Contested knowledge in Dutch climate change policy

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1. Introduction

Several decades ago, Lasswell (1970) underlined the importance of scientific knowledge for complex societal problems. In his view, science *for* policymaking could contribute to governments' understanding of the nature and effects of these problems and, building upon that, to more efficient and effective policy interventions. The current plea for evidence-based policies fits within Laswell's ideal of science for policymaking (Pawson, 2006). However, policymakers increasingly are confronted with an erosion of the legitimacy of scientific evidence. Two alternative 'truth claims' challenge the adequacy and applicability of the scientific claim for truth. The first alternative claim refers to the so-called 'commons knowledge' reservoirs created by citizens, considered as being laypeople (Lievrouw, 2011). The second alternative claim starts from the idea that the nature of a policy programme should reflect the beliefs and viewpoints of the responsible politicians because they represent the (will of the) people in a political community. From this perspective, political arguments and scientific knowledge are considered as equally valid (Houtman et al., 2012). In 2010, Bill Clinton coined the term 'fact-free politics' for this alternative truth claim in response to Sarah Palin's political rhetoric (the former Alaska governor and running mate in McCain's presidential campaign in 2008). The current Trump administration in the US seems to reinforce this approach and even introduced the term 'alternative facts' for this.

This article sets out to analyse and explain how and why the knowledge base of wicked policy problems has increasingly become contested. We discuss this issue in relation to climate change, which can be seen as a 'super' wicked problem (cf. Levin et al., 2012; see also Tumpenny, 2009). Following the email hacking in 2009 (commonly known as 'Climategate') and the publicity about errors in the 2007 report of the Intergovernmental Panel on Climate Change (IPCC) in 2010, climate policy became severely contested. Even in the Netherlands, a country in which the reality of anthropogenic climate change has been relatively uncontested, policymakers faced considerable damage to the legitimacy of the scientific knowledge base of climate policy. The central question of this article is how competing truth claims have affected climate policy in the Netherlands in the period 2009-2011. We focus on this period because it witnessed an erosion of the scientific knowledge base for climate policy. Analysing the ways in which these competing truth claims have affected the policy agenda and policy design, helps to understand the dynamics in the policy process in an era in which 'science' is no longer considered as the only legitimate knowledge base *for* policy, and alternative knowledge bases compete for recognition in the policy arena. Each of these knowledge bases may arrive at different truth claims. We define a truth claim as a universal statement about a state of affairs within a specific policy domain (see Van Zoonen, 2012).

The article is structured as follows. In the next section, we elaborate on the nature and origins of three competing domains of 'knowledge': scientific knowledge, laymen's knowledge and political knowledge. In section three, we develop a research strategy that enables us to describe and analyse the dynamics between these truth claims. Section four introduces the context of Dutch policy making regarding climate change. In section five, we show how the three competing domains of knowledge have interacted and influenced Dutch climate change policies. In section six, we draw conclusions about the impact of the three claims on Dutch climate change policy and reflect on the importance of these findings for policymakers and scientists.

2. Contested knowledge in public policymaking

Nowadays, the role of scientific knowledge in policy-making is a contested one. Groups of citizens, interest groups and politicians tend to question the legitimacy of knowledge provided by well-established institutions, especially the monopoly that science is said to have in producing 'true' and

'valid' knowledge (Hoppe, 2005). In section 2.1 we discuss some social, political and technological trends that have challenged the legitimacy of scientific knowledge, in section 2.2 we describe and compare three knowledge domains and the conflicting types of thruth claims resulting from them in detail.

2.1 A changing social, political and technological environment

The contested nature of knowledge in policy making can be understood against the background of a number of societal, political and technological developments. The first development refers to the process of individualization and the concomitant erosion of institutions (Baumann, 2000). Institutions create order and stability by stressing specific values that are considered important. Examples of relevant institutions are the family, the church, the school, the army, the police, the labor union, but also politics and science (Dahlgren, 2009). These institutions play an important role in the socialization of people. However, the authority of the institutions and the values and ideologies that they try to protect, are being questioned. In terms of authority a horizontal relationship has emerged that challenges or replaces the previous more vertical or hierarchical ones. This also influences the authority that science as an important institution has in terms of being 'just one opinion' (Guston, 2000; Nowotny et al 2001).

The second development is the proclaimed legitimacy crisis of representative democracy. For this article, especially one element is important. People have liberated themselves from the socio-economic and cultural background and the ideological frames of reference that were pushed forward by institutions that told people how to behave politically. Moreover they have become more educated and more emancipated, thereby liberating themselves from established political parties and the control they have over specific media (Mudde, 2004). As a result, voters have increasingly become drifting voters, which are seduced by the personal image that politicians want to push forward as being attractive and convincing, thereby appealing to our emotions. Due to the increased role that images play in politics, mass media and especially television have become very important in political life to gain attention and to acquire public support. Politics and democracy have become mediated politics and mediated democracy (Bennett & Entmann, 2000:5). The Belgian sociologist Elchardus (2002:49) has described the growing influence of the media logic and strategic communication in the political process as the emergence of the so- called 'drama democracy'

The third relevant development refers to technological developments, especially in relation to the massive introduction and adoption of the internet, and more recently the rapid penetration of social media, like Twitter, YouTube and Facebook in our society. Especially the connective capacities that are embedded in (multimedia and mobile) network technologies, facilitate the creation of an open, global and real-time operating communication infrastructure, in which it is rather easy to exchange and share (dispersed) contacts, all kinds of communications, information, knowledge, pictures, videos etcetera for all kinds of purposes (Bekkers, 2004; Benkler, 2006; Castells, 2010). One purpose is to support the rapid and massive political mobilization of citizens in order to influence the public and political agenda setting process (Bekkers et al, 2011). The exploration, exploitation and linking of dispersed but accessible knowledge (people, databases, articles, books, experiences etc.) generate new knowledge which can be used to push forward alternative problem definitions and policy answers.

2.2 Conflicting truth claims

These developments have contributed to the fact that knowledge in policy making has become more contested. As a result three types of conflicting 'truth claims' can be discerned, which are based on three contrary demands regarding the development and use of policy relevant knowledge.

The technocratic claim: evidence-based knowledge

The first type of truth claims refers to a call for policies to be evidence-based. This call is strongly rooted in a rationalist approach to policymaking which emphasizes the traditional view of science as the producer of relevant, non-disputed and authoritative knowledge about what works and what not (see Parsons, 1995). The term evidence-based has been borrowed from medicine. As might be expected, in medicine drugs and treatments are tested all the time, their impact is closely monitored and in this manner, evidence is created about the question: does it work? In order to answer this question, it is important that policy makers acquire relevant knowledge (this can be science-driven knowledge but also systematic knowledge that is based on experiences elsewhere), by making use of a systematic review and synthesizing the results from this review, about the causal mechanism which lay behind a problem which policy makers want to address (Pawson, 2006; Head, 2008). There are several reasons why this idea is currently embraced. First, evidence-based policy making expresses the idea that political ideologies have lost their significance in designing policy programs, while reform movements like New Public Management emphasized the importance of a more 'business like' approach. A second reason refers to the idea that especially in times of austerity it is important to spend public money only on programs that really work. The last reason refers to the 'performance deficit' of public administration which also has influenced the legitimacy and responsiveness of public administration: in order to achieve outcomes that really matter to citizens and companies, it is important, in advance, to know if the chance that a policy program would work, is a real one. At the same time, evidence-based policy making strategies are not easy to apply in case of complex problems in which a multitude of interlinked causal mechanisms play a role and competing value-based political viewpoints are at stake (Sarewitz, 2004). Its implicit claims on truth and authority challenges the authority of the (primacy of) politics in democracy (Fischer, 2000).

The democratic claim: laymen's knowledge

The second type of truth claims refers to a development that looks beyond these well-established bodies of knowledge in order to incorporate alternative bodies of knowledge, like the 'laymen's knowledge', 'citizen's knowledge' or the 'wisdom of crowds' as opposite, or at least complementary to, expert knowledge (Kuklinkski et al 1982; Fischer, 2000; Backstrand, 2003; Surowiecki, 2004). The democratization or popularization of science forms an important trigger for what is called the emancipation of 'civic science' (Backstrand 2003. The possibilities that the internet and online social networks offer, help citizens to create their own knowledge base, which can be called 'commons knowledge' (Lievrouw, 2011). Commons knowledge "provides an alternative and complement to the expert-driven, disciplinary, institutionalized and authoritative process of knowledge creation, distribution, and gatekeeping" in modern societies (Lievrouw, 2011: 178). Online social networks do not only play an increasing role in sharing and facilitating different forms of knowledge in our society (Bekkers, 2004), but the open access and flexible character of digitally stored knowledge makes it also possible to produce new knowledge. Users are not only consumers but also co-producers of this knowledge: they add new knowledge, they discuss it and they change it. This also implies that online forums can be centres of debate about the reliability of knowledge and trustworthiness of sources (Lievrouw, 2011).

An important aspect of knowledge sharing in social networks is that boundaries between ordinary knowledge and scientific knowledge ('theoretical knowledge') are becoming vague (Lievrouw & Livingstone, 2006). Knowledge from sources with a somewhat ambiguous academic status, for instance, are referred to as 'alternative sources' with an expert status. We see that 'commons knowledge' especially plays a role in 'wicked problems' and in the definition of the risks that they involve (Rittel & Webber, 1973; Douglas & Wildavsky, 1982). Typical for these problems is that there is a fundamental dispute about causes and effects, about the assessment of the question what are relevant risks and for whom, and about possible ways to deal with these risks. The knowledge that is available is not only being disputed in terms of relevance, comprehensiveness, or trustworthiness but also in terms of presumed underlying political values (Douglas & Wildavksy, 1982). The ambiguity that prevails in wicked problems opens up the possibility to bring in other, alternative bodies of knowledge. At the same time fundamental questions can be raised regarding the quality of these alternative bodies. Some even talk about the 'the cult of the amateur' (Keen, 2007). Typical examples are public controversies about vaccination campaigns or about the risks of biotechnology in food production (Kata, 2010).

The populist claim: fact-free politics

The last type of truth claims refers to 'fact-free politics'. These claims start from the idea that policy-making is a task that should be performed by elected politicians because "government is of the people, for the people and by the people" (Canovan, 1999:10). In politics, 'facts' are always embedded in the normative perceptions of politicians who compete for governmental power (Stone, 2000). However, fact-free politics is closely related to a more populist view on politics and policy-making, thereby stressing the 'redemptive' instead of the more pragmatic dimension of democracy as well as [the need to make use of] personalized political leadership (Canovan (1999). The redemptive dimension refers to a set of ideas according to which salvation is brought through politics and the people (defined as a unity) constitutes the only source of legitimate authority. Salvation is promised when people are able to take charge of their own lives. In this perspective, they should not be subjected to institutions and rules which embrace rationality as an elite value, and should not rely on experts and expert knowledge that limit their power, hinder spontaneous action, political enthusiasm and directedness as well as neglect common sense (Canovan, 1999; Mudde, 2004). The pragmatic idea which democracy also represents, according to which rules and institutions support people to reconcile different views, ideas and interests in a peaceful way, is perceived as an alienating one. This also influences the role of knowledge. Knowledge is considered as being relevant in so far it expresses the will of the people (Mudde, 2004). So-called 'facts' that are produced by organizations that have been established to support rational policy making processes, are suspect because these organizations are considered as representing elite-interests.

The changes in the media landscape, particularly the advent of social media, and the rise of right-wing populism have together created a cultural-political infrastructure for the expression of distrust in established knowledge institutions. Web forums tend to give voice to viewpoints that deviate from what at least is perceived by outsiders as the 'mainstream' in the traditional media. Speaking about the so-called 'shocklogs', which deliberately "test the boundaries of the political correct consensus culture of western society", Lovink (2007: 41-42) remarks that they attract "average outsiders who feel excluded by the progressive-liberal establishment".

In this section we have introduced three competing truth claims which may contribute to understanding the conflicts, dead-locks and misunderstandings with regard to the role of knowledge in wicked policy issues. Table 1 summarizes these characteristics in brief. The next step is to develop a research strategy to analyze how these different truth claims interact, to understand the demands and dilemmas that stem from them and influence public policy processes.

- Table 1 about here -

3. Research strategy

In this article, we argue that the three competing truth claims and the way they are dealt with strongly influence the dynamics of policy processes in terms of its content (which issues dominate the debate), its progress (stagnation or acceleration, hick ups or break-trough's) and its institutional structuration (venue change, changing rules of the game). To understand the origins and interaction of the three truth claims, we have analysed the evolution of the Dutch climate policy debate. Also in international perspective, climate change and climate change policies have been the subject of various debates in which the causes, effects, and risks of climate change have been questioned, as well as the effects of both potential and implemented measures (Cass, 2007; Hulme, 2009). Hence, we expect that the conflicting truth claims will be present in this case study. Three questions guide our analysis of the Dutch climate policy case. First, we analyse how these three competing truth claims are present in the climate policy case. Secondly, we investigate how these claims interact with each other. Finally, we analyse the impact of these interactions on the Dutch climate policy.

We opted for a case study because it has the advantage that the interactions between relevant stakeholders, their motives, and their interests can be understood in detail. Our choice for the Dutch climate policy is the result of a typical case selection procedure: we need a policy domain in which the three competing truth claims are present, to study how they function and interact. On the basis of our prior knowledge of the case we expect that climate policymaking in the Netherlands exhibits some 'likeness' that is congruent with the expectations which we can deduct from the selected theories (Blatter and Haverland, 2012). Dutch policymaking traditionally exhibits a strong tendency of depoliticization, which involves reducing complex issues with strong normative overtones into technical questions, in which a confrontation between competing worldviews is avoided. Present-day Dutch policymaking is also geared towards consensus making between stakeholders with competing perspectives on policy issues, in which co-production is accomplished on the basis of frame reflection and frame convergence (Van Buuren, 2009). The external validity of our findings is low, given that we looked at one policy debate only. However, we aim to achieve analytical validity, in which the findings of a typical case may help us to further develop our conceptual framework on the dynamics of different truth claims (Seawright and Gerring, 2008).

Our research focuses on the period between 2009 until 2011 within a longer time-line, which provides an overall picture of how the three truth claims came into being. Dutch climate policy remained almost unchanged between 1989 and 2009. However, since the beginning of the new millennium, several undercurrents came into being, partly because of the rise of populism and the advent of online domains in which established policy views and knowledge became the subject of debate and contestation which from 2010 onwards found their ways into policy.

This article is based on research we did during two time periods. In the years 2007-2009, we investigated the reception of Al Gore's documentary on Dutch blogs and online forums. In addition, three interviews were held with a staff member of the Ministry and with representatives of environmentalist organizations. In the years 2010-2011 we conducted an investigation commissioned by the Dutch central government. We conducted semi-structured in-depth interviews with six key officials within the former Department of Housing, Spatial Planning and the Environment (responsible for climate policy in the period under investigation), with the Managing Director of the Netherlands Environmental Assessment Agency and with one of the initiators of the website *Climategate.nl*. We analysed the official minutes

of the debates in the House of Representatives, of relevant parliamentary commissions and their inquiries, and the reports of formal questions raised in Parliament. Furthermore, we assembled and analysed data from various internet sources, including online forums and blogs. Specifically, we read the blog written by the minister responsible for climate policy, Jacqueline Cramer, one of the few ministers who maintained an individual blog on a regular basis in the period 2007-2010. The interviews indicate that her blog posts during the period under investigation reflected the viewpoints resulting from the meetings between the minister and her top officials in the domains of policy and communication. We also consulted the archive of *Climategate.nl*. Finally, we made a secondary analysis of academic and professional literature that analysed the development of Dutch climate policymaking (Pettenger, 2007; Van der Sluijs et al., 2010).

4. Dutch climate change policies: an overview

In this section, we provide a short overview of the historical development of the Dutch climate change debate in the period between 1989 and 2011. In section 5, we analyse how the three competing truth claims that have been distinguished in the previous section have affected the policy process with regard to climate change from 2009 onwards and how they interacted.

In the Netherlands, climate change attained policy agenda status relatively quickly (Pettenger, 2007). In an international context, the first National Environmental Policy Plan (NEPP) in 1989 was one of the first policy documents to address climate change as a serious problem. According to Pettenger (2007), the NEPP represents a number of major policy shifts. For this article, three shifts are relevant. The first shift refers to a change from a sector-oriented approach to a comprehensive or integrated approach in combination with the desire to make use of long-term planning. This entailed focusing environmental policymaking on a number of broad environmental themes and goals. The second shift was a trend towards working with various target groups, like agriculture, industry, and consumers. The assumption was that all parts of society contribute to environmental problems and must act responsibly to reduce negative effects. The third shift, which constitutes a basic feature of Dutch policymaking, was the orientation towards consensus seeking by involving these target groups in the policymaking process (Hendriks and Toonen, 2002). Consequently, the NEPPs 'embody the centralized, consensus-based relationship that exists between government and society' (Pettenger, 2007, p.59). According to one of our interviewees, there was no broad societal awareness regarding climate change among the wider public. This made climate policy, particularly in terms of the adoption and implementation of concrete policy measures, politically vulnerable.

Surveys by the Netherlands Environmental Assessment Agency reveal continual fluctuations in public support for climate policy. In 2003, 2005, and 2006 environmental issues declined in importance on the public agenda (Visser et al., 2007). Other societal problems, in particular multi-culturalism and socio-economic problems came to the fore. In 2002, after the assassination of the populist leader Pim Fortuyn, and again after the elections in 2003, conservative governments were formed, in which the portfolio for the environment was not entrusted to a Minister but only to a State Secretary. Towards the end of 2006 environmental issues regained importance. The re-appearance of environmental and climate policy on political and public agendas early 2007 was partly a result of several focusing events, such as some extraordinarily natural disasters like hurricane Katrina. Al Gore's documentary *An Inconvenient Truth* was strongly and positively received by the Dutch public, the political elite, and the business community. After the elections in November 2006, a centre-left government was formed in which a new Minister for Environmental Affairs was appointed. In this new political constellation, and stirred by the public and political resonance of Al Gore's documentary, climate change policy got a new impetus. In 2007, six ministries presented the Work Programme Clean and Sparing (*Werkprogramma Schoon en Zuinig*).

At the same time, it should be noticed that *An Inconvenient Truth* also generated controversies and counterattacks by opponents who claimed that the film was utterly alarmist and contained major errors (Pettenger, 2007). In our research on Dutch blogs and online forums we observed that on personal weblogs Gore's documentary was received generally positively. However, on online forums directed at civic journalism and public debate more sceptical viewpoints about climate change were brought forward, thereby giving voice to a possibly significant undercurrent within public opinion.

On 20 November 2009, several thousand emails and other documents of researchers from the University of East Anglia's Climatic Research Institute were copied to various locations on the internet. Although sceptics used the emails to stir up doubts about the scientific basis of climate policy, the publicity about the incident was of relatively limited political effect. According to our interviewees within the department, the publicity had exposed several 'hairline cracks' in the public and political support for climate policy. In late January 2010, one month after the Copenhagen Summit on Climate Change, an error was identified in the 2007 IPCC report of Working Group II on the meltdown of the Himalayan glaciers. Other errors in the report were highlighted as well. The publicity about the errors in the IPCC report appeared to be much more threatening. The authority of the IPCC was no longer taken for granted. The political effects of the publicity about the errors were indeed considerable and effectuated several policy changes. First, the ministry decided to broaden the argumentation basis of mitigation policy to encompass energy policy. The events also brought about a more positive attitude towards communication with climate sceptics.

The centre-left cabinet resigned in March 2010. This occurred two months after the turmoil regarding mistakes in the 2007 IPCC report. A centre-right cabinet (Rutte-I) was installed in October 2010, consisting of a coalition of conservative liberals and Christian Democrats, with the parliamentary support of the right-wing populist Party for Freedom (*Partij voor de Vrijheid*, PVV). As a result of the new cabinet, the departments of Housing, Spatial Planning, and the Environment and of Transport and Public Works were merged into the new department of Infrastructure and Environment which is also responsible for climate policy. The installation of the new cabinet had several consequences for the climate mitigation agenda, which not only became less ambitious, but also was reframed in terms of parsimony, fostering economic growth, and innovation.

5. Competing truth claims in Dutch climate policy

In the previous section we have briefly sketched the background of Dutch environmental policies and climate change policies I the period 1989-2011. In this section, we focus on the role of competing truth claims in the period 2009-2011, the period that followed the turmoil of the IPCC leaks. In this section, we also indicate how policymakers reacted to the controversies which occurred during the focus period and the challenges these three truth claims created.

5.1 The technocratic quest for evidence-based policy: the compass of the IPCC

From the very beginning of Dutch climate policymaking we can witness a strong drive to formulate evidence-based climate policy. This ambition was shared among the responsible political authorities and the public officials in the climate domain. It was strongly supported by both national and international knowledge institutes, which invested heavily to satisfy the needs of national government. With regard to the climate-policy knowledge base, the policymakers had always relied on the reports of the IPCC. According to one of our interviewees: "We do not meddle into science. We steer by the compass of the IPCC". The IPCC's procedures are guided by a consensus approach between the involved scientists.

This approach has contributed to the IPCC's success, in that it has acquired a position of authority on which the international community and national governments can rely (Hajer, 2009). With regard to Dutch climate policy, the IPCC has provided an infrastructure for the development of a scientific knowledge base to support climate policymaking. It has also provided a rather scientific focus in order to search for solutions. The IPCC's authority within the established policy arena can be interpreted as allowing decision makers to depoliticize climate policy. The consequence was that hardly any public political-normative debate took place in the Netherlands with regard to the possible consequences and risks of climate change and the approaches that were proposed to deal with them (Van der Sluijs et al. (2010).

After the publicity about the IPCC errors in January 2010, it became clear that these errors, significant or not, inflicted serious damage on the legitimacy of climate policy. They threatened to inflict heavy damage on the ministry's public line of defence regarding the scientific basis of climate policy. An initial reaction was communicated by the minister on her blog and even more bluntly on television: 'I will no longer accept any errors of science. Politics should be able to place blind trust in science'. As she acknowledged in her blog on 5 February 2010, this pronouncement triggered 'an avalanche' of critical reactions, particularly from scientists, who pointed out that such a viewpoint about the role of science was utterly unrealistic.

The viewpoint that the errors inflicted serious damage on the substantive legitimacy of climate policy was strengthened by the consideration that, even if these errors were insignificant, they did reveal important weaknesses in the IPPC assessment process: 'What other, possibly more important, errors could come out in the future?' is a question that worried the policy officials according to one of our interviewees.

5.2 The rise of commons knowledge: the sceptical undercurrent becoming mainstream?

Within a 'national mood' (Kingdon, 1984) in which environmental issues did not figure prominently on the public agenda, the effect of the publicity about the email hacks and in particular about the errors in the IPCC reports was, however, considerable. Both events gave a new impetus to the critical undercurrent on the internet. Shortly after the email hacking incident, the Climategate.nl forum was established. The initiators, science journalists with expertise on climate change, argued in their mission statement that the emails gave the impression that a worldwide 'team' of influential climate researchers had manipulated data, excluded sceptics from the scientific literature, and been unwilling to share their measurements and software programmes with sceptics. They formulated in their mission to provide 'a platform for a respectful and fruitful discussion'. Instances of commons knowledge included references to truth claims on sceptical websites such as WUWT (WattsUpWithThat).[i] Ideological and lifestyle-related arguments were also frequently expressed. For example, in a discussion about a green economy between 18 and 21 April 2011, one discussant put forward the following reaction:

> *People like Neven* [a participant on Climategate.nl advocating the need for climate change policy] *are clearly proving how the Green Taliban works and how life in a green eco-socialist state would be if he and his sort were to run the country* (Climategate.nl, 2011).

A web-monitoring research project in February and March 2010, commissioned by the Ministry for the Environment, revealed that also on many other online forums fierce oppositional voices were raised against established climate science and climate policy. The discussions were marked by strong distrust in government and science (Politiek Online, 2010).

5.3 The ascent of fact-free politics: the Party for Freedom's denial of climate change

Until 2009, there was broad political support in the Dutch parliament for climate policy. This changed with the entry of the right-wing populist party PVV into the House of Representatives, and especially after the earlier mentioned triggering events in 2009 and 2010. The PVV was founded in 2005 by Geert Wilders, who was a former parliamentarian of the liberal-conservative VVD. In 2006, the PVV won nine seats, and in the 2010 general election twenty-four seats, making it the third largest party in parliament. Since 2009, the PVV parliamentary party has also given voice to sceptical views on climate change. Richard de Mos, the party's former spokesman on climate policy, regularly attracted public attention with his contributions to debates and parliamentary questions, whereby he tried to blow holes in climate policy. The following examples of parliamentary questions are characteristic of his approach.

> *[1] Is it true that the intended plans in the report on environmental taxes to raise the VAT tariff from six to nineteen per cent and to introduce a CO_2 tax proceed from the climate alarmist idea that the earth is warming as a result of human action? If yes, are you aware of the fact that worldwide temperature has already been decreasing since 1998 and that there is no global warming as you suppose? […] Are you prepared to protect the taxpayer against high taxes that are directed at influencing something on which we as insignificant human beings cannot exert any influence?* (Tweede Kamer der Staten-Generaal, 2009-2010)

> *[2] Do you agree […] that the scientific discussion about the effect of CO_2 on the climate is not yet settled? Do you agree that no single Eurocent should be spent to CO_2 reduction as long as the science about the effect of CO_2 on climate is not yet settled?* (Tweede Kamer der Staten-Generaal, 2011-2012)

The core element of these questions is the redemptive idea that the taxpayer has to be protected against high taxes, especially when these taxes are part of policies aimed at influencing processes that are determined by 'Mother Nature' (an expression used by de Mos). De Mos also introduces 'alternative facts', when speaking about 'true' facts that indicate that the supposed warming trend has reversed.

5.4 Interaction between the three truth claims

As we have stated in the introduction, the three types of truth claims interact with each other and compete for hegemony. The nature of this interaction becomes clearer if we look at the political controversies that arose in 2010. When looking at this interactions we also see how they shape the content and course of the involved climate change policies (section 5.5).

First of all, we observe a clash between scientific knowledge and commons knowledge, especially in the online domain. The oppositional voices on online forums developed from an already longer existing undercurrent to a mainstream sentiment in the public opinion. Later on, the policymakers tried to stimulate a more constructive interaction between these two knowledge domains. For instance, the Ministry decided to commission the PBL to conduct an inquiry into the IPCC errors. The PBL did not seek to invite only scientists to participate, but also other interested parties were invited. That is why the agency launched a Dutch website to give scientists, experts and other interested parties the opportunity to submit possible errors in the involved regional chapters of the IPPC Report. This can be interpreted as a crowdsourcing strategy for assembling input from the wider public, thereby acknowledging the idea that there are different knowledge bases with different truth claims. The website yielded some forty responses, most of which were related to other subjects than regional consequences of climate change (PBL, 2010).

Secondly, we observe a coalition emerging between populist politicians and critical citizens with sceptical viewpoints. The signals expressed on internet forums were picked up by these politicians.

Together, they challenged the authority of 'official' climate science. Politicians from the PVV deliberately used the more general scepticism about scientific knowledge to legitimize their claim that climate change was not as serious as suggested by the scientific world. In a debate on 13 January 2010 in the Dutch House of Representatives PVV politician De Mos introduced a motion in which he mentioned the manipulation of scientific data to mislead public opinion. He figured prominently on the website Climategate.nl and referred to this website during the debate.[ii] Both in the formal political arena as well as in many online arenas the legitimacy of scientific knowledge came under fierce attack.

Thirdly, the PVV's 'promotion' to the status of an informal coalition party in October 2010 paved the way for 'fact-free politics' into the heart of policymaking. Until 2010, 'fact-free politics' was confined to political interventions of the PVV. After the publicity about the IPCC errors also the conservative liberal party (VVD) took a strong critical attitude towards the existing knowledge-policy nexus. During a debate in the House of Representatives on 10 March 2010 the VVD criticized the intention to commission the PBL to conduct an inquiry into the IPCC errors with the argument that this agency "has been fully involved in all what has happened". However, this party did not explicitly cast into doubt the basic premises of climate policy.

5.5 Impact on climate policy

The emerging viewpoints within the Ministry during the controversy effectuated some significant policy changes. The ministry decided to broaden the argumentation basis of mitigation policy to encompass energy policy. Minister Cramer formulated this decision in one of her last postings on this issue (17-02-2010):

We must nevertheless proceed towards a more sustainable society with far more sustainably produced energy and less depletion of raw materials. If only because this would make us less dependent upon oil and gas-producing countries. But above all, because we are obliged to do this for future generations.

The events also brought about a more positive attitude towards the role of sceptics in the policy debate. Several actions were taken by the ministry in 2010 to make the role of climate scepticism (thereby given room to alternative truth claims) more concrete. One action was the invited participation of sceptics (including one of the editors of Climategate.nl) at a meeting on the report of the international inquiry commission of the InterAcademy Council. However, when dealing with the policy relevant role of scepticism, it was recurrently stressed in the interviews that it is important to differentiate between two types of sceptics: those making substantive arguments based on alternative scientific truth claims and those whose motivation was predominantly ideological.[iii]

The centre-left cabinet resigned in March 2010. Cramer's reframing strategy became further developed in the new centre-right cabinet which was formed in October 2010. The 'fact free politics' of the new coalition involved a shift towards a more 'agnostic' view towards climate change. For instance, in the new Delta Programme introduced in September 2010 the existing policy of protecting the country against water and drought was affirmed, but without mentioning climate change. Instead, safeguarding economic value on the long-term and actualizing current norms were given as main arguments for the new policy program, which can be considered as a no-regret investment whether or not climate change becomes a serious treat (Vink et al., 2013).

6. Conclusion and discussion

In this article we have distinguished three competing truth claims and argued that these claims rival for a position as the founding base for policy. We have shown how these three truth claims were present in

the climate policy case, how they interacted and how they influenced the policy process regarding climate change.

We observed that the interaction between the three truth claims has led to a gradual weakening of the legitimacy of climate policy. Until 2008, there was more or less consensus about climate change, its causes, and consequences. However, gradually this science–policy community came under attack by critical outsiders. This grew into a crisis because of the emergence of triggering events in the international arena that weakened the legitimacy of the proclaimed evidence-based policy. During the crisis, the online domain constituted the arena for the highly polarized mobilization of proponents and opponents in separate camps. Combined with the attention paid to the events in the traditional media, the mobilization of consensus among sceptics threatened to inflict serious damage on the legitimacy of climate policy. The mobilization was further facilitated by a change in the national mood, in which other societal problems gained importance at the expense of concerns regarding climate and the environment. This confluent evolution between a political movement and sceptical commons knowledge resulted in a fierce clash with the scientific community.

The emerging coalition between populist politicians and sceptical citizens formed an effective alliance against the existing science-policy community. The PVV's 'promotion' to the status of an informal coalition party in 2010 paved the way for 'fact-free politics'. At the same time it is interesting to note that, although the policy ambitions were adjusted, the main consequence of the eroding scientific legitimacy was that the policies were reframed in such a sense that they better fitted the national mood. The focus was put upon sustainability from an economic perspective (it is smart to reduce energy use and to make use of renewable energy) rather than from a climate perspective (we have to reduce emissions to prevent global warming). In this way, 'economic salvation' could be found in becoming less dependent on energy imports. The reframing strategy was followed by initiatives to include sceptics in the policy debate. An online platform was established for debate between scientists with different viewpoints on climate change. Moreover, policy-makers tried to establish an alternative policy-discourse in which long-term policy plans on water management were legitimized as a no-regret option, and not with reference to climate change.

This article sheds new light upon science–policy interactions and gives us a conceptual lens to understand the switches and interactions between different sources of knowledge that gain importance or lose relevance during a policy process. It would be a promising research direction to make more in-depth and comparative analyses of the dynamics of policy processes, departing from the logic of "evidence-based policy-making", in relation to the competing truth claims as presented in this article and policymakers' strategies to deal with changing equilibriums. Also, the managerial implications have to be analysed in more detail. As we saw, each knowledge claim is not only relevant but also legitimate within its own context of application. However, each claim also has its own shortcomings and pitfalls. Then, the question is: how can we do justice to the legitimacy of scientific expertise, the legitimacy of the primacy of politics, and the legitimacy of the citizen's voice without falling into its pitfalls? From the Dutch climate case we can learn that finding common ground by reframing issues into less controversial ones, can be – at least temporally – effective. However, it also shows that a dialogue between sceptics and experts may be helpful in regaining legitimacy, perhaps even more so than an adversarial approach in which only more 'facts' are mobilized. With renewed efforts to facilitate public engagement in producing science for policy, the legitimacy of policy actions can even be stronger than before.

Notes

[i] WattsUpWithThat is one of the most viewed sceptical climate websites. It is maintained by the meteorologist Anthony Watts.

[ii] http://climategate.nl/2010/01/13/spoeddebat-cramer-neemt-climategate-nu-wel-serieus/

[iii] In an interview in a Dutch newspaper, the Dutch 'alarmist' climate scientist, Pier Vellinga, made the same distinction, adding the remark that the alarmist scientists and the sceptics who take scientific arguments seriously agree about many elements of climate science (NRC-Handelsblad 20-05-2011, http://nrcboeken.vorige.nrc.nl/interview/een-langdurig-experiment-met-de-aarde).

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