The risk conflicts perspective : mediating environmental change we can believe in

Reference:

Maeseele Pieter.- The risk conflicts perspective : mediating environmental change we can believe in
Bulletin of science, technology and society - ISSN 0270-4676 - 35:1-2(2015), p. 44-53
Full text (Publishers DOI): http://dx.doi.org/doi:10.1177/0270467615594938

The Risk Conflicts-Perspective: Mediating Environmental Change We Can Believe In

Introduction

> Socio-environmental conflict […] should not be subsumed under the homogenizing mantle of a [consensual] environmentalist-sustainability discourse, but should be legitimized as constitutive of a democratic order. This, of course, turns the climate question into a question of democracy and its meaning. It asserts the horizon of a recuperated democracy as the terrain (space) for expressing conflict, for nurturing agonistic debate and disagreement, and, most importantly, for the naming of different possible socio-environmental futures (Swyngedouw, 2010: 229)

During the last decade, it has become common practice in public and academic discourse about climate change to find the following underlying storyline: (i) a scientific consensus on the anthropogenic and catastrophic nature of climate changes has been established; (ii) however, since this is damaging to their "vested industry interests" and "conservative values", diverse social actors have been (successfully) questioning this scientific consensus, thereby (iii) unjustifiably *politicizing* the issue and stalling climate progress (Gore, 2010; McCright & Dunlap, 2010; Monbiot, 2007; Oreskes & Conway, 2010). Looking back at the last global techno-environmental risk controversy, about GM (genetically manipulated) crops and food, we find a similar storyline, although with qualitative differences: (i) a scientific consensus on the benefits and harmlessness of GM crops and food has been established; (ii) however, since this is damaging to their "environmentalist ideology and interests", diverse social actors have been (successfully) questioning this scientific consensus, thereby (iii) unjustifiably *politicizing* the issue and stalling progress with regards to the development of GM crops and food (Kleinman, 2005; Marks et al., 2007; Maeseele, 2009; Sinemus, 2007, Van Montagu, 2013) .

Despite the qualitative differences between both storylines (in terms of actors, demands and aspirations), the aim of this essay is to address and criticize their underlying commonalities. Starting from a perspective of democratic politics, I will argue that contemporary environmental discourse and politics should not be problematized for the "unjustified" politicization of risk controversies, but for their *de-politicization* or their capture in a *post-political consensus*. In doing so, these storylines will be shown to conceal rather than reveal what is stake in environmental politics, i.e. a democratic-ideological struggle between competing, alternative (techno-scientific, socio-environmental, sustainable, economic etc.) futures.

My argument proceeds in three steps, which is reflected in the structure of the essay. First, these storylines are deconstructed by arguing how they are based on invalid assumptions regarding both nature and science in the context of late modern risk controversies. Second, the strategic usefulness of these storylines is related to their underlying political character, by showing how they serve as discursive mechanisms of exclusion precluding particular actors and demands from democratic debate and citizenship. Third, a perspective is proposed which yields the tools both to evaluate mediated public discourse on risk controversies in terms of its contribution to democratic debate and citizenship, and to communicate more effectively from the perspective of democratic politics. This risk conflicts-perspective induces a shift in emphasis from a focus on the *epistemic* level to the level of *the political*. For the fields of science and environment communication, this shift entails a Copernican revolution from a focus on the *communication of science* to a focus on the *nature and extent of political conflict* in mediated public discourse on risk controversies. This essay concludes by discussing the potential transformative impacts of this perspective for academic research, journalists, public discourse, as well as the directly involved social actors.

(In)valid assumptions on nature and science

The environment as a physical category

In this paragraph, I will deconstruct the above storylines on climate change and GM food by arguing why they are based on invalid assumptions regarding nature and science, focusing subsequently on (i) the reduction of the environment to a physical category and (ii) the discourse of scientism.

Both storylines appear to suggest that the environmental issues at stake can be reduced to either the physical characteristics of the climate or the biological characteristics of particular crops. In other words, both are grounded in the assumption that nature or the environment can be reduced to a physical (or biological) category. This is problematic for two reasons. First, it externalizes nature from society, by reproducing an understanding of nature as separated from social relations. However, as the work by Beck (1992, 2009) and Giddens (2003, 2009) has shown, nature and society in late modern societies are inextricably linked. Only by focusing on the relation between environmental problems on the one hand and existing social relations on the other, one is able to demarcate the object of change, i.e. which specific social actors are responsible for which polluting practices? Which particular farming model is in need of genetic modification, and who stands to gain most from it? When nature is externalized, for instance, by focusing on CO_2 as the main problem of climate change or on glyphosate-resistance as the main problem for particular crops, social relations are separated from nature. As a result, particular policy options can be promoted irrespective of the energy or agricultural models they advocate (e.g. a fossil fuel or renewable energy model, or an industrial or agro-ecology farming model). In turn, this precludes people from making a choice between these models.

Second, this reduction of the environment to a physical category also implies that the environment can be observed directly or unmediated. The work by Hulme (2009), however, has shown how the environment is observed from a multiplicity and diversity of interpretations, which are themselves the product of socio-cultural processes. Disagreements about the environment reflect the existence of competing values and interests, social identities, intellectual traditions, and interpretations of what a "sustainable" environment looks like. In short, these disagreements are ideological. This is most obvious in the case of the polarized debate on climate change in the United States, in which the degree to which people are found to worry about climate change or accept the idea that there is a scientific consensus has been found to be directly related to one's ideological preferences and/or party affiliation (e.g. Hoffman, 2011). Similar results have been found to explain the opposition against GM crops and food (e.g. Herring, 2008). When I talk about ideological disagreements about the environment, I start from an interpretation of ideology which is based on difference and is therefore essentially relational: ideological preferences are defined as much by what they represent as by what they stand in opposition to. In other words, an ideological struggle between alternative "sustainable" futures entails the existence of competing ideas about how sustainable things are today and about sustainable things should be in the future (Carvalho 2007). The acknowledgement of the interwining of nature and society on the one hand, and the ideological nature of disagreements on the environment on the other, puts forward the environment as a political category (similar to the economy, religion or national identity) rather than a physical category.

The discourse of scientism

Furthermore, both storylines are also grounded in the discourse of *scientism*, which refers to the science/society (ontologically) and fact/value (epistemologically) dichotomies (Goeminne,

2010, Kleinman, 2005). This powerful discourse in Western societies not only distinguishes between science and society, and facts and values, as inherently separate categories, but also puts forward science and facts as superior to society and values. In public discourse, these dichotomies appear in various forms, such as science versus anti-science, sound science versus junk science, science versus ideology, politics or religion, rationality versus emotionality, etc. Furthermore, based on the assumption of being value-free and politically neutral, this discourse grants scientists and experts superior cultural authority. The discourse of scientism clearly underlies both storylines, in terms of the following assumptions: the belief in an unproblematized scientific consensus, the opposition between (the universal nature of) science and (the particular nature of) values and interests, the necessity and social desirability of an automatic equivalence between a scientific and social consensus, and a direct link between (scientific) evidence and political action.

In this regard, it is vital to emphasize that while scientific knowledge and research constitute a necessary condition for making sense of late modern risks such as climate change and genetic modification, they simultaneously constitute an insufficient condition, because of the heterogeneous nature of modern science. Recent work within the sociology of science (Böschen et al. 2006, 2010; see also Knorr-Cetina, 1999) has demonstrated the existence of different disciplinary and subdisciplinary epistemic cultures within science, including not only specific practices of generating, validating, communicating and investigating scientific knowledge, but also scientific nonknowledge. In short, these authors argue that we should focus on the unknowns, or what they call "nonknowledge[2]", to grasp the controversies surrounding late modern risks:

> The concept of nonknowledge focuses on the inherent limitations of the dominant framings of "risk" issues and points at the possibility of large areas of unknowns not only beyond the reach and scope of scientific risk assessment but also inadvertently

> embedded within supposedly all-embracing definitions of risk (Böschen et al., 2010: 784-5).

Different perceptions and evaluations of the awareness, intentionality and temporal stability of nonknowledge easily interlink with different interests, values, identities and epistemic perspectives (see also Michael, 1996; Wynne, 1992), leading to contrasting social perceptions and evaluations. In the case of genetic modification, industry, research organizations and governments have generally been found to start from the control-oriented epistemic cultures of molecular biology and genetics in reducing the focus on the unknowns to the "known unknowns" and "not-yet known's". Environmental and other social movements, on the other hand, generally aim to broaden the focus on the unknowns to the "unknown unknowns". For instance, they have been found to play off the control-oriented epistemic culture of molecular biology against the complexity-oriented approach of ecology in the case of contesting the release of GM crops into the environment, or the complexity-oriented approach of epigenetics *within* the control-oriented approach of molecular biology in the case of contesting the technique of genetic engineering itself (Böschen et al., 2006, 2010).

In other words, ideological disagreements on the environment are also related to the existence of different epistemic cultures within science[3] (see also Jamison, 2010). This explains why late modern risk controversies are characterized by competing social actors who are found to selectively adopt conflicting scientific knowledge claims as a discursive (and material) resource in pursuing alternative sustainable futures (McCormick, 2007). This interplay between epistemic and ideological disagreements has two important consequences: first, these (essentially epistemic) controversies cannot be resolved on the basis of matter of fact, as what is actually taking place is a political struggle on the level of *unknown* and *unforeseeable* risks communities and societies are willing to undergo. Since the definition and distribution of the "bads" of techno-industrial progress is what is stake in this struggle, which

necessarily implies that both winners and losers result from this process, it is an illusion to expect a consensual solution. Second, who (temporarily) wins this struggle, will be determined in large part by which framing of the unknown eventually becomes dominant. In this framing struggle, appeals to scientific credibility will indeed serve as a vital discourse resource, but the (uneven amount of) economic and cultural resources the various social actors involved in a controversy are able to draw from will eventually determine (and explain) the prominence and weight of particular framings more than their (original) scientific credibility. This is most obvious in the case of the debate on climate change in the Anglo-Saxon world. With support of particular disciplines within the scientific community, who drew primarily from complexity-oriented epistemic cultures, the environmental movement had succeeded by the early 1990s in defining anthropogenic climate change as a legitimate global social problem (resulting in the UN-led regime of international climate governance[4]). In response to these events, a network of conservative think tanks funded by wealthy foundations and corporations, also referred to as the "countermovement", mobilized as a professional social movement organization with the aim of re-defining climate change as non-problematic (McCright & Dunlap, 2010; Monbiot, 2007; Oreskes & Conway, 2010). To be able to use scientific credibility as a discursive resource, these organizations allied with sympathetic professional scientists (i.e. prominent American climate change skeptics), who mainly drew from control-oriented epistemic cultures (Böschen, 2013).

So far, I have argued how the storylines at issue are based on invalid assumptions regarding nature and science. The externalization of nature and the fact/value dichotomy both serve to disavow the political nature of the environment, about which disagreements are essentially ideological, with scientific credibility and knowledge serving as material and discursive resources in a struggle over meaning. In the following paragraph, I will argue how this disavowal itself renders the political nature of environmental events and processes both

invisible and uncontestable. In other words, the disavowal of the political will be found to serve a political purpose itself. In doing so, I turn to a particular school of political philosophy which allows us not only to diagnose these symptoms, such as the externalization of nature and discourses of scientism, as classic symptoms of the "post-political condition", but also provide a remedy bringing forward the analytical concept of depoliticization.

The Post-Political Condition

In this paragraph, I will subsequently (i) explain what is referred to as the post-political condition, (ii) argue why this is problematic from a perspective of democratic politics, (iii) introduce the analytical concept of depoliticization, and (iv), discuss which symptoms of the post-political condition have been identified within the related literature on environmental discourse and politics.

The post-political condition is generally used as a shorthand to refer to the time frame which started after the fall of the Berlin Wall and which is symbolized by Fukuyama's end of history-claim (Fukuyama, 1992). Following Fukuyama, many theorists proclaimed the arrival of a "post-ideological" era, in which the belief in a *universal rational consensus*, with experts reconciling conflicting interests and values through impartial procedures and technical knowledge, was welcomed over the existence of fundamental ideological conflict (e.g. Giddens, 1994). This conceptualization, however, has been criticized by a particular school of political philosophers for representing a "post-political" and "post-democratic", rather than "post-ideological", condition (Mouffe, 2005; Rancière, 1998; Žižek, 1999). This refers to how democratic politics has transfigured into a *de-politicized* technocratic management of social, economic and ecological affairs within the framework of a hegemonic neoliberal project and global market forces, for which there is allegedly "no alternative".

This post-political condition is problematic from a democratic perspective. Indeed, the democratic nature of a social order is dependent on the discursive recognition and visibility of the power relations that organize a society and the exclusions that this generates, so these are open to democratic discussion and contestation (Kenis, 2015). The main issue is therefore whether social reality is interpreted through discourses which account for the traces of power and exclusion. The "post-political condition" refers to how these traces are generally concealed and misrecognized in the public discourse of contemporary, Western, liberal democratic societies. This impedes both democratic and effective social change, since profound solutions to social, economic and ecological issues require a grasp of the root causes, which depends on the ability to recognize the contingency of existent social structures and the power relations underpinning them.

This process, in which the political is transformed from a matter of ideological contestation to a matter of administration, with decision-making as a question of expert knowledge rather than political position, is generally referred to with the analytical concept of *depoliticization*. Mouffe in particular (2005) has argued how this process of depoliticization has not resulted in the disappearance of ideological conflict, but in its rationalization and moralization. Instead of an adversarial democratic debate between social actors with irreconcilable political demands, we are faced with a struggle between "right and wrong". The democratic-ideological struggle, i.e. the essence of democratic politics, is either overcome based on the moral categories of "good" versus "evil" or neutralized based on "rational" experts achieving consensus through "rational" argumentation. In the politics of consensus, these moralist and rationalist considerations serve as mechanisms of exclusion, turning anyone who disagrees with an assumed (moral or rational) consensus into a fundamentalist or blind radical. In other words, what constitutes a very political, even partisan, act, simultaneously serves to deny the political character of its construction, by presenting itself as

neutral, objective and common sense. As a result, technocratic and market considerations come to substitute properly political debate and a democratic-ideological struggle between competing, alternative futures is foreclosed. Finally, depoliticization can be countered only by *politicization*, which entails a discourse that acknowledges the traces of power and exclusion and makes these visible, thereby opening particular demands or a particular framework to ideological contestation and democratic debate, and consequently, the space for democratic and effective social change. Put differently, an issue is politicized when it is presented as a choice between different strategies on the one hand and the competing societal projects which they are related to on the other.

The post-politics of the environment

During the last decade, an emerging literature has been concerned with identifying symptoms of the post-political condition within discourses on late modern risks, and climate change[5] and GM crops and food more specifically.

First, by starting from *unproblematized concepts* such as "scientific consensus", "climate action", "technological progress" or "sustainability", the de-politicizing nature of the politics of consensus conceals the competing imaginations mobilized by social actors. This precludes debate on the meaning(s) of these concepts, and resultantly, on the articulation of competing, alternative (technoscientific, socio-environmental or economic) futures. For instance, dominant interpretations in mediated public discourse on GM food have been shown to originate from a common underlying problem definition that regards the development of GM food as a *normal* element of an *inevitable, natural* scientific and economic development in the public interest (Maeseele 2010, 2011). In this problem definition, the development and marketing of GM food is equated with scientific and economic progress, and the interests of GM food developers as public interests. As a result, any disruption of this "natural" process

(e.g. political debate, regulation, direct action) is interpreted as damaging to scientific and economic progress, and consequently, the public interest. Furthermore, this disruption can only be explained by factors external to the technology or its developers, since these latter are insulated from any epistemic, axiological or normative questioning.

Simultaneously, particular forms of scientific and economic development are naturalized as scientific and economic progress: the existing institutionalized culture of science, with its increasing commercialization and marketization, and its preference for reductionist control-oriented epistemic cultures; the relationship between man and nature as one of science-based mastery over nature, and more specifically, in the form of large-scale, industrialized, capital- and energy-intensive agricultural and food practices; and the neo-liberal foundations of the Western economic development paradigm (with market liberalism and deregulation as guiding principles).

Furthermore, Swyngedouw (2007, 2010) has argued how existing discourses on sustainability, nature and the environment have served as a key arena for the configuration, entrenchment and consolidation of the post-political condition, based on what he puts forward as the underlying singular view of Nature as an harmonious equilibrium. This (predefined consensual) concept of nature precludes democratic debate about the kind of nature we would like to inhabit and how this can be achieved. As a result, this reduces the politics of sustainability to a negotiation about the technomanagerial fixes at our disposal to "save" nature from current "unsustainable" paths and return to an apparently benign former status-quo.

Second, a *rationalization* of politics is sustained by a focus on the epistemic level and the assumption that the politics of environmental risk or the politics of sustainability are a matter of translating a scientific consensus into a political consensus, thereby reducing policy-making to a matter of rationality claims. For instance, the consensual focus on the

scientifically registered level of CO_2 emissions or temperature tresholds in UN climate politics[6] amounts to a scientization of environmental discourse, with significant implications: in addition to narrowing the potential range of dispute to "controversies between believers and non-believers … regarding the validity of the answers science provides" (Goeminne, 2010: 212), it activates the fact/value dichotomy from the discourse of scientism. This results in the creation of a discursive space in which the superiority of rational decision-making is put against the inferiority of political (i.e. democratic) judgment. Only by shifting the focus from "a dispute over matters of fact in terms of true and false to a struggle for matters of concern" (Goeminne, 2010: 212) in terms of the unknowns societies are willing to accept, a discursive space opens for a political struggle over what to be concerned about.

Other authors have focused on how the rise and success of the "Green Economy"-project[7] is based on the collaboration between environmental NGOs and green parties on the one hand and international institutions, governments, corporations, think tanks and banks on the other (Kenis and Lievens, 2015). These authors have argued how the success of this collaboration is to a significant degree sustained by the articulation of an antagonistic political relation towards the countermovement's coalition of fossil fuel capitalists and climate skeptics who politicize the epistemic level by denying the existence of a scientific consensus. However, what this latter coalition as well as the adherents of the "Green Economy"-project have in common is an instrumentalization of science: both reduce climate change to an epistemic debate on its physical causes and consequences, which conceals the political positions underlying scientific positions and results in the replacement of a proper political debate with a scientific non-debate. In the GM food debate, a similar role is played by the illustrious concept of "sound science" (Maeseele, 2013).

The claim that regulation should be based exclusively on "sound science", while any barriers to trade for political reasons should be condemned as illegal and unscientific, serves

as an effective delegitimation of democratic control and debate (as “counterproductive”) while legitimizing technocratic decision-making and market forces. Similarly, the claim that the lack of progress regarding the marketing of GM food is a result of ignorant public perceptions is based on the argument of that an existing lack of “rational“ debate based on “sound science” is what prevents the public to be fully informed about the technology’s *science* and *benefits*, thereby excluding particular actors and demands from participating in the debate (Maeseele, 2010).

Third, a *moralization* of politics is sustained by framing specific scientific or technological developments, or the environmental question in general, as a global humanitarian cause, based on processes of universalization and social homogenization and the externalization and objectification of the respective problem. For instance, Swyngedouw (2010) has argued how its framing in terms of a struggle between “us” and “CO_2” represents climate change as a universalizing and socially homogenizing threat to humanity by obfuscating structural inequalities and disavowing social antagonisms. Furthermore, by externalizing and objectifying CO_2 as the enemy, climate change is disassociated from (alternative) trajectories, political programs or socio-ecological projects (from which to choose). This is similar to the promotion of GM food in terms of a moral obligation for prosperous Western nations to support new technologies that could help to alleviate multiple problems in the Third World (Maeseele 2010), thereby reconfiguring the problems of developing nations from political problems into technological problems ready to be fixed by conglomerates such as Monsanto, BASF, Bayer, Syngenta, Pioneer Hi-Bred, etc.

Ultimately, these processes of *rationalization* and *moralization* are deeply characterized by mechanisms of exclusion, since those actors and demands that either disagree with the “scientific consensus” or with framing the controversies in question as an epistemic matter or a global humanitarian cause, are stigmatized as enemies of the consensus.

For instance, in media discourses on GM food (Maeseele 2015b), critical scientists have been found to be discredited as scientific charlatans; social critics as traditionalists, fundamentalists, anti-science radicals, green terrorists, etc.; media that report on them as sensational; precautionary politicians, food and retail industries as opportunistic, etc. In climate change discourses, the claim for rational decision-making in "consensual" climate policy-making similarly functions as an exclusionary mechanism for anyone questioning the neo-liberal alliance between science and policy (Goeminne, 2010), such as the climate justice movement for which climate progress depends on a fundamental reconfiguration of the Western economic development paradigm (and its corresponding values and interests). Furthermore, a discursive construction of climate change in terms of an exclusionary scientific consensus impedes democratic citizenship, since it encourages either political apathy by alienating people from owning the issue or polarization between acceptance and denial (Carvalho and Peterson, 2012; Machin, 2013).

In the end, by foreclosing the space for democratic-ideological conflict, these processes result in precluding a democratic debate between alternative futures and in stifling democratic citizenship, since people are turned into passive spectators and not active participants in the articulation and shaping of alternative futures. And this is exactly the nature (and purpose) of the storylines on climate change and GM food that this paper started with. From a perspective of democratic politics, then, the problem lies not in the *politicization* of risk controversies, but in their *de-politicization* or capture in a *post-political consensus*. Indeed, both the focus on epistemology and the aim of consensus simultaneously misrecognize and naturalize existing traces of power and exclusion, thereby making particular, dominant values and interests invisible and uncontestable.

The Risk Conflicts-Perspective

In the previous paragraphs, I have argued that the environment should be approached as a political category, about which disagreements are ideological. Furthermore, I have shown that in late modern risk controversies the externalization of nature and the fact/value dichotomy serve as discursive mechanisms of exclusion, precluding particular actors, demands and frameworks from democratic debate and citizenship. The subsequent question is how to integrate these insights and formulate a perspective that succeeds in grasping these political dynamics and in recognizing the discursive mechanisms at work. And most importantly, in yielding the tools to both evaluate mediated public discourse in terms of its contribution to democratic debate and citizenship, and communicate more effectively from a perspective of democratic politics. In short, this perspective not only needs to avoid falling into the trap of the post-political condition itself, but should be able to recognize this trap as a purposeful and effective discursive strategy to conceal existing traces of power and exclusion. To that end, three conditions need to be fulfilled (Maeseele, 2015a, 2015b): (i) the recognition of a democratic-ideological struggle between competing, alternative futures underlying controversies on late modern risks, (ii) the creation of a discursive space to reveal the nature and extent of democratic-ideological struggle and dissent, and (iii), the identification within this space of those discursive strategies which aim either at its discursive closure (depoliticization) or cultivation (politicization). In other words, ideology and (the discursive strategies of) de/politicization serve as the central analytical categories of this perspective.

To be able to recognize disagreements as ideological, it is imperative to make a clear (theoretical-philosophical and empirical-methodological) choice for *politicization* and *conflict* over depoliticization and consensus, by approaching risk controversies as a new type of *social conflict* in late modern societies: a social conflict between social actors who selectively adopt conflicting (and contested) claims to knowledge from competing epistemic cultures as a

material and discursive resource in pursuing alternative futures. In other words, the interplay between epistemic and ideological disagreements is of central analytical importance. For instance, in previous research on GM crops (Maeseele 2009), a systematic interplay was found between the reductionist epistemic culture of molecular biology (epistemic) and anthropogenic and neoliberal values (ideological) on the one hand, and between the holistic epistemology of the complexity-oriented epistemic culture of ecology (epistemic) and ecocentric and precautionary[8] values (ideological) on the other. This identification of the ideological nature of the disagreements in a risk controversy then creates the discursive space to reveal the nature and extent of democratic-ideological struggle.

The subsequent step is to establish whether the discursive strategies at play either aim at closing or cultivating this discursive space. This can be revealed by establishing whether a discursive logic of depoliticization or politicization is at work. A democratic-ideological struggle about the ideological disagreements in a risk controversy is being impeded when a logic of depoliticization is at work. In this case, the *moral* or *rational* demands of responsible actors are distinguished from the *radical* epistemically-vacuous concerns of irresponsible actors, who are thereby stigmatized as enemies of an existing or potential (moral or rational) consensus. In doing so, the *site of struggle* is shifted from a democratic-ideological struggle between alternative futures to a struggle between "right and wrong" (e.g. "scientific" and "unscientific"). This precludes an adversarial democratic debate in favour of consensual technocratic decision-making and/or market forces, thereby concealing what is at stake. For instance, this is what happens when a demand is justified exclusively in terms of an appeal to scientific consensus: it naturalizes a particular policy strategy or framework as a neutral, objective development rather than a deliberate political choice (e.g. a binding emissions reduction treaty agreed at a climate summit; the marketing of GM crops and food by the chemical companies Monsanto, Syngenta, Bayer CropScience and others; the prolongation of

the life time of existing nuclear power plants, etc.) and thereby disavows the value-laden assumptions and material interests involved. On the other hand, a democratic-ideological struggle is cultivated when a logic of *politicization* is at work. In that case, instead of amplifying a moral or rational consensus, the competing epistemic and ideological disagreements underlying competing responses to uncertainty are not only revealed, but also related to the respective, underlying visions of society, which are thereby made subject of public debate. Resultantly, a choice is offered between alternative futures, and a space opens for democratic and effective socio-environmental change.

Simply put, I call this perspective the risk conflicts-perspective. It defines risk controversies as "risk conflicts", involving contestation between various social actors over conflicting risk definitions, which are based on the confluence of competing epistemic and ideological disagreements. Depending on how they relate towards the values and interests involved in a given situation, or whether they promote a socio-environmental status-quo or advocate transformative change, these social actors will aim at either the politicization or depoliticization of a respective risk conflict (Maeseele 2015a, 2015b). Put differently, democratic debate and citizenship are found to be cultivated when a risk conflict is framed as an (*ideological*) debate involving key *political* choices between *alternative* futures, while being impeded when a risk conflict is framed in terms of a (moral or rational) consensus about an inevitable, natural development best left to technocratic and/or market considerations. In other words, when mediated public discourse contributes to processes of *politicization* or *depoliticization*, respectively.

The *risk conflicts-perspective* then entails a Copernican revolution for the fields of science and environment communication. Instead of approaching risk controversies in terms of identifying the relevant science and its legitimate spokespersons against those who distort "the science" in promotion of "special interests", it proposes to start from an identification of

the competing epistemic and ideological disagreements at work, to arrive at the heart of what is at stake: a democratic-struggle between alternative futures, which are based on competing analyses of a current and ideal state of affairs. It rejects the technocratic temptation, i.e. the idea that appeals to reason or science can lead to a social consensus on late modern risks. Consequently, it entails a shift from a narrow view of these controversies in terms of a focus on the *communication of science* (which acts as a depoliticizing force) to a broader view in terms of a focus on the *nature and extent of political conflict*, which acts as a politicizing force by entailing ideological discussion and collective debate and choice. However, constitutive of this perspective is that those actors with a direct interest in depoliticization will deny the legitimacy of the risk conflicts-perspective and its corresponding shifts, generally invoking the superiority of a narrow science-led framing, which, by its nature, serves a depoliticizing function.

Last, this risk conflicts-perspective is both a holistic and critical perspective. It starts from an analysis of the existent configuration of social relations, in terms of relations of power and mechanisms of exclusion. It rejects a liberal-pluralist approach characterizing society as a struggle for power between competing interest groups on a level playing field, in favor of a critical approach characterizing society as a hegemonic struggle in a socio-political context of structural inequalities. In the 21st century, the industrial capitalist social order and hegemonic neoliberal and Promethean discourses serve as the given socio-political status-quo for this struggle (Klein, 2014). This is why democratic control over the economy and natural resources is found to be at stake in both the case of climate change and GM crops and food, and why short-term profits and consumption are continuously promoted at the expense of social and ecological costs. Indeed, in the risk conflicts-perspective, techno-environmental controversies are not only connected to, but constitutive of, the broader conflicts and struggles in liberal democratic societies.

Transformative Impact

The title's provocative "mediating environmental change we can believe in" refers to how the specific nature of this perspective holds the promise for potential transformative impacts, and consequently, socio-environmental change. Since discourses, whether academic or public, are either de-politicizing or politicizing in nature, the act alone of distinguishing between them, and thereby revealing their nature, has direct politicizing implications. With regards to academic discourse, the risk conflicts-perspective yields the tools to recognize not only how existing analytical frameworks are incapable of addressing processes of de-politicization. By definition, it also allows for addressing how they, simultaneously although inadvertently, contribute to them, thereby reproducing and reinforcing an existing status-quo. For example, a recent literature review concluded that much of the existing research literature in media and communication studies evaluates the representation of climate change on the extent to which it either contributes to communicating the "established scientific consensus" in climate science, or to achieving a social consensus by exceeding existing conflicting values and interests (Pepermans & Maeseele 2014). In other words, considering its focus on an epistemic framing of climate change and its underlying desire for consensus, the respective literature simultaneously contributes to the exclusion of those actors and/or demands not conforming to a (predefined) scientific or social consensus from democratic debate.

Ultimately, the evaluation of mediated public discourse in terms of processes of de/politicization is dependent on a corresponding *politicization* of academic discourse, since the risk conflicts-perspective requires fundamental conceptual and methodological shifts to avoid the post-political trap. By organizing spaces for the confrontation of competing alternative futures, the required accommodation of research designs should contribute to the

naming and articulation (and potentially, shaping) of competing, alternative futures, thereby constituting an essential component of social change. This of course applies to all social domains: when journalists, activists, politicians, scientists, or even consumer organizations, make *politicized* readings of public discourse on risk debates, they become active participants in the articulation of alternative futures, fostering democratic debate about the kind of societies and natures we would like to inhabit and how this can be achieved. Furthermore, they will contribute to more dynamic democracies with critical citizens who are able to formulate oppositional ideas. The recognition of the respective normative, axiological and political standpoints at play (both in particular debates or in personal decision-making)potentially creates the conditions for mobilizing people for the key political choices between alternative futures needed to address the inherent tremendous democratic challenges with regards to the rapid increases in scientific and technological developments. And consequently, for taking collective and decisive action.

Coming back to the storylines this essay started with, they have the following in common: based on the assumption of a (predefined) scientific consensus, both storylines distinguish the legitimate (presumed scientific) demands of *responsible* actors from the illegitimate (presumed epistemically-vacuous) demands of *irresponsible* actors, excluding the latter from democratic debate. In doing so, they shift the site of struggle from the political to the epistemic level, or respectively, from a democratic-ideological struggle between alternative futures to a struggle between science on the one hand and politics, ideology or special interests on the other. Resultantly, both storylines serve to reify science and scientific authority in terms of a discourse of “sound science” which is used as a rhetorical tool to isolate unacknowledged (and unaccountable) value-laden assumptions and material interests in competing demands. This either regarding the dominant technomanagerial approach in the case of climate change, or regarding the development, marketing and/or safety regulation in

the case of GM food. In the end, these storylines are the problem, not politics or ideology, unless democratic politics is what is put into question.

Footnotes

[1] Of course, the role of these storylines on climate change and GM crops and food in this essay is to symbolize the prevailing discourse on risk controversies.

[2] Nonknowledge is explicitly chosen by Böschen et al. (2006, 2010) over ignorance, uncertainty and indeterminacy to refer to a general absence of knowledge regardless of contextual implications, while the latter concepts either imply the theoretical availability of specific knowledge or the recognition of a lack of knowledge.

[3] Because of different niches within highly specialized disciplinary environments, standard scientific practice is hardly aware of the incompatibility of epistemic cultures: moreover, this incompatibility is only revealed through the multidisciplinary engagement induced by the social assessment of late modern risks (Böschen et al., 2010).

[4] The United Nations Framework Convention on Climate Change (UNFCCC), the annual Conference of Parties (COP) climate summits and the quadrennial Intergovernmental Panel on Climate Change (IPCC) reports.

[5] It is important to emphasize that the political polarization which is particularly observable in the Anglo-Saxon West is qualitatively different from what is meant here with a *genuine politicization* between alternative visions of society, since this polarization is derived from observing elite and popular disagreement about accepting the scientific consensus or the degree to which climate change is something to be worried about (Hoffman, 2011).

[6] While the IPCC reports have played a vital role in framing climate change in terms of a scientific battle against CO_2 -emisions, the annual climate summits have narrowed the politics of climate change to debates on particular technologies and market mechanisms.

[7] This stands for the mobilization of market mechanisms and capitalism's innovative nature for making the transition to sustainability, based on (i) technomanagerial innovation, (ii) sustainable entrepreneurship (i.e. corporate social responsibility), and (iii) sustainable consumption (i.e. individual behavior change). The Green Economy-project aims to incorporate environmental protest and turn it into a new regime for capital accumulation, therefore it has been equated to green capitalism and discourses of ecological modernization, transition management and people planet profit (Kenis & Lievens, 2015).

[8] The precautionary principle argues that the commercialization of technological innovations should either be suspended or strictly regulated when risks and dangers are insufficiently known.

References

Beck, U. (1992). *Risk Society. Towards a new Modernity*. London: Sage Publications.

Beck, U. (2009). *World at Risk*. Cambridge: Polity Press.

Böschen, S., Kastenhofer, K., Marshall, L., Rust, I., Soentgen, J., & Wehling, P. (2006). Scientific Cultures of Non-Knowledge in the Controversy over Genetically Modified Organisms (GMO). The Cases of Molecular Biology and Ecology. *GAIA, 15*, 294-301.

Böschen, S., Kastenhofer, K., Rust, I., Soentgen, J., & Wehling, P. (2010). Scientific nonknowledge and its political dynamics: The cases of agri-biotechnology and mobile phoning. *Science, Technology & Human Values, 35,* 783–811.

Böschen, S. (2013). Modes of constructing evidence: Sustainable development as social experimentation - The cases of chemical regulations and climate change politics. *Nature and Culture, 8,* 74-96.

Carvalho, A. (2007). Ideological cultures and media discourses on scientific knowledge: re-reading news on climate change. *Public Understanding of Science, 16,* 223-243.

Carvalho, A., & Peterson, T.R. (Eds.) (2012). *Climate change politics: Communication and public engagement*. Amherst: Cambria Press.

Fukuyama, F. (1992). *The end of history and the last man*. New York: Avon Books.

Giddens, A. (1994). *Beyond Left and Right. The Future of Radical Politics*. Cambridge (UK): Polity Press.

Giddens, A. (2003). *Runaway World. How Globalization is Reshaping our Lives.* Third Edition. Cambridge (UK): Polity Press.

Giddens, A. (2009). *The politics of climate change*. Cambridge: Polity Press.

Goeminne, G. (2010). Climate policy is dead, long live climate politics! *Ethics, Place and Environment, 13,* 207-214.

Gore, A. (2010, February 27). We Can't Wish Away Climate Change (Opinion). *New York Times*.

Herring, R.J. (2008). Opposition to transgenic technologies: ideology, interests and collective action frames. *Nature Reviews Genetics, 9,* 458-463.

Hoffman, A.J. (2011). The growing climate divide. *Nature Climate Change, 1,* 195-196.

Hulme, M. (2009). *Why We Disagree about Climate Change: Understanding Controversy, Inaction, and Opportunity*. Cambridge: Cambridge University Press.

Jamison, A. (2010). Climate change knowledge and social movement theory. *Wire's Climate Change, 1,* 811-823.

Kenis, A. (2015). *From Individual to Collective Change and Beyond. Ecological Citizenship and Politicisation*. University of Leuven. Unpublished doctoral thesis.

Kenis, A., & Lievens, M. (2015). *The Limits of the Green Economy. From re-inventing capitalism to re-politicising the present.* London: Routledge.

Klein, N. (2014). *This Changes Everything. Capitalism vs. The Climate*. London: Penguin Books UK.

Kleinman, D.L. (2005). *Science and Technology in Society. From Biotechnology to the Internet*. Malden: Blackwell Publishing.

Knorr Cetina, K. (1999). *Epistemic Cultures. How the Sciences Make Knowledge*. Cambridge, MA: Harvard University Press.

Machin, A. (2013). *Negotiating climate change: Radical democracy and the illusion of consensus*. London: Zed Books.

Maeseele, P. (2009). NGOs and GMOs: A case study in *alternative* science communication. *Javnost - The Public, 16,* 55-72.

Maeseele, P. (2010). On neo-luddites led by ayatollahs. The frame matrix of the GM food debate in Northern Belgium. *Environmental Communication: A Journal of Nature and Culture, 4,* 277-300.

Maeseele, P. (2011). On news media and democratic debate: framing agricultural biotechnology in Northern Belgium. *International Communication Gazette, 73,* 83-105.

Maeseele, P. (2013). Communication, media and GM food: a politicized reading. *Catalan Journal of Communication and Cultural Studies, 5,* 183-199.

Maeseele, P. (2015a). Beyond the post-political zeitgeist. In A. Hansen and R. Cox (Eds.), *The Routledge Handbook of Environment and Communication* (pp. 429-443). New York: Routledge.

Maeseele, P. (2015b) Risk conflicts, critical discourse analysis, and media discourses on GM crops and food. *Journalism*, *16*, 278-297.

Marks, L.A., Kalaitzandonakes, N., Wilkins, L., & Zakharova, L. (2007). Mass Media Framing of Biotechnology News. *Public Understanding of Science, 16,* 183-203.

McCormick, S. (2007). Democratizing Science Movements: A New Framework for Mobilization and Contestation. *Social Studies of Science, 37,* 609-623.

McCright, A., & Dunlap, R. (2010). Anti-reflexivity. The American Conservative movement's success in undermining climate science and policy. *Theory, Culture & Society, 27*, 100–133.

Michael, M. (1996). *Constructing identities: The social, the nonhuman and change.* London: Sage.

Monbiot, G. (2007). *Heat: How to Stop the Planet Burning.* London: Allen Lane.

Mouffe, C. (2005) *On The Political*. London: Routledge.

Pepermans, Y., & Maeseele, P. (2014). Democratic debate and mediated discourses on climate change: from consensus to de/politicization. *Environmental Communication, 8*, 216-232.

Oreskes, N., & Conway, E.M. (2010). *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming*. New York: Bloomsbury Press.

Rancière, J. (1998). *Disagreement: Politics and Philosophy*. Minneapolis: University of Minnesota Press.

Sinemus, K. (2007). Talking with the Public – Challenging the Public Scare. *Biotechnology Journal, 2*, 1047.

Swyngedouw, E. (2007). Impossible "Sustainability" and the Post-Political Condition. In D. Gibbs and R. Kreuger (Eds.), *The Sustainable Development Paradox: Urban Political Economy in the United States and Europe* (pp. 13-40). New York: Guilford Press.

Swyngedouw, E. (2010). Apocalypse forever? Post-political populism and the spectre of climate change. *Theory, Culture & Society, 27*, 213-232.

Van Montagu, M. (2013, October 22). The Irrational Fear of GM Food (Opinion), *The Wall Street Journal.*

Wynne, B. (1992). Misunderstood misunderstanding: Social identities and public uptake of science. *Public Understanding of Science, 1*, 281-304.

Žižek, S. (1999). *The Ticklish Subject: The Absent Centre of Political Ontology*. London: Verso.