one framework; into one map,¹¹⁷ and further, this made possible an abstraction from local knowledge and a combination – assemblage – of non-uniform pieces of information into a coherent image. In other words: a centralisation of knowledge of the territory.¹¹⁸

Hence, not only did the map condition the centralisation of authority; once in motion scientific cartography provided the state with a tool to command space. Indeed, a “cartographic description was seen as the perfect measure of the identity of the land”¹¹⁹ and with this, changes occurred in property, the tax-base of the country, and the state’s ability to penetrate space. Whence, property previously was recorded in an oral or literary contract it turned into a cartographic representation, which facilitated its taxation.¹²⁰ The way maps store and organise knowledge enables ‘the authors’ to send out scientists or surveyors from the centre and take the places (in the form of spatial knowledge) back home.¹²¹ The introduction of absolutism, gave the king unrestricted access to claim

¹¹⁵ Ibid. 111.

¹¹⁶ For these events see Bøggild-Andersen, C. O. (1971). Statsomvæltningen i 1660. Kritiske studier over kilder og tradition. Århus, Universitetsforlaget.

¹¹⁷ Latour, B. (1987). Science in action : how to follow scientists and engineers through society. Milton Keynes, Open University Press: 219 -221.

¹¹⁸ Turnbull, D. (2000). Masons, tricksters and cartographers : comparative studies in the sociology of scientific and indigenous knowledge. Australia, Harwood Academic: 116-117.

¹¹⁹ Pottage, A. (1994). "The Measure of Land " Modern Land Review 57: 361-384. quoted by Turnbull, D. (2000). Masons, tricksters and cartographers : comparative studies in the sociology of scientific and indigenous knowledge. Australia, Harwood Academic: 103.

¹²⁰ Turnbull, D. (2000). Masons, tricksters and cartographers : comparative studies in the sociology of scientific and indigenous knowledge. Australia, Harwood Academic: 103, and See Smail, D. L. (2000). Imaginary cartographies : possession and identity in late medieval Marseille. Ithaca, Cornell University Press for a fascinating study of property in Medieval Marseilles. According to David Turnbull cartography was seen as the solution to the problem of finance in France in the 17th century Turnbull, D. (2000). Masons, tricksters and cartographers : comparative studies in the sociology of scientific and indigenous knowledge. Australia, Harwood Academic: 113.

¹²¹ Latour, B. (1987). Science in action : how to follow scientists and engineers through society. Milton Keynes, Open University Press: 219 -221.

taxes¹²² and the state engaged in a massive new survey of the country side during the years 1681-87 resulting in Christian V's Land Register providing a uniform registration of the entire territory.¹²³ Simultaneously, a single code of law – *Danske Lov* – was introduced in the entire country¹²⁴ and hence, the law and the territory was unified. Alongside the completion of the land register in 1688, *Kong Valdemars Jordebog* was thus finally succeeded as the sovereigns guide to his territory.

These arguments lead to my second suggestion that the development of the modern state depends on the specific cartographic reality provided by the map. Although, no uniform topographic mapping came out of the land register¹²⁵ the territory had been opened and made accessible for centralised administration.¹²⁶ As the king realised that the more exact, more complete, and more accurate maps would increase efficiency of tax extraction, military planning and movement etc they got a strong incentive to provide better maps. It was partly because of demands from the military to receive better maps that *Videnskabernes Selskab* (the Royal Academy) started a topographic mapping of the territory during the 18th century.¹²⁷ I would suggest that it is this alliances between scientific cartography and the state which fuels claims such as those made by Brian Harley who reads maps as ideology and concludes that “cartography became more ‘objective’ through the state’s patronage, so it was also imprisoned by a different subjectivity, that inherent in its replications of the state’s dominant ideology.”¹²⁸ This assumption of a convergence between the state and the cartography plays into claims in IR about the state and territory; in the remaining part of this paper, I will return to the general discussion about territory and the state in IR.

Implications for IR

In the Introduction of this paper I raised a problematique concerning how space is being conceptualised in relation to the state in IR theory. Simply speaking, the problem is that the notion of space is largely neglected. Space is usually being conflated with either

¹²² *Kongeloven* “enhver vel ved, at riger og lande ikke tryggeligen kan besiddes uden væbnet magt, og krigsmagt ikke holdes uden besolding, og besolding ikke bringes til veje uden skat” Quoted by Scocozza, B. (2003). *Ved afgrundens rand*. [Kbh.], Gyldendal & Politiken: 285.

¹²³ Ladewig Petersen, E. (1980). *Dansk Socialhistorie 3. Fra standssamfund til rangssamfund 1500-1700*: 24, and Henriksen, P. G. (1971). *Hærkort i Danmark og nabolande gennem tiderne*. Kbh, Geodætisk Institut: 10.

¹²⁴ A commission to create a new legal code was established 1661 and the law was signed by the king in 1683, see Scocozza, B. (2003). *Ved afgrundens rand*. [Kbh.], Gyldendal & Politiken: 315-319.

¹²⁵ This was initially planned but had to be abandoned due to a lack of cartographers Henriksen, P. G. (1971). *Hærkort i Danmark og nabolande gennem tiderne*. Kbh, Geodætisk Institut: 10.

¹²⁶ *Videnskabernes Selskab* (The Royal Society) initiated a topographic mapping of the territory during the 18th century, Bramsen, B. (1975). *Gamle danmarkskort en historisk oversigt med bibliografiske noter for perioden 1570-1770*, Henriksen, P. G. (1971). *Hærkort i Danmark og nabolande gennem tiderne*. Kbh, Geodætisk Institut. I would suggest that it is this alliances between scientific cartography and the state which fuels claims such as those made by Brian Harley who reads maps as ideology and concludes that “cartography became more ‘objective’ through the state’s patronage, so it was also imprisoned by a different subjectivity, that inherent in its replications of the state’s dominant ideology” Harley, J. B. (1988). “Silences and Secrecy.” *Imago Mundi* 40: 71.

¹²⁷ Bramsen, B. (1975). *Gamle danmarkskort en historisk oversigt med bibliografiske noter for perioden 1570-1770*. Kbh, Rosenkilde og Bagger, Henriksen, P. G. (1971). *Hærkort i Danmark og nabolande gennem tiderne*. Kbh, Geodætisk Institut.

¹²⁸ Harley, J. B. (1988). “Silences and Secrecy.” *Imago Mundi* 40: 71.

territory or global space, and it is either taken for granted that space is natural and stable background for social practice or it is assumed that space is a discursive production arising in response to social practice. I have argued that neither take give us a very fruitful understanding of what territory is: it is neither 'social' nor 'natural' but both at the same time. In order to capture this we have to understand how space is made present as a 'concrete abstraction' to echo the space maestro Henri Lefebvre. I argued that territorial space is first and foremost a cartographic space, because cartography has been the medium through which the reality of space has been established. It is through cartography that the landscape meets representation, meets social practice, meets power, resulting in an establishment of space against which politics and political ordering takes place. If we accept that space *per se* is not immediately present, then a political order requires a medium in order to establish itself spatially. I would suggest that territorial practices should be seen attempts to control other 'things' through by turning space into a medium that allows spatial control.¹²⁹ In this way space is turned into a resource for the state, which frames both its strategies vis-à-vis other states, and also in the attempts to control movements, such as trade and religion, by the means of space.

One implication of this take on space is that the mode of territory depend on practices that establish the reality of space, and not necessarily on market forces, mobility etc. When Marx suggested that "space is annihilated by time"¹³⁰ he indicated a notion of space rendering it a natural barrier which could be made irrelevant by forces of movement and exchange. This claim is often reproduced in various guises by postmodern claims to globalisation where it is somehow thought that as the 'world' is becoming unified space is losing significance. Discussing these claims in depth would be beyond the purpose of this paper, however, the key implication to take from the argument presented here, is that significant changes in the territorial mode would somehow require changes to the way in which 'reality of space' was established. I will not dispute that this might be happening but we cannot know from observing increasing flows of capital, deterritorialisation of some security threats or increasing numbers of immigrants. Space is produced in the concrete and more could be done to engage with how territorial space has been produced historically and how it is reproduced today. If much of the momentum of globalisation is being driven by the international capitalist system, and at the same time it is true that the map opens the world for a certain form of possession turning space into a property, then globalisation depends on rather than being at odds with scientific – or modern – cartography.

As a final remark, in much of the postmodernist writings challenging to so-called modernist IR, we find the notion that the state is somewhat ethically inadequate because it's attempts to create centralised control over a demarcated territory is necessarily

¹²⁹ In this I echo Sacks famous definition of territoriality: "Territoriality is best understood as a spatial strategy to affect, influence, or control resources and people, by controlling an area" Sack, R. D. (1986). Human territoriality : its theory and history. Cambridge, Cambridge University Press. Territoriality thus is a means to obtain control, and its form depends on "how people use the land, how they organise themselves in space, and how they give meaning to place." Sack, R. D. (1986). Human territoriality : its theory and history. Cambridge, Cambridge University Press.

¹³⁰ Marx, K. and Y. d. E. La Haye (1980). Marx and Engels on the means of communication : the movement of commodities people information and capital : a selection of texts. New York, international general.

oppressive of any notion of difference. I believe this is often a valid argument in practice but it is important to keep in mind that this is not necessarily a result of 'territory' in itself but rather a specific understanding of territory. The map provides the spatial knowledge of a world supposed to be: territory, boundaries, the international, which is then 'brought to life' by spatio-political practice. The process of implementing is often violent, messy and will never be quite identical with the map it seeks to replicate. However, what is crucial is that the cartographic reality by means of which the modern state gains its spatiality is not a neutral arbiter but neither is it distorting a more real reality of space lurking underneath the surface of the map. All realities of space will have to be established in the present and the quest to find for authenticity below, above, or besides is doomed to failure. The reality of space is right here, on the surface of the map, and this is what politics and academia have to deal with.

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