

DOES THE CLIMATE NEED CONSENSUS? THE POLITICS OF CLIMATE CHANGE REVISITED

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For all the talk of science being political, it is amazing how little research has been invested in the conceptualisation of “the political” within post-positivist philosophy of science. The latter gathered momentum in the 1960s with the publication of *The Structure of Scientific Revolutions* in which Thomas Kuhn pointed out that social factors such as scientists’ concerns and interests play a prominent role in the emergence of scientific theories. In the aftermath of Kuhn, the emergent field of constructivist thought, now generally known under the banner of Science and Technology Studies (STS), has further concentrated on the social embeddedness of scientific practice. Opening up the black box of scientific practice, STS has brought about what I call a “first-order claim” that science is political. Although this first-order claim comes in different flavors, its central gist is that actual scientific practice, because of its situated and human character, results in imperfect, value-laden and perspective-bound knowledge.¹ In response to this widespread first-order claim, STS-scholars have repeatedly argued that the expert world of science should be brought into democracy if it is to serve as a legitimate basis for decision-making. Democratization, in turn, has quite straightforwardly been conceived in terms of increased public engagement through reflexive communication and participatory approaches. In the last two decades, this call for a democratization of expertise has gained increasing appeal with scientists and policy-makers involved in environmental decision-making. It has, for instance, led the United Nations’ Intergovernmental Panel on Climate Change (IPCC) to extend its composition and include non-climate science experts and to communicate their findings in a more open and reflexive way, thereby showing awareness of the value-laden and uncertain nature of the results. Although this democratization paradigm provides a corrective to the implicit privilege that the model of rational decision-making grants science, licensing non-expert involvement in the characterization of

¹I have elaborated this argument in-depth in my critique of post-normal science (Goeminne 2011a, 631).

current conditions and in the pursuit of “optimal” solutions, it—quite symptomatically—reproduces the traditional logic which assumes that superior outcomes rest upon the quality of scientific facts informing them (Healy, 202). In this paper, I will start from the argument that such STS-inspired reforms fall short because they are predicated upon an inadequate understanding of the politics of science. Within constructivist science studies, the concept of the political itself is all too often used as a black-box containing a variety of critical claims vis-à-vis science’s self-proclaimed values of universalism and rationalism, thereby giving way to dualistic ideas about either the politicization of science or the scientization of politics as threatening democracy. It is therefore my conviction that STS needs to engage more explicitly with political thought if it is to open—simultaneously—the inextricable black boxes of science and politics. This essay constitutes an attempt to bridge the worlds of constructivist and critical political thought. In contrast with the widespread first-order claim that science is political, I will therefore elaborate on a second-order claim that turns the first-order argument upside down: science is necessarily political as it is the situated, human and—as I will argue more specifically—concerned character of scientific practice that makes scientific knowledge possible in the first place. Rather than being a secondary, negative property that keeps science away from being perfect, its political character will therefore be understood as a primary, positive quality of scientific knowledge.

When Matters of Fact Become Matters of Concern: A Compositionist Account of Climate Modeling

Over the past few decades, STS has taken down the unworldly image of science as a truth-speaking device and replaced it with a practice-inspired account of science as culture. In arguing that matters of fact are always also matters of a particular concern, Bruno Latour has explicitly thematised this inherently human, that is to say, “concerned” character of scientific practice (2004, 225). Seen within the context of its construction, he argues, scientific knowledge aims to fulfill a certain function, and the choice of that function depends on the scientist’s concern: What kind of knowledge is aimed at? What is it supposed to account for and to take into account? In other words, scientific facts are always already answers to a particular question, the latter expressing a particular way of being concerned with the world. Beyond construction and representation, I appeal to the notion of “composition” to convey the idea that a scientific fact is not chosen or given; rather, it is “concernfully” composed as a “matter of concern” in relation to what is considered to be the issue at stake. As will be illustrated below with the case of climate modeling, the notion of composition nicely captures the idea

how—analogue to the creation of a piece of art—different elements are meticulously combined into a meaningful whole before the latter can be mobilized as a fact.² So, in the “compositionist” account I am putting forward here, science does not represent a pre-existing reality out there nor does it construct facts out of the blue. Rather, it reflects a very specific, concerned involvement with the world that allows it to come up with a meaningful composition.

A closer look at the history of climate modeling makes clear that the notion of a global climate and the idea that it could be understood through the use of modeling techniques are indeed not separate ideas, but rather that they took shape simultaneously.³ Until the 1950s, climatology was pretty much a spatial issue focused on gathering local data such as temperature, precipitation, etc. and averaging them out in presumably stable geographical climate patterns. From the 1960s on, however, this local, data-driven approach gradually evolved into a theory-driven, model-based and globally oriented discipline increasingly focused on forecasting the future. As I will come to explain, this evolution was nurtured by the availability of increasing computing power combined with a military interest in weather modification as well as emerging environmental concerns with climate change.

Initially, however, modeling techniques were used to introduce a certain degree of homogeneity in the vast array of disparate, local meteorological data. Averaging local data over time as well as space is a prerequisite for obtaining relevant information about global weather patterns. However, measurement standards as well as instruments and the way they are used may differ immensely over time and space. How does one compare data that result from different recording methods? And how does one deal with a mere lack of data, either in the spatial or in the temporal dimension? According to Paul Edwards, this requires two complementary tasks: collecting planetary data in standard forms to build images of global weather and oceanic and atmospheric circulation (“making global data” [2010, 187-228]) and building complete, coherent and consistent global data sets from incomplete, inconsistent and heterogeneous data sources (“making data global” [2010, 251-286]). Since the 1950s, modeling techniques have allowed climatologists to generate relatively homogeneous data sets, computer models serving as what Edwards calls “technical gateways” (2010, 11) between heterogeneous sources.

²In a recent article entitled “An Attempt at a ‘Compositionist Manifesto,’” Latour argues that, after all the critique, deconstruction and debunking of postmodernism, it is now time to compose again. Very similarly to how I try to elaborate the concept of composition and its corollary notion of political objectivity (see further) in a way that conveys the idea of going beyond mere representation and construction, Latour argues that compositionism should “take up the task of searching for universality without believing that this universality is already there, waiting to be unveiled and discovered. It is thus as far from relativism as it is from universalism” (2010, 474).

³The brief account presented here is mainly based on *A Vast Machine* (2010), Paul Edwards’ illuminating monograph on the history of climate modeling.

In a second step, the use of computer models to understand—rather than create—global weather patterns was boosted by an increasing social interest in simulation and prediction, both from an environmental and from a military perspective. Until the 1960s, basic modeling research was mainly supported by military sources interested in controlling and possibly modifying weather patterns. From the 1970s on, however, atmospheric scientists deliberately tapped into growing public concerns about human impacts on the environment to secure funding for their research. As David Demeritt noted, both perspectives are consistent with what Edwards called the “closed world discourse” (1996) of Cold War America: “...a language of integrated systems, an image of global containment (of communism and environmental problems) and apocalypse, and a practice of technologically centralized management, communications, and command-and-control” (Demeritt 2001, 315). The basic idea, of course, is that simulation models enable so-called “virtual experiments” which allow manipulating variables at will and observing their effects and outcomes. Indeed, in the case of climate change, the only way to demonstrate the anthropogenic character of climate change is to simulate what would have happened without humans adding greenhouse gasses (GHGs) to the atmosphere.

From this rough historical sketch, one may already conclude that the current practice of climate modeling, and the image of a global climate it produces, is not the unique answer to an unequivocal question. The prevailing scientific construction of climate change should rather be viewed as a contingent social outcome of a dynamic interplay between problem framing and solution framing, this interplay being driven—but not determined—by particular, contextually bound concerns such as globalism, simulation and prediction.⁴

Actual climate models, the so-called General Circulation Models (GCM), simulate the behavior of the climate system by dividing the atmosphere into three-dimensional grid boxes (approximately 100 km² in surface area and a few kilometers in height) and using supercomputers to solve mathematical equations representing the climate’s so-called core physics. The latter mainly deals with energy transfer between different grid boxes and is based on fluid dynamics of the oceans and the atmosphere. As models founded on such a 3D-grid intrinsically neglect all possible processes on smaller scales, the grid-scale of a climate model introduces a first aspect of a separation between internalities and externalities that, as will be argued, I see as an essential characteristic of scientific practice. Whereas ‘grid-scale processes’ such as the energy transfer between grid elements are internal to the climate model in

⁴I use the word “driven” here to discern my view from so-called “strong constructivism,” which holds that the social context unidirectionally determines the scientific content. Indeed, particular concerns can only be identified retrospectively as they themselves are also outcomes of one and the same composition process. The way, for instance, the notion of “global” is now commonly understood arguably owes a great deal to the current scientific understanding of climate change as a “global” issue.

the sense that they are modeled from the bottom up applying fluid dynamics, sub-grid-scale processes such as cloud physics or the transfer of water vapor between water surfaces and the atmosphere are thus external to the dynamical core of climate modeling.⁵ However, sub-grid-scale processes are “internalized” by means of exogenously specified parameters that capture the large-scale effects of smaller-scale processes without effectively modeling them. These parameters, such as the amount of cloud present within one grid box, are typically based on empirical data and further adjusted or—using climate science jargon—“tuned” in the course of the modeling process.⁶ This tuning process, however, does not turn the external sub-grid-scale processes into genuine internalities of the model. As empirically parameterized entities, they are not internal to the model and thus not internal to the understanding of climate change such models provide.

Another interesting separation between internalities and externalities happens on the level of GHG emission treatment within climate models. It is only by excluding the messy social relations that drive GHG emissions and by focusing narrowly on their universal physical properties, Demeritt argues, that atmospheric scientists, concerned as they were about global homogeneity and predictability, have been able to capture the issue of climate change (2001, 314). Whereas “residence time,” “radiative signature” and “photochemical reactivity” are thus considered relevant properties of GHG emissions to climate modelers, the historical origins of these emissions are not, installing a mere indifference between, for instance, luxury and subsistence emissions. In illuminating the constitutive role played by particular concerns such as globalism, simulation and prediction in the historical emergence of climate modeling and the accompanying pattern of inclusions and exclusions, I have firmly adhered to my compositionist account of scientific practice introduced above. Indeed, along the lines sketched here, I tend to argue that climate modeling composes climate change as a global-scale problem caused by the universal physical properties of GHGs: the prevailing image of what global climate change “is” and how we can “know” it was co-shaped through the modeling approach.

⁵It is important to note that the grid-scale is imposed by the available computing power. In this case, indifferences with regard to externalities are thus not merely installed by the human, but rather by the human+technology. In recent times, science has become more and more technologically mediated, so it is important to take this technological dimension into account, in particular its non-neutral role in co-shaping the resulting knowledge. The way particular concerns play out is thus co-shaped by technology, in this case by computing power.

⁶In this respect, it is interesting to note that climate models are also data-laden just as, vice versa, climate data are always also model-laden.

*Science is Political—
Second-Order Claim:
Indeterminism as the
Foundationless Foundation
of the Political*

In elaborating on my compositionist account of climate modeling, I have been working towards a particular conception of the political character of science, which can now be summarized as follows. Science, conceived as a concerned work of composition, is necessarily political as it entails a dialectic separation between what has been taken into account in the composition (internalities) and what has not (externalities). I call this a second-order claim that science is political to distinguish it from the first-order version outlined above.

Indeed, it should first of all be clear that a differing interpretation of the “situatedness of science,” i.e., the awareness that science is a human and therefore necessarily perspectival and value-laden endeavor, is at the heart of what differentiates my second-order claim from most first-order claims. First-order claims tend to—negatively—understand the situatedness of science as resulting in a restricted, suboptimal knowledge of the problem at stake, a knowledge that becomes the more “contaminated” by uncertainty and value-ladenness, the more “situated” the issues get. In highlighting the constitutive role of concern, however, my second-order claim positively understands the situated, perspectival character of science as being truly constitutive of the knowledge composed and as inevitably resulting in a division between what has been taken into account and what not. The case of climate modeling affirms this: what it means to observe climate change is inextricably intertwined with the concerns of globalism, simulation and prediction that have guided climate modelers in their daily practice. In a recent article, confirmed constructivist Brian Wynne clearly argues along this line when he says that “woven into the disciplined attempt to understand what nature is saying to us about changing climate processes are always ancillary but constitutive concerns and commitments” (2010, 291).

A second major characteristic of my second-order claim is its grounding in a dialectical relation between inclusion and exclusion: externalities are constitutive of internalities and vice versa. As already argued, neglecting the political economy that drives GHG emissions enabled climate scientists to understand the effects of increasing GHG concentrations on the climate system. “Such physically reductionist abstractions render the world analytically manageable,” says Demeritt, cautiously adding that “it is probably something that we cannot do without” (2001, 314). A similar point can arguably be made about the differentiation between grid-scale and sub-grid-scale processes. Put quite bluntly, climate modeling would simply have been impossible without the introduction of a grid-scale and the associated pattern

of inclusions and exclusions. It might be tempting to regard this separation between internalities and externalities as a deliberative process scientists perform in order to cope with the practical limits they are confronted with (time, computing power, ...) in view of the infinite task of modeling "the world." But this would miss the point that it is precisely their concerned involvement with "the world" that allows climate scientists to compose a meaningful conception of what climate change is. Indeed, such an account of externalities as negative side-effects of the imperfect character of actual scientific practice, would bring us back to the "first-order" claim that science is political because in practice it cannot live up to the idealistic view of the uninterested, unconcerned scientist who faithfully represents a reality that is independent of him. In my view, however, the incompleteness of scientific knowledge has to be regarded as a primary, constitutive characteristic: both the indifference towards sub-grid-scale processes and that towards the political economy of GHGs are to be understood as blind spots that act as a background against which the scientific image of global climate change stands out.⁷

Thirdly and finally, it is important to see that my understanding of the political character of science does not necessarily entail a societal connotation in the sense that exclusions would intrinsically constitute an issue for socio-political concern. Although externalities such as the unequal political economy that produces GHGs may act as the germ of a political identification, as illustrated by the so-called climate justice movement (see further), this does not have to be so as may be clear from the example of the "excluded" sub-grid-scale processes. In stating that science is political, I thus merely claim that it differentiates between the internalities and externalities of its composition and that this differentiation process lies at the very heart of the scientific practice.⁸

This point reflects a similar distinction between "political" and "politics" made by the "radical democracy" theorists Laclau and Mouffe in *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics*. For them, politics is an ontic notion referring to the manifold practices of conventional politics, while the political should be conceived on an ontological level as dealing with the very way in which society is instituted. At the heart of the radical democracy project stands a fundamental critique of the idea of the political holding sway over a great deal of contemporary democratic thinking, characterized as it is by rationalism and universalism. Invoking the term 'post-politics,' Mouffe, amongst others, laments the evacuation of antagonistic notions such

⁷To illustrate this view, one might think of the well-known figure-ground images such as the faces-vase drawing by Edgar Rubin. Also here, the "external" ground image acts as a constitutive background against which the "internal" figure image can stand out. And also here, it is merely impossible to see both images at the same time or, in my compositionist terms, to internalize the ground image in a genuine figure-like way.

⁸Recently, I have elaborated this argument in the context of experimental nuclear physics (Goeminne 2011b, 12-18).

as exclusion, adversary and contestation from the political sphere, because it reduces politics to a mere instrumental conception focused on the consensual administration of environmental, social, economic or other domains (2001, 48-51). In a recent article entitled "Apocalypse Forever? Post-political Populism and the Spectre of Climate Change" (2010), Erik Swyngedouw has convincingly illustrated how international climate policy serves as a pre-eminent example of such a technocratic management approach, tellingly characterizing it as post-political populism: invoking the threat of a scientifically framed doomsday scenario, it paralyzes the struggle between differing and opposing socio-environmental visions, making everybody toe the line of neo-liberalism. Contrary to such an instrumental conception, radical democracy theorists thus argue that the political should be conceived as an ontological dimension that determines our very human condition. Indeed, according to Mouffe, human society is essentially political, first of all, because "the need for collective identifications will never disappear since it is constitutive of the mode of existence of human beings" (2005, 28) and, secondly, as "in the field of collective identities, we are always dealing with the creation of a 'we' which can exist only by the demarcation of a 'they'" (15).

In putting forward my second-order claim that science is political, I am thus expanding this non-essentialist thesis from the social to the natural sphere, arguing that the construction of objectivity more generally (identity, knowledge, ...) is relational, its condition of existence being the affirmation of an exclusion. Conceiving science as a concerned work of composition along the lines sketched above indeed shows how the condition of possibility of scientific objectivity necessarily involves exclusion, differentiating between what is taken into account and what is not. In my compositionist account of climate modeling, I indeed focused on the constitutive role of concern in the contingent emergence of scientific objectivity, this being reflected in the inscription of inclusion/exclusion pairs in the final composition. In this view, scientific objectivity has no ultimate foundation, neither in an external human-independent reality nor in an internal human-centered subjectivity. Rather, objectivity is relational in the sense that its construction, or rather its composition, necessarily entails the demarcation of what is excluded and thus not taken into account. This absence of an ultimate foundation eventually serves as the very foundation of my political account of science; the latter's political moment being situated at the point of deciding what to take into account. I thus abstain from defining science or, more accurately, scientific objectivity, by politicizing it. Understood this way, the scientific account of climate change is as universally objective as it is contingent: defining climate change, as illustrated above, implies the contingent installation of a—now politically understood—differentiation.

In this respect, it is illuminating to dig a little bit deeper into radical democracy's theoretical framework. Interestingly, Laclau and Mouffe argue that their approach is grounded in privileging the moment of political articulation, or what they also call "hegemonic" articulation. Drawing

on the deconstructionist notion of undecidability, hegemony is put forward by them as “a theory of the decision taken in an undecidable terrain” (2001, xi). The very condition for a hegemonic relation to become possible, Laclau and Mouffe argue, is that a particular social force assumes the representation of a totality that is radically incommensurable with it. Such a representation is then characterized by what they call a “political universality” in the sense that it depends on “internal frontiers within society” (xiii). This view on hegemonic relations in the social sphere coincides with my earlier argument that the prevailing structuration of the natural order is founded in the irreducible political moment of deciding what to take into account and what not. In this sense, my account of climate change knowledge as being as much universally objective as it is contingent could be interpreted along the lines of Laclau and Mouffe such that a scientific representation can now be viewed as possessing a similar kind of political universality or, more aptly, “political objectivity.” Indeed, further resonating with my compositionist account of science, they write that, “In order to have hegemony, the requirement is that elements whose own nature does not predetermine them to enter into one type of arrangement rather than another, nevertheless coalesce, as a result of an external or articulating practice” (xii).

Climate Politics and the Post-political Illusion of Total Inclusion

Although explicitly dealing with the political, my analysis so far has not touched upon the politics of climate change, which—following Mouffe and Laclau’s distinction between politics and the political—should be understood in the sense of societal reform in response to the climate change problematique. In our Western techno-scientific culture, environmental issues in general and climate change in particular have predominantly been staged scientifically as an issue for politics. Set up in 1988 as a mediating instance between science and policy, the IPCC has been mandated by the United Nations to make a policy relevant and internationally agreed-on interpretation of the available scientific knowledge on climate change (Agrawala 1998). For almost 25 years now, the IPCC has been framing the climate change issue as a scientific puzzle, in which the leading part is played by CO₂ and its universal physical properties. At this point of intersection between science and policy, an almost natural alliance has emerged between a scientific perspective that focuses on quantifiable entities on the one hand and a managerial, technocratic governance approach to politics on the other. This has resulted in the issue of climate change, which is first and foremost a political issue questioning the organization of our society, being reduced to a one-sided CO₂-abatement strategy.

Interestingly, criticisms on the one-sided scientific framing of the climate issue as solidifying capitalist status-quo have come both from constructivist perspectives as well as from political theorists. Leaving a political analysis aside, STS-scholars such as Wynne and Demeritt on the one hand have focused on the role of science in failing to create “ownership” for the climate issue with ordinary human subjects. “The intensely scientific primary framing of the issue, combined as this is with an intensely economic imagination and framing of the appropriate responses,” Wynne writes, “may engender profound alienation of ordinary human subjects around the globe from ‘owning the issue’ and thus from taking responsibility for it” (2010, 291). Demeritt makes a similar point, stating that:

the narrowly scientific focus on global climate change addresses itself to an undifferentiated global “we” and relies exclusively on the authority of science to create this sense of global citizenship. In the absence of some other basis of appeal, “we” are likely to act more as spectators than participants in the shaping of our related but different futures. (2001, 329)

Swyngedouw, on the other hand, puts aside the specific role of science and understands this problematic in explicitly political terms, lamenting the depoliticization, or in his words post-politicization, of the climate change issue. “The undisputed matters of fact (except by a small number of maverick scientists),” Swyngedouw argues, “are, without proper political intermediation, translated into matters of concern” (2010, 217). This gives rise to an image of international climate policy as constituting a depoliticized landscape: no political subject is called upon and no political project is formulated. Rather than questioning the reigning socio-economic order by imagining and formulating alternatives, a CO₂-reduction strategy is organized within the existing neo-liberal order. Disagreement is thereby confined to the ideological contours of neo-liberalism reducing political debate to a process of negotiation of (economic) interests centered on emission reductions, green technologies and market mechanisms. Predicated on the alleged universality of science, Swyngedouw argues, “a consensual policy framework is established structured around the perceived inevitability of capitalism and a market economy as the basic organizational structure of the social and economic order, for which there is no alternative” (215). Climate policy, in other words, has fallen prey to the post-political illusion that a totally inclusive policy framework can be constructed on rational grounds.

With respect to this dual criticism on the scientization and depoliticization of the climate change issue, the first-order claim of science being political has mainly resulted in a call for more reflexivity in communicating scientific knowledge to the public domain, thereby showing awareness of its value-loaded character and its perspective-boundedness. The latter point has for instance been raised in an opinion piece on the BBC News website by Mike Hulme and Jerome Ravetz, who argue that “we need a more concerted effort

to explain and engage the public in understanding the processes and practices of science and scientists." Whilst this may be a good thing in principle, it still leaves the framing of the climate change issue untouched as what Wynne calls "a problem of translation" from science to politics (2010, 290).

Invoking my second-order claim that science is political, however, means that both the scientization argument (from STS) and the depoliticization perspective (from post-politics) now merge and it becomes clear that such a science-based consensual approach is bound to fail because it is preconditioned on the alleged non-exclusive character of science. However, as I have argued on the basis of my compositionist perspective, science does divide and separate. In arguing that matters of fact are always also matters of concern, I have pointed towards the irreducible political moment that is situated at the point of determining what "the issue at stake" is, even so in science. Already in 1991, Anil Agarwal and Sunita Narain argued that the attempt to create a carbon-trading scheme predicated upon the scientific universality of GHG emissions in effect erases the historical origins of the emissions, excluding the difference between luxury and subsistence emissions from further policy debate. However neutral the invocation of "science" may seem, one can indeed not smooth out the non-neutral and very political practice that grounds the decision on what to be concerned about.

Lost in the translation from science to policy, the concerned work of composition that goes into the construction of a matter of fact is obscured in consensual decision making, which leaves policy nothing but externalities to be managed in a technocratic way. Understanding the task of raising and addressing matters of concern as a work of composition, however, is the true political heritage of constructivism, conceiving politics as a struggle for who and what is to be taken in to account. Such a struggle, Swyngedouw argues, presupposes the openness towards "divergent, conflicting and alternative trajectories of future socio-environmental possibilities" (2010, 228), the composition of which constitutes the very political work that needs to be done. A central feature of this approach to politics is the awareness that this work of composition is an unending task, as exclusion and antagonism are at the same time its condition of possibility and the condition of impossibility of its full realization. In this sense, the theoretical potentiality for reform is always already embedded in the installation of a particular order. Indeed, Mouffe also builds on the idea that exclusion represents the condition of possibility of inclusion (and *vice versa*) to argue for the very possibility of counter-hegemonic practices, that is to say "practices which ... attempt to disarticulate the existing order so as to install another form of hegemony" (2005, 18). Exclusions thus act as what Mouffe calls a "constitutive outside" around which a "collective identification" can arise striving for an alternative hegemonic order.

This is convincingly illustrated by the way in which genuine concerns of local communities in developing countries, typically framed in terms of "environmental justice" or, more specifically, "climate justice" are

systematically repudiated in international debates on environmental issues such as climate change. Rather than originating in a scientific context, their struggle for environmental justice is motivated by a day-to-day confrontation with the externalities of an energy and resource guzzling Western development pattern including the clearance of rainforest land for the sake of animal fodder production or the environmental and social impacts of oil and uranium exploitation. Along the lines sketched above, we can now characterize the environmental justice movement as being genuinely political, understanding it in terms of a collective identification around the constitutive outside of the neo-liberal economic paradigm. Indeed, the truly interesting point about these externalities of the Western economic paradigm is that they have the potential to fundamentally question its neo-liberal foundations, provided the necessary political space is rendered available. However, in a depoliticized landscape that is governed by technocratic consensual policy-making and where externalities are at best internalized in terms of market corrections, environmental justice's political demand for these externalities to be taken into account as part of an alternative socio-environmental composition can only appear as radical opposition, so that it is sidelined. In my view, this is also what happened at the UN climate summit in Cancun in December 2010, where the blame was pinned on Bolivia for its fierce resistance against a weak agreement. Along this line, I tend to argue that consensus-driven UN climate policy is running into its own limits. It is indeed symptomatic of their incapacity to think of "the excluded," that consensual approaches, notwithstanding their emphasis on inclusion and participation, typically turn out to be exclusive in a dogmatic way: everybody is included as long as one plays to the consensual rules of the game.

Conclusion: Climate Denial and the Return of the Political

Over the last decade, climate change denial and global warming skepticism have taken the shape of a well-coordinated campaign with funding from industry and free market think tanks. The so-called "climategate" affair that erupted in late November 2009 with the illegal release of thousands of emails and other documents from the University of East Anglia's Climatic Research Unit may well be considered as the preliminary culmination of a decade or more of climate denial. Various allegations were made that the emails showed climate scientists colluded to withhold scientific information and interfered with the peer-review process to prevent dissenting scientific papers from being published. Climate scientists implicated in the controversy issued rebuttals and argued that the attacks on climate science were organized to sabotage the upcoming Copenhagen global climate summit in December 2009. Whether regarded as part of normal, critical scientific practice, or as a

crime against humanity belying the “inconvenient truth,” climate denial has indifferently been framed as a variant of a truth-challenging practice. And while this may be correct when focusing on the motivations—ideological or other—behind climate denial, it does not tell the full story. However true Naomi Oreskes and Erik Conway’s characterization of climate skeptics in terms of *Merchants of Doubt* (2010) may be, such an account does not reflect on the basic principles of a science-policy architecture that is predicated upon a scientific framing of the problem at stake.

This focus on the truth as being crucial to climate politics is easily understood from the rational-decision making logic of translating science into policy: if only people can be convinced of the truthfulness of the “inconvenient truth,” if need be with apocalyptic images of a melting planet, they will be amenable to science-based climate policies. This so-called public deficit model, in which public indifference is interpreted as a direct consequence of dis- or misinformation, is also implicitly present in most of the scholarly accounts of public perception of climate change risks.⁹ In problematizing the perception of climate change risk, such studies implicitly affirm the post-political idea that people can be mobilized politically if and only if they are correctly informed about the facts. The use of the term “perception” is also telling of the secondary status that such studies attribute to the public’s capability to define risk. In focusing on the different public perceptions, they suppose that there is one correct, factual definition of climate risk. Wynne speaks of “the dominant scientific cultural reification of risk as if it were an independently existing object ...” (2005, 70). This view of humans as rational agents that should be mobilized by hard facts rather than by their passions or interests is so deeply entrenched that climate denial is often perceived as a direct threat to successful climate politics.¹⁰ Reason enough for some to accuse climate skeptics of a crime against humanity, or to argue, as Vice-Chair of the IPCC Jean-Pascal van Ypersele repeatedly did in the Belgian press, for setting up court cases against them. What is thereby neglected is the possibility that public indifference or straight denial may have more to do with a non-adequate framing of the issue at stake.¹¹ Interestingly, the wide-

⁹See, for example, Lorenzoni 2006 and references therein.

¹⁰The use of rhetoric devices and emotional appeal in convincing the public of the truthfulness of the facts, as happened for instance with Al Gore’s *An Inconvenient Truth* (2006) is not contradictory in this respect. On the contrary, such—instrumental—use of rhetoric and emotion is in my view a symptomatic confirmation of the fundamental shortcoming of viewing humans as rational agents.

¹¹This does not mean that science should or could not play a role in framing a political issue. Indeed, as I have argued in my account of climate modeling, climate change cannot be understood apart from apart from science. Realizing that matters of fact are always also matters of concern and thus political on their own terms rather implies that when matters of fact do raise a matter of societal concern, they do so in a truly political, that is, divisive way, separating internalities from externalities. This necessarily implies that the matter of concern raised in such a scientific way cannot be dealt with adequately through a consensual procedure that is predicated on that scientific basis. This argument is also elaborated in my critique of post-normal science (Goeminne 2011a, 632-634)

spread appeal of climate denial shows resemblances with that of right wing populism in Europe. The idea of the human as a rational agent also featured centrally in the fight against the latter: if only people could be convinced of what right-wing populism was really after and of the untruthfulness of its arguments, if need be by mobilizing the image of Nazi Germany, voters would turn their back on it. In Belgium, the populist, extreme right party *Vlaams Blok* was brought to the Court of Cassation, which found it to be in violation of the law against racism.¹² In her analysis of the success of right-wing populism in Europe, Mouffe draws a remarkable conclusion. Rather than seeing it as a driving force undermining democracy, she diagnoses the increasing success of right-wing populist parties in several European countries as being a symptom of the stifling consensus at the center, which does not “allow voters to make a real choice between significantly different policies” (2005, 66). In taking away the channels through which dissensus, disagreement and conflict can be expressed, Mouffe argues, the consensus at the center, whereby all classical parties have moved to the center under pressure of a global, neoliberal order, “is bound to give rise to the emergence of conflicts on the antagonistic mode” (5). In other words, every attempt to depoliticize a societal issue, even when such an attempt is founded on a scientific basis, will eventually lead to a return of the political. At this point, I thus suggest that the widespread appeal of climate denial constitutes such a symptomatic outburst of the political in a completely depoliticized landscape. My argument is nicely summarized by paraphrasing Mouffe’s observation regarding the appeal of right-wing populism: in a context where the dominant discourse proclaims that there is no alternative to a global cap and trade emission scheme and that we should accept its dictates unless we are ready to take personal responsibility for the end of humanity, it is not surprising that a growing number of people are listening to those who proclaim that alternatives do exist, even if the latter carry a right-wing signature and are predicated upon a straight denial of sound scientific arguments (70).

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¹²In response to this conviction, *Vlaams Blok* changed its name to *Vlaams Belang* and instituted a number of changes in its program. Of interest with respect to my general argument is that this conviction did not affect the success of *Vlaams Belang*. Only after a new right-wing party called the *New-Flemish Alliance* (N-VA) came to the fore and presented itself explicitly as an alternative on the right did *Vlaams Belang* effectively lose a significant part of its voters.

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