Article:

The Possibility of Reflexive Global Climate Politics

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ABSTRACT

FOR MORE THAN TWO DECADES, THE GLOBAL CLIMATE CHANGE REGIME HAS BEEN FAILING TO PRODUCE OUTCOMES THAT WILL GENUINELY CONFRONT THE THREAT OF CLIMATE CHANGE. RECENT YEARS HAVE SEEN GREATER POLITICAL WILL TO FORGE A SUCCESSFUL AGREEMENT AT THE 2015 PARIS SUMMIT. OPTIMISM HAS BEEN PARTICULARLY HIGH SINCE CHINA AND THE US REACHED A BILATERAL DEAL IN 2014. BUT IT REMAINS UNCERTAIN WHETHER A PARIS AGREEMENT WILL BE SUFFICIENTLY AMBITIOUS TO AVOID THE WORST EFFECTS OF CLIMATE CHANGE. PAST EXPERIENCE IN GLOBAL CLIMATE GOVERNANCE CAUTIONS AGAINST ASSUMING THAT ANY AGREEMENT IS A STEP FORWARD. DRAWING ON GREEN POLITICAL THEORY, THIS PAPER APPROACHES CLIMATE CHANGE AS PART OF A WIDER CONDITION OF UNSUSTAINABILITY. IT DEFINES A STANDARD OF ECOLOGICAL RATIONALITY FOR MEASURING THE ADEQUACY OF CLIMATE AGREEMENTS, AND OUTLINES THE IMPORTANCE OF STRONG ECOLOGICAL REFLEXIVITY FOR OVERCOMING THE WEAKNESSES IN EXISTING GLOBAL CLIMATE CHANGE GOVERNANCE.

RESUME

DEPUIS PLUS DE VINGT ANS, LE RÉGIME POLITIQUE PROPRE À GÉRER LE CHANGEMENT CLIMATIQUE GLOBAL A ÉCHOUÉ À PRODUIRE DES RÉSULTATS À MÊME D'AFFRONTER LA CRAINTE GÉNÉRÉE PAR CE CHANGEMENT. ON A VU APPARAÎTRE CES DERNIÈRES ANNÉES UNE PLUS GRANDE VOLONTÉ POLITIQUE POUR ARRIVER À UN ACCORD AU SOMMET DE PARIS EN 2015. L'OPTIMISME EST DEVENU PARTICULIÈREMENT FORT DEPUIS QUE LA CHINE ET LES ETATS-UNIS ONT CONCLU UN ACCORD BILATÉRAL EN 2014. NÉANMOINS IL RESTE INCERTAIN DE SAVOIR SI UN ACCORD SUFFISAMMENT AMBITIEUX SERA ATTEINT À PARIS, QUI PUISSE ÉVITER LES PIRES EFFETS DU CHANGEMENT CLIMATIQUE. LES EXPÉRIENCES PASSÉES POUR LA GOUVERNANCE GLOBALE DU CLIMAT RENDENT PRUDENT QUANT À FAIT DE PENSER QUE CHAQUE ACCORD EST UN PAS EN AVANT. INSPIRÉ DE LA THÉORIE POLITIQUE VERTE, CET ARTICLE ABORDE LE CHANGEMENT CLIMATIQUE COMME UNE PARTIE D'UN ENSEMBLE PLUS VASTE DE NON-DURABILITÉ. CE TEXTE DÉFINIT LES CRITÈRES D'UNE RATIONALITÉ ÉCOLOGIQUE À MÊME DE MESURER L'ADÉQUATION AVEC ELLE DES ACCORDS SUR LE CLIMAT. IL SOULIGNE L'IMPORTANCE D'UNE RÉFLEXIVITÉ ÉCOLOGIQUE FORTE POUR POUVOIR DÉPASSER LES FAIBLESSES DE LA GOUVERNANCE ACTUELLE DU CHANGEMENT DU CLIMAT GLOBAL.

INTRODUCTION

The mood in the lead-up to the Paris climate change summit has undoubtedly been more upbeat than at any time since 2009, when the international community failed to reach an agreement in Copenhagen. Optimism is the word on everyone's lips: from Greenpeace to Al Gore[1]. A key source of optimism is the deal struck by China and the United States in late 2014, which signalled their agreement to cooperate on developing clean energy and mitigating greenhouse gas (GHG) emissions. The US pledged to cut *net* emissions by 26-28 percent below 2005 levels by 2025. This represents a doubling of present ambition; it would take average annual emission reductions from 1.2 percent between 2005-2020, to 2.3-2.8 percent between 2020 and 2025. It is also significantly more ambitious than the targets taken by the US to Copenhagen, which was even weaker than the target it agreed in Kyoto in 1997. China pledged that CO_2 emissions would peak around 2030 ('with the intention to try to peak early'),

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[1] http://www.rtcc.org/2015/01/26/us-top-climate-lawyer-overcoming-the-firewall/ consulted March 2015; http://www.theclimategroup.org/what-we-do/news-and-blogs/iea-chief-economist-optimistic-about-paris-climate-summit/, consulted March 2015; http://www.theguardian.com/sustainable-business/2014/dec/23/2015-climate-sceptics-us-china-agreement-carbon-emissions, consulted March 2015; http://cleantechnica.com/2015/01/25/al-gore-optimistic-paris-exclusive-videos/, consulted March 2015.

and that the non-fossil fuel share of all energy would increase to around 20 percent by 2030[2]. This deal was widely seen as a breakthrough in climate change politics. China and the US together account for about 35% of global emissions[3]. Ambitious cuts from these two countries are undeniably important if we are to limit global warming to 2° Celsius. While this deal may reflect unprecedented ambition from these two countries, it is still far from the level of ambition that is needed. Nevertheless, the significance of the US-China deal can be measured in terms of its *diplomatic* impact as well as its impact on global emissions. The diplomatic importance of this deal chimes with dominant perspectives on the role of leadership in breaking the global warming gridlock[4]. It is widely accepted in the scholarly and policy communities that leadership by major emitters will be essential for achieving a multilateral agreement. UNFCCC Executive Secretary Christiana Figueres praised the deal predicting that it would provide a strong push in negotiations and encourage others to follow suit. Echeverría and Gass observed that the deal was significant irrespective of the level of ambition: '…the fact that these two countries have not only committed to targets, but have done so in a collaborative manner, is a seismic shift in international climate policy dynamics'[5]. This development also resonates with the widespread perception that breaking the 'gridlock' in international climate change politics is most likely to be achieved in exclusive 'minilateral' forums. The idea of minilateralism slowly gathered momentum throughout the 2000s and struck a chord with many frustrated observers in the aftermath of Copenhagen. Moisés Naím, for example, urged the international community to abandon its 'flawed obsession with multilateralism' and instead 'bring to the table the smallest possible number of countries needed to have the largest possible impact on solving a particular problem'[6]. Reducing the number of parties to a negotiation would, it is argued, reduce complexity and the likelihood of stalemate and thereby offers the greatest chance of overcoming the 'impasse' in global climate politics[7]. Shifting negotiations from the inclusive multilateral forum of the UNFCCC to small clubs of the major emitters (like the Major Economies Forum, or the bilateral China-India dialogue) would reduce the number of compromises required to accommodate the needs and interests of 196 parties.

Viewed from these perspectives of leadership and minilateralism, the US-China deal is a positive sign and bodes well for Paris. While the international community has yet to abandon ideals of multilateralism, there is reason to believe that *some* agreement in Paris is more likely once the major emitters have reached common understandings and commitments. The problem

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[2] THE WHITE HOUSE, «Factsheet: U.S.-China joint announcement on climate change and clean energy cooperation», 11 November 2014, http://www.whitehouse.gov/the-press- office/2014/11/11/fact-sheet-us-china-joint-announcement-climate-change-and-clean-energy-c

[3] N. HÖHNE, H. FEKETE, M. HAGEMANN, K. WOUTERS, B. HARE, M. SCHAEFFER, F. SFERRA, M. LINDBERG, L. JEFFERY, M. ROCHA, C. BAXTER. «China and the US: how does their climate action compare?» *Climate Action Tracker Policy Brief*, 21 October 2014.

[4] C. KARLSSON, C. PARKER, M. HJERPE, and B.O. LINNÉR. 2011. «Looking for Leaders: Perceptions of Climate Change Leadership among Climate Change Negotiation Participants», *Global Environmental Politics* 11(1): 89-107; C.F. PARKER, C. KARLSSON, and M. HJERPE, «Climate change leaders and followers: Leadership recognition and selection in the UNFCCC negotiations», *International Relations*. Forthcoming, DOI: 10.1177/0047117814552143.

[5] D. ECHEVERRÍA and P. GASS, «The United States and China's New Climate Change Commitments: Elements, implications and reactions», IISD Briefing Note. International Institute for Sustainable Development. November 2014, p.3.

[6] M. NAÍM, "Minilateralism." *Foreign Policy*, 2009, July/August (173), p.137; D.G. VICTOR, *Global Warming Gridlock: Creating More Effective Strategies for Protecting the Planet*. Cambridge: Cambridge University Press, 2011.

[7] M. GRASSO, and J. TIMMONS ROBERTS, «A compromise to break the climate impasse», *Nature Climate Change* 8 June 2014. Vol. 4. Pp.543-49; D.G. VICTOR 2011; B.E. BAGOZZI «The multifaceted nature of global climate change negotiations», forthcoming, *Review of International Organizations*   DOI 10.1007/s11558-014-9211-7.

with this pragmatic line of thinking is that it assumes that *any* agreement is a progressive step forward. Indeed, scholars and practitioners of international relations are often guilty of measuring the success of an international regime only in terms of whether an agreement has been reached, and whether the signatories subsequently comply. The question of whether the agreement will successfully mitigate the problem it purports to address is of secondary concern[8]. This tendency was displayed in the final hours and aftermath of the Copenhagen climate summit. The derision directed at the small number of states who thwarted adoption of the final text was generally stronger than the criticism directed at the powerful few who covertly drafted it[9]. While there may be good reasons to question the motives of all of these dissenting parties, the substance of their dissent was entirely reasonable. Bolivia's chief negotiator rejected the unambitious 2° target on the grounds that it would endanger islands, coastal cities, and the water and food security of millions of people[10]. Tuvalu similarly rejected how ambition was being traded off for financial aid[11]. Of course, it now seems very unlikely that warming will be limited to even 2°. For those dissenting parties, and for many within civil society, the failure to reach agreement was deplorable, but no agreement was preferable to a grossly insufficient one.

This article departs from pragmatic tone of mainstream discussion on climate change negotiations. Drawing on green political theory, it approaches climate change as part of a wider condition of unsustainability. This perspective cautions against assuming that any agreement is a progressive step forward. This article proceeds by establishing a standard for assessing the quality of any international agreement on climate change. This is based on an account of *ecological rationality* and *ecological reflexivity*, concepts which are explained in the following section. Subsequent sections then use this standard to assess the quality of global climate governance firstly during the ten-year period of 1997-2007, and then in more recent efforts to negotiate a new international agreement. What this discussion reveals is profound *ecological irrationality* and an absence of *ecological reflexivity*.

ECOLOGICAL RATIONALITY AND REFLEXIVITY

Rather than assume that any international agreement on climate change is a step forward, the content of proposed agreements ought to be subjected to a test of ecological rationality. "Rationality" can be conceptualized in terms of *foci* and *form*. Baber and Bartlett identify three different foci to which the concept of rationality can be applied: the system, the choice or action, and the reasoning process[12]:

1. *Functional rationality applies to the level of the system.* "The functional rationality of a system is the degree to which system behavior is organized according to particular principles and can be understood by reference to principles of order"[13]. A system is functionally rational if it is organized to "consistently and effectively promote or produce some value"[14].

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[8] G. KÜTTING, *Environment, Society and International Relations: Towards More effective International Environmental Agreements.* London: Routledge, 2000.

[9] H. STEVENSON, «Representing Green Radicalism: the limits of state-based representation in global climate governance». Review of International Studies, 2014, 40, p.178.

[10] UNFCCC, Conference of the Parties serving as the meeting of the Parties to the Kyoto Pro- tocol (CMP) resumed 12th Meeting, Copenhagen (19 December 2009), Plenary. 03:10 CET.
http:// www1.cop15.meta-fusion.com/kongresse/cop15/templ/play.php?id_kongressmain=1&theme= unfccc&id_kongresssession=2755

[11] http://news.bbc.co.uk/1/hi/sci/tech/8422031.stm consulted January 2010.

[12] W.F. BABER and R.V. BARTLETT, *Deliberative Environmental Politics: Democracy and Ecological Rationality.* Cambridge, MA: MIT Press, 2005.

[13] *Ibidem*, p.17.

[14] J.S. DRYZEK. *Rational Ecology: Environment and Political Economy.* Oxford: Basil Blackwell, 1987, p.25.

2. *Substantive rationality applies to the level of the choice or action.* Choices and actions can be described as rational if they appear to be "appropriate to the achievement of given goals within the limits imposed by given conditions and constraints"[15].

3. *Procedural rationality applies to the level of the reasoning process.* "Behavior is procedurally rational when it is the outcome of appropriate deliberation," rather than merely impulse[16].

In addition to these three *foci*, there are numerous *forms* to which the concept of rationality can be applied: technical, economic, social, legal, political, and ecological rationality. These forms of rationality can be found at all levels of focus: functional, substantive, and procedural. Dominant conceptualizations of rationality concern a single focus (choice or action) and two related forms (technical and economic). There is a pervasive assumption, especially in mainstream theories of international relations, that instrumental rationality (based on principles of efficiency and utility-maximization) is universally inherent to individuals prior to any social interaction. A commitment to this understanding of rationality effectively rules out the possibility that actors may reason about ends as well as means; instrumental rationality is concerned with achieving pre-given goals, irrespective of the desirability of those goals. Specific manifestations of rationality at any time and place are essentially socially constructed, rather than natural, universal, and inevitable. Some forms of rationality may be highly problematic and inappropriate in certain contexts.

Green political theory usefully reminds us that socially constructed forms of rationality can effect harm not only on particular groups within society, but also on the nonhuman natural world[17]. An ecocentric position denaturalizes the anthropocentrism that is embedded in instrumental rationality. Anthropocentrism is defined by Eckersley as "the belief that there is a clear and morally relevant dividing line between humankind and the rest of nature, that humankind is the only or principal source of value and meaning in the world, and that nonhuman nature is there for no other purpose but to serve humankind"[18]. This position is based on a distinction between humans and nature, which green political theorists reject on the basis that it is an ontological fallacy and/or environmentally damaging[19]. In contrast to this distinction, ecocentrism is based on an understanding of "internal relatedness, according to which all organisms are not simply interrelated with their environment but also *constituted* by those very environmental inter-relationships"[20]. Dryzek reminds us that the onus of establishing and maintaining a mutually supportive relationship with nature necessarily falls on humans, because nature can exist without humankind, yet humankind cannot exist without nature[21]. This suggests that the concept of "ecological rationality" should be based on the overarching goal of establishing and maintaining a mutually supportive relationship with nature. Rather than assuming that the goals of efficiency and utility-maximization are inherent to human nature, the identification of such goals can be treated as a normative exercise. Given that the conditions for sustained human life are dependent on a healthy environment, our

[15] H.A. SIMON, «From Substantive to Procedural Rationality». In *Method and Appraisal in Economics,* ed. S.J. LATSIS. Cambridge: Cambridge University Press, 1976, p.130.

[16] *Ibidem*, p.131.

[17] e.g. R. ECKERSLEY 1992 *Environmentalism and Political Theory*. Albany: State University of New York Press; R. ECKERSLEY. 2004, *The Green State: Rethinking Democracy and Sovereignty.* Cambridge, MA: MIT Press; DRYZEK, *Rational Ecology, op. cit.*; V. PLUMWOOD, *Environmental Culture: The Ecological Crisis of Reason*, London: Routledge, 2002; V. PLUMWOOD, «Nature, Self, and Gender: Feminism, Environmental Philosophy, and the Critique of Rationalism». *Hypatia* 1991, 6(1), pp.3–28.

[18] ECKERSLEY, *Environmentalism and Political Theory, op. cit.,* p.51.

[19] *Idem.*

[20] *Ibidem*, p.49.

[21] DRYZEK, *Rational Ecology, op. cit.*

overarching goal *should* be the maintenance of a healthy environment. As Plumwood argues, even if we take a minimally anthropocentric approach and value sustained human life, it is essential that ecological rationality be constructed and prioritized over other forms of rationality: "If forms of rationality that treat the earth as plunder . . . have become a danger to us and to the rest of the inhabitants of the earth, we need to . . . develop new forms. These will be ecologically sensitive forms of rationality that judge what currently passes for reason by the standards of ecological success or failure, among other things"[22].

This green theoretical background allows us to identify how ecological rationality manifests at each of the three levels of focus identified earlier:

1. The system: A system or organization would be ecologically rational if it is organized in such a way that it could "consistently and effectively… provide the good of human life support"[23]. Baber and Bartlett suggest that such a system would be organized according to a fundamental principle of "biogeophysical interdependence"[24].
2. Choice or action: Individual and collective choices and action would be ecologically rational if they could be judged as appropriate to the goal of achieving and maintaining a mutually supportive relationship with the biosphere.
3. Reasoning process: An ecologically rational reasoning process would entail a "higher-order form of critical, prudential, self-critical reason which scrutinizes the match or fit between an agent's choices, actions and effects and that agent's overall desires, interests and objectives as they require certain ecological conditions for their fulfillment"[25].

A pre-condition for realizing ecological rationality is *reflexivity*, involving thinking about, reflecting on, and monitoring individual and social behavior, as well as responding to new knowledge and information in ways that reinforce or transform that behavior. Social theorists, most prominently Anthony Giddens, have shown how reflexivity is intrinsic to human activity[26]. O'Brien points out that as an inherent human capacity, reflexivity has no particular political quality: "reflexive monitoring of conduct" can just as easily reproduce feudalism and dictatorship as it can transform those systems into something more progressive. There is nothing inherently transformative about basic human reflexivity[27]. For Giddens, however, there is something unique about *modern* reflexivity as a *post-traditional* form of reflexivity. The scale of knowledge and information available in modern societies means that reflexivity takes on a *redefining* function whereby human activity is regularly reordered as a result of self-monitoring[28]. Giddens refers to this as the intensification of reflexivity: "The reflexivity of modern social life consists in the fact that social practices are constantly examined and reformed in the light of incoming information about those very practices, thus constitutively altering their character"[29]. Human relations with non-human nature ought to be a domain that benefits from this 'intensified' examination of social action. The fact that climate change was taken up as an issue of political concern in the 1980s is evidence of some degree and form of reflexivity. At this time, political leaders and concerned citizens began to reflect on the connections between scientific evidence of global warming and dominant development

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[22] PLUMWOOD, *Environmental Culture, op. cit.,* p.18.

[23] *Ibedem.*, p.25.

[24] *Ibedem*, p.19.

[25] *Ibedem*, p.68.

[26] A. GIDDENS, *Modernity and Self-Identity: Self and Society in the Late Modern Age*, 1991. Cambridge: Polity Press; M. Archer, *Making our Way through the World*, 2007, Cambridge: Cambridge University Press.

[27] M. O'BRIEN. «Theorising Modernity: Reflexivity, identity and environment in Giddens' social theory». In M. O'BRIEN, S. PENNA, and C. HAY (eds). *Theorising Modernity*. 1999. London: Longman. p. 25.

[28] *Ibidem*, pp.25-6.

[29] A. GIDDENS, *The Consequences of Modernity*, 1990, Cambridge: Polity Press, p.38.

paths, and subsequently established a multilateral process to coordinate a response[30]. However, in the following sections I demonstrate how this response has reflected only a very weak form of ecological reflexivity, and has ultimately produced ecologically irrational outcomes. It remains beyond the scope of this article to develop a full account of an ecologically rational system for addressing climate change (i.e., the focus of *functional* rationality). Instead, I limit my attention to assessing the *substantive* rationality of global climate governance under the first 10 years of the Kyoto Protocol, and the *procedural* rationality of more recent efforts to craft a future international agreement.

INSTITUTIONALISING UNSUSTAINABILITY: 1997-2007

The experience of the Kyoto Protocol should serve as a caution against assuming that any international agreement on climate change is a step forward. If we apply an ecological standard of substantive rationality to this agreement, its shortcomings are readily exposed. A choice or action can be considered ecologically rational if it advances the goal of achieving and maintaining a mutually supportive relationship with the biosphere. Far from advancing this goal, the Kyoto Protocol induced states to comply with climate governance norms in ways that actually exacerbate unsustainable development. Elsewhere I offer a full account of this process[31]. Here I will focus on the significance of shifting understandings about *how* climate change mitigation should be pursued.

As climate change climbed up the political agenda in the 1980s and 1990s, negotiations were underpinned by a widely shared assumption that mitigation should be pursued through domestic emission reduction targets[32]. Perhaps as a consequence of its institutionalization in two existing international atmospheric agreements (the Montreal Protocol and the European Community's Large Combustion Plant Directive), this norm was reflected in numerous declarations and policies in the lead up to the creation of the UNFCCC in 1992. But norms are not static; they evolve through contestation and reinterpretation. Throughout the 1990s, the dominant interpretation of this norm shifted as global environmental governance came to be more broadly dominated by a discourse of 'liberal environmentalism'[33]. As Bernstein explains, 'the "compromise of liberal environmentalism" mitigates the economic disruptions that environmental protection may cause by absorbing environmental concerns into the liberal economic order itself; environmental protection has thus become seemingly dependent on securing continued economic growth and accumulation'[34]. This allowed attention to gradually shift from *domestic* mitigation efforts to *transnational* ones. The Kyoto Protocol institutionalized the idea that mitigation should be pursued via domestic targets, but in a compromised form that directed attention away from industrialized states' existing emissions to the future emissions of developing countries. In contrast to earlier environmental and atmospheric agreements, the Kyoto Protocol tied domestic targets to a set of 'flexible mechanisms' that would enable states to meet their commitments in the most cost-efficient manner by investing in GHG mitigation in less-developed countries, or buying emissions credits through a trading system.

Shifting attention from *domestic* mitigation efforts to *transnational* ones, and tying mitigation to flexible mechanisms institutionalized a technical representation of the climate change problem. Viewed through a technical lens, the specific sources of emissions, as well as

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[30] H. STEVENSON, *Institutionalizing Unsustainability: The Paradox of Global Climate Governance*, 2013, Berkley: University of California Press, chapter 2.
[31] *Idem.*
[32] *Ibidem*, pp.23-5.
[33] S. BERNSTEIN, *The Compromise of Liberal Environmentalism*, 2001, New York: Colombia University Press.
[34] *Idem.*

the social and political objectives they serve, are treated as irrelevant: avoiding dangerous climate change simply requires limiting overall global emissions. Under the Kyoto Protocol, global climate governance became a task principally of mitigating GHG emissions at the cheapest possible source, rather than one of transforming the political, economic, and cultural drivers of excessive emissions.

The fundamental problem with these flexible mechanisms is that they introduce "remoteness" into global climate governance. This refers to the disruption of "connections and balances between decisions and their consequences"[35]. Essentially this serves to obstruct the possibility of ecological rationality. Distance severs 'ecological and social feedback as decision points along the (commodity) chain are increasingly separated along the dimensions of geography, culture, agency, and power'[36]. Remoteness manifests in several forms, the most obvious one being spatial: the spatial distance between practices of production and consumption disassociates people from the ecological consequences of their choices. However, there are other forms of remoteness that artificially disassociate people from the ecological relationships in which they are embedded; these include consequential, communicative, epistemic, temporal, and technological remoteness[37]. If we were to only address the spatial form of remoteness (for example, by localizing economic and political processes), these other forms of remoteness would continue to obstruct ecological rationality.

While several countries withdrew from the Kyoto Protocol, many others were able to fully comply with their targets by relying on emissions offsetting. As the birthplace of the Kyoto Protocol, Japan may appear to offer some hope for environmental leadership. But in 2006 Japan became the largest purchaser of offset credits on the international market[38]. The EU initially opposed the flexible mechanisms but later became their most ardent supporter[39]. Under the EU's emissions trading scheme, sectors can meet up to 50 percent of their targets through the purchase of carbon offsets. Sectors outside the trading scheme, including transport, buildings, agriculture, and waste, can meet 73 percent of their reduction target through offsets[40]. This simply allows carbon-intensive development to continue.

In sum, by inducing wealthy states to offset their ecologically insensitive policies, practices, and systems in distant, poorer states, global climate governance under the Kyoto Protocol simply served to reinforce existing unsustainability.

THE PATH FROM BALI TO COPENHAGEN: 2007-2009
In 2008, the international community met on the Indonesian island of Bali to launch a new process for negotiating future climate change agreements. With the first commitment period of the Kyoto Protocol nearing a close, it was time to secure commitments on a second commitment period, as well develop an agreement that would include those Parties with minimal or no Kyoto obligations. The resulting "Bali Action Plan" established a two-track process to advance these objectives. One track, the Ad-hoc Working Group on Long-term Cooperative Action (AWG-LCA), had a broad scope encompassing debate on a long-term shared vision, mitigation, adaptation, finance, and technology. This process provides an opportunity for assessing the *procedural rationality* of more recent processes of global climate governance. It is this process that culminated in the COP15 summit which produced the highly

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[35] PLUMWOOD, *Environmental Culture: op. cit.*, p.72.
[36] T. PRINCEN, M. MANIATES, and K. CONCA, «Introduction: Confronting Consumption». In *Confronting Consumption,* 2002, ed. T. PRINCEN, M. MANIATES, and K. CONCA. Boston: MIT Press, p.16.
[37] PLUMWOOD, *Environmental Culture*, *op. cit.,* pp.71–73.
[38] http://www.reuters.com/article/environmentNews/idUSL1189069320080411 consulted January 2009.
[39] L. CASS, «Norm Entrapment and Preference Change: The Evolution of the European Union Position on International Emissions Trading». *Global Environmental Politics* 2005, 5 (2), pp.38–60.
[40] S. BULLOCK , M. CHILDS, and T. PICKEN, «A Dangerous Obsession: Why Offsetting Is Failing the Climate and People: The Evidence». London: Friends of the Earth, 2009, p.11.

inadequate Copenhagen Accord. However, rather than focus on the substance of this agreement itself, my aim in this section is to assess its preceding reasoning processes against a standard of ecological rationality. To recall, an ecologically rational reasoning process would entail critical scrutiny of 'the match or fit between an agent's choices, actions and effects and that agent's overall desires, interests and objectives as they require certain ecological conditions for their fulfillment'[41]. Green political theorists persuasively argue that such scrutiny is more likely to emerge from inclusive deliberation, rather than acting on impulse or aggregating individuals preliminary preferences.[42] Deliberation can be defined as 'debate and discussion aimed at producing reasonable, well-informed opinions in which participants are willing to revise preferences in light of discussion, new information, and claims made by fellow participants. Although consensus need not be the ultimate aim of deliberation, and participants are expected to pursue their interests, an overarching interest in the legitimacy of outcomes (understood as justification to all affected) ideally characterizes deliberation'[43].

While it may be unreasonable to expect multilateral negotiations to conform to a theoretical ideal of deliberation, there are certainly deliberative practices and qualities that are compatible with the theory and practice of negotiations[44]. One of these is the inclusive engagement of diverse discourses, or perspectives. Deliberation and decision-making in enclave-like environments is very unlikely to produce ecologically rational outcomes. Arguments advanced in groups of like-minded individuals are shielded from critique and challenge. The result can be what Sunstein refers to as 'ideological amplification' whereby people reinforce their commitment to existing convictions when they are supported by a vocal majority[45]. This diminishes reflexive capacity.

Debates in public settings surrounding the Bali Action Plan negotiating process (2008-2009) certainly featured diverse discourses[46]. These can be classified as *Mainstream Sustainability*; *Expansive Sustainability*; *Limits*; and *Green Radicalism*[47]. These vary, in part, according to the extent to which they take existing political-economic conditions for granted, or subject them to ecological scrutiny.

- *Mainstream Sustainability* assumes that climate change action can be defined within the parameters of the existing liberal capitalist system. The drive to compete and accumulate material goods and wealth is taken to be an inherent aspect of human nature and relations. But low-carbon capitalism and 'green growth' are viable options because pollution and profit can be decoupled. Market logic or governmental policy and regulation can align goals of economic growth with the demands of ecological sustainability. This may involve emissions trading or carbon taxes, voluntary or mandatory sectoral standards, and strong intellectual property rights regimes.

- *Expansive Sustainability* holds to many of the same assumptions as its mainstream counterpart. Decarbonised economic development is possible, and profit and pollution can be decoupled. But here there is an emphasis on directing economic modernisation towards the fulfilment of human needs and mitigating North-South inequalities rather than just mitigating GHG emissions in the most efficient manner. This may require

[41] PLUMWOOD, *Environmental Culture, op. cit.,* p.68.

[42] BABER and BARTLETT, *Deliberative Environmental Politics, op. cit.,* DRYZEK, , *Rational Ecology, op. cit.,* and G. SMITH, *Deliberative Democracy and the Environment,* 2003, London: Routledge.

[43] S. CHAMBERS, "Deliberative Democratic Theory" *Annual Review of Political Science* 2003, 6: p.309.

[44] H. STEVENSON, and J.S. DRYZEK, *Democratizing Global Climate Governance.* Cambridge: Cambridge University Press, 2014, ch. 4.

[45] C. SUNSTEIN, «Ideological amplification». *Constellations,* 2007, 14 (2), 273–279.

[46] STEVENSON and DRYZEK, *Democratizing Global Climate Governance, op. cit.*

[47] *Idem.*

carefully designed market mechanisms, and concessionary transfer of clean technology from North to South.

- *Limits* questions both the ecological viability and social desirability of neoliberal development; unlimited economic growth is criticised, as is profligate consumption and unconstrained population growth. The economic system is considered in need of significant restructuring, but there is trust in the capacity of existing authorities (e.g., governments and international organisations) of voluntary 'downsizing' to achieve this.
- *Green Radicalism* calls into the question the ecological viability of capitalism and growth-based economies, as well as the capacity of existing authorities to promote the systemic change required. It calls for a redistribution of power towards local communities and marginalised groups, and shift towards prioritising human rights, justice, and equity over short-term growth concerns. Industrial-scale production is rejected in favor of small-scale development. Market-based mechanisms are rejected on the grounds that they shift responsibility and have contributed to environmental crises in the first place.

These diverse discourses were articulated in civil society forums, blogs, business summits, and UNFCCC side events. Transmission from these settings to the formal negotiations during 2008-2009 was very weak. *Mainstream Sustainability* was strongly represented, particularly in statements from the EU, US, and Japan. The G77 bloc of developing countries frequently articulated equity concerns, albeit in a narrow state-centric vein that overlooks intra-state inequalities or empowering local communities. Venezuela made occasional critical references to capitalism, and Bolivia consistently advanced a *Green Radical* position[48]. In short, reformist voices are prominent, but radical ones are barely heard. What has been entirely absent is any thorough engagement with those questioning states' taken-for-granted interests and goals. What Steven Bernstein calls the 'compromise of liberal environmentalism' remains beyond scrutiny.

Insofar as certain agendas remain beyond debate, reflexivity is suppressed and ecological rationality is impossible. It may be the case that proponents of *Limits* and *Green Radicalism* are wrong. Irrespective of whether they are right or wrong, there are rational justifications for engaging them in deliberation. The process of critically scrutinising existing political and economic objectives in light of the latest sustainability science is precisely what is demanded for ecologically rational procedures. This involves critical reflection of existing *goals* rather than just the *means* to achieve those goals. Designing climate change policy by reconciling it with existing development goals reflects a highly constrained form of reflexivity. Engaging in deliberation with those who question these goals may not produce either consensus or 'radical green' agreements, but it would open space for considering which aspects of our existing political and economic structures are implicated in the problem of climate change and broader conditions of unsustainability. It is now commonplace to dismiss as a 'myth' the possibility that exponential economic growth and sustainability are incompatible[49]. But given the strength of evidence surrounding (a) the limits of dematerialisation, and (b) the limited connection between material accumulation and human wellbeing, there are good ecological and social reasons for taking a less dismissive position. On the question of dematerialisation, technological optimists and mainstream economists are quick to point out that economic growth in industrialized countries has been largely decoupled from energy consumption and GHG emissions. If material output is decreasingly dependent on natural

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[48] *Idem.*

[49] e.g. UNEP, *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*, Geneva: UNEP, 2011.

resources there is no imperative to curb growth. Indeed, efficiency standards have improved dramatically in recent decades: on a global scale energy intensity was 33 percent lower in 2008 than in 1970[50]. But from a sustainability perspective, relative decoupling is far less relevant than absolute decoupling. In other words, we need to reduce the *amount* of resources that are being used rather than just reduce the *rate* at which they are being used. Here, the figures are less positive. Between 1990 and 2008, global GDP grew at a faster rate than GHG emissions, but emissions still grew by forty percent. In OECD countries, emissions grew by only 4 percent in the 1990s, while GDP grew by 23 percent[51]. But this data omits the emissions embodied in goods imported for domestic consumption. When these are taken into account, the consumption and economic growth in wealthy countries is shown to be highly emissions-intensive [52] (Peters and Hertwich 2008). Given the emissions intensity of growth-based development patterns, it is worth recalling their weak relationship with human wellbeing. Economic indicators, including GDP and surpluses and deficits are prominent indicators of progress and wellbeing. But studies consistently suggest that above a certain level, wealth and consumption is inversely related to human wellbeing[53]. In any case, the ends of private procurement can often easily be met through alternative sharing-based arrangements. An important body of literature is emerging that denormalises growth and dispels any ideas that a growth-centred model of progress is timeless and universal[54]. As Ferguson observes, 'the commitment to growth is a relatively recent, novel and hence not necessarily permanent feature of the global political economy'[55]. Hegemonic ideas do change, but there are no assurances that the rate of change will be sufficiently swift to avoid some very grim social and ecological outcomes.

CONCLUSION
Charting a course towards a more sustainable future will require applying a stringent standard of ecological rationality to any agreement that governments manage to reach at the Paris climate summit or beyond. Agreements that give a veneer of progress while reinforcing unsustainable conditions or placing certain questions beyond the realm of debate are no cause for celebration. To date, global climate change politics has featured a 'light green' form of reflexivity: the environmental problems associated with industrial development are recognized and attention is directed to identifying more sustainable means of reaching existing goals. A deeper ecological reflexivity is required if the international community is to bring human and economic development into line with an overarching goal of achieving and maintaining a mutually supportive relationship with the biosphere. This will require critical scrutiny of the 'liberal environmentalist' agenda and reflection on the possibilities for moving beyond growth-centric models of development.

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[50] http://www.sd-commission.org.uk/publications/downloads/prosperity_without_ growth_report.pdf, consulted January 2009.
[51] OECD, *Indicators to Measure Decoupling of Environmental Pressure from Economic Growth*, Paris: OECD, 2002, p.24.
[52] G.P. Peters and E.G. Hertwich. «CO_2 Embodied in International Trade with Implications for Global Climate Policy». *Environmental Science and Technology* 2008, 42(5): 1401–7.
[53] e.g., E. DIENER, and M.E.P. SELIGMAN, «Beyond Money: Toward an Economy of Well-Being». *Psychological Science in the Public Interest*, 2004, 5(1), pp.1–31.
[54] e.g. S.J. PURDEY *Economic Growth, the Environment and International Relations*. London: Routledge, 2010.
[55] P. FERGUSON, *The State and the Growth Hegemony Prospects for a Post-growth Society*. PhD Thesis. Melbourne: University of Melbourne, 2012, p.235.