"Climate Change and the Ecology of the Political: Moderate, Radical, and Marxist Perspectives on the Politics of Climate Change"

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Abstract: In this paper I argue for a Marxist ecological perspective on the politics of climate change. I begin by framing the ongoing debate regarding the nature or role of 'the political' in ongoing social scientific and theoretical debates on climate politics. Drawing upon Bertell Ollman's distinction between "moderate" and "radical" theories in political science, I reconstruct the "politicization debate" in climate politics to demonstrate how both sides are derived from not only different conceptions of the "problem" of climate change, but distinct conceptions regarding the nature of "politics" itself. Against the dualistic opposition between moderate "consensus-building" approaches on the one hand, and agonistic "radical" perspectives on the other, I draw upon Marxist ecology and Gramscian political theory to argue for the necessity of understanding current meta-debates over climate politics as just one front in the broader struggle for climate justice and hegemony over the "metabolic relation" between humans and the rest of nature. Whereas moderates are unable to adequately grasp the systemic nature of the ecological and political crisis of climate change, the radicals have thus far also been unable to specify the political and ecological specificity of the climate crisis as derived from the social and ecological contradictions of capitalism. Only a Marxist perspective which can simultaneously grasp the ecological character of the capitalist mode of production and its political forms via hegemony and the integral state (system) offers a coherent account that can both specify the nature of the crisis, and the necessary political means of (potentially) resolving it. I conclude by arguing on behalf of a Marxist perspective for an adequately *ecological* perspective onto political theory and theories of the political, including the politics of climate justice.

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I. Introduction

There is widespread recognition that the global ecological crisis of climate change is at its core a fundamentally political problem, yet political theorists have only just begun to think critically about what the crisis and its politics mean for our conceptions of the world. Applications of political theory to the climate crisis are wellestablished (e.g. Barry and Eckersley 2005; Gardiner 2006; Vanderheiden 2008) but, in the words of geographer Eric Swyngedouw, the question is no longer about "bringing environmental issues into the domain of politics as... how to bring the political into the environment" (2011, 254-5). That is, the global ecological crisis of climate change is forcing us to reevaulate the adequacy of existing and prevailing conceptions of the world, including our most fundamental political questions and concepts, as means of comprehending the crisis and the politics necessary to resolve it.1

At the heart of the matter is a contradiction. On the one hand, there is a widespread *consensus* among climate change scholars, activists, and policy-makers that our current global ecological conditions are unsustainable: that is, a continuation of "business-as-usual" will lead to emissions scenarios and warming rates that will have catastrophic implications for life on the planet. For examples of these we need look not much farther than the "Environmental" section of most any reputable newspaper – see for example, Sir Nicholas Stern's comments last year in *The Independent* noting that the

¹ Short note w/ citations regarding "the crisis." [see previous notes from prior PT papers and prospectus drafts]

global economy will "self-destruct" if we keep burning fossil fuels (Johnston 2016) – a claim backed up by the latest climate science research (Hansen et al 2016; Oil Change International 2016).

On the other hand, there is a profound *dissensus* regarding what is politically necessary to resolve the crisis. The discourse of policy elites and capitalist technocrats is that "innovation" and "resilience" are what we need to weather the storm. Capitalism may need to change, but by "greening" it, using market-based and individual-oriented policy initiatives to shift our energy consumption away from fossil fuels and towards more sustainable sources. The key in this view is to get carbon and other greenhouse gas (GHG) emissions "priced right," so that we can adequately and efficiently achieve collectively-rational outcomes. According to this "eco-modernist" perspective, if we appropriately incorporate the full social and environmental "costs" into the market valuation of the commodity, then we may be able to achieve progress in the form of climate "mitigation" (Asafu-Adjaye, et al 2015; Krupp and Horne 2009; Lovins, Lovins, and Hawken 2000).

For more radical and critical climate scholars and activists in the climate justice movement however, this is not nearly enough. Climate mitigation we agree must occur, and GHG regulation by state and "non-state" actors will have an essential part to play in this, primarily through carbon taxation and more immediate phasing out of fossil fuel consumption especially coal - but not via "false solutions" such as market-based

policies such as cap and trade and the production of fictitious commodities such as carbon offsets (Lohmann 2006, 2012; Bohm and Dabhi 2009; Pearse and Bohm 2014).² This question of climate mitigation must furthermore be accompanied by sufficient "adaptation" to a warming world, and there must be "just transition" to a post-carbon political economy.

But in order to achieve this vision of "climate justice," we must address fundamental problems which lie with "the system" itself: in the words of the popular climate justice slogan, "System change, not climate change!" That is, unless we resolve the fundamental social and ecological contradictions of *capitalism*, that specific form of historical civilization defined by the state system and predicated upon the transformation of the material world into the value form, organized by the endless accumulation and expansion of capital (Marx 1976; Foster 2000; Clark and York 2005; Malm 2016; Moore 2015), we will never address the fundamental source of the problems of climate change.³ Unless we can "change the system" - that is, overcome capitalism

² Note that there is increasing consensus regarding what constitutes a "false solution" to the problem of climate justice: both radical climate justice organizations such as Rising Tide North America (RTNA) as well as broad-based groups such as the Women and Gender Caucus of the UNFCCC criticize "market-based mechanisms" and "unsafe technologies" such as nuclear, CCS (carbon capture and storage), and genetically-modified biofuels on such grounds (RTNA 2010; Women and Gender Constituency n.d.).

³ It is the *uniqueness* of this moment in the social history of the Earth that is posited by the "Anthropocene" hypothesis/discourse - that "human activity" has become a *uniquely* geological force, which in turn presents profound social, ecological, and political challenges that we must confront collectively. But whether or not the global ecological crisis, as marked by climate change and all of the various intersecting social and environmental crises with it (mass extinction, ocean acidification, deforestation, etc.) represents a truly *qualitative* shift in the social history of the Earth (or the natural history of capitalism), rather than a more *quantitative* shift in the history of capital's exploitation of nature, is the subject of the "Anthropocene vs. Capitalocene" debate (e. g. Moore, ed. 2016; see also

and its political system - we are bound to fail in our global environmental struggle for social and ecological justice.

There is, in other words, a paradoxical situation whereby the crisis calls for a profound social and ecological transformation - and yet, if we look closely at the leading solutions to the problem of climate change, the underlying political economic system that is responsible for the crisis remains intact (Swyngedouw 2011). My goal in this paper is to provide a Marxist ecological critique of this political paradox, drawing upon Gramscian political theory to overcome the opposition between "moderate" and "radical" theories of the crisis and its politics, by arguing that the politics of climate change, or the struggle for climate justice, must be understood as the struggle for hegemony over the socio-ecological metabolism of the Earth system. In so doing, I contribute to ongoing debates in climate politics and ecological political theory by advancing a Marxist ecological critique of the political and radical ecological theory as expressed in the new or vital materialism of Jane Bennett and others. In sum, I conclude that a Marxist ecological approach to political theory provides a more coherent and comprehensive perspective to the politics of climate change and the climate justice movement.

[Paragraph summarizing/mapping the rest of the paper]

II. The Politicization Debate: Liberal and Radical Perspectives Regarding the Nature of Malm and Hornberg 2014).

<u>Climate Politics</u>

In climate change scholarship this political tension – regarding the increasingly recognized severity and urgency of the crisis, and the nature of the political proposals and possibilities being offered as its potential (re)solution(s) - is becoming increasingly acknowledged by a number of scholars, primarily from disciplines at the intersection of the social and environmental sciences including critical human geography, environmental policy, and science and technology studies (STS) (Swyngedouw 2010, 2011, 2013; Moolna 2012; Goeminne 2012; Machin 2013; Kenis and Lievens 2014; Pepermans and Maeseele 2016). These scholars are recognizing the distinctly *political nature* of the global ecological crisis: that is, we do not face so much a conflict over the *types* of *political* solutions are available to us, in the form of policy proposals or institutional mechanisms, so much as conflicting conceptions regarding the necessary *form* of the *politics* themselves to address the crisis.

Using the terms of the scholars engaged in this debate, I call this the "politicization debate" in climate change scholarship. In its broadest terms, this debate can be framed as between those on the one hand who emphasize a need for a "consensus-based" form of politics, which, I will identify as "moderate" positions within the politicization debate, against those who on the other hand argue on behalf of the necessity for a more "agonistic" approach to climate politics, which I identify as the "radical" position. I will critique these two positions and offer my own, Marxist

alternative position in the following sections.

In his 2000 article, "What is Political Science?" Bertell Ollmann offers a threefold typology of approaches to understanding political problems and their potential solutions, which he characterizes as "moderate," "radical," and "Marxist." The moderate, Ollmann argues, sees problems in the world but treats them as largely disconnected from one another, as discrete issues or themes to be tackled one by one. The radical, on the other hand, sees political problems as interconnected, and causally linked through a system of relations. According to Ollmann, only the Marxist adequately ties these relations, problems, and potential solutions together, naming the system "Capitalism" and understanding the distinctly political role that the state and class relations play in organizing these relations. And it is only by struggling against Capitalism, and the state (system), according to this perspective that we call "Marxist," that we can actually seek to overcome these problems (Ollmann 2000).

A similar typology is useful for understanding current debates over climate politics. "Moderate" perspectives span the sub-fields of social and natural science, advocating piece-meal approaches to the multi-variant tasks and challenges that the climate crisis presents. Perhaps most fundamentally this is reflected in the division between "mitigation" and "adaptation," which has been fundamental to the political framing of climate change since the origins of the IPCC and UNFCCC.4 Climate change

⁴ IPCC refers to the Intergovernmental Panel on Climate Change, the scientific authority on climate change known for its comprehensive reports. The UNFCCC is the United Nations Framework

mitigation refers to attempts to address the root causes of climate change, namely the global warming of the atmosphere through the emission of greenhouse gases (GHG). Such attempts at 'solutions,' which range from the variety of proposals to reduce CO2 emissions to more radical for geo-engineering (attempts to deliberately manipulate the Earth's environment to counteract the greenhouse effect), are in effect efforts to provide what in traditional political economic theory is a *public* good: a stable climatic environment. On the other hand, "adaptation" to climate change involves, at the most basic level, implementing what are seen as necessary responses to the changing environment that is occurring as a result of climate change. This ranges potentially from simply ensuring better disaster-preparedness at a household level, to the possibility of wholesale migration of populations from low-lying flood-prone areas. These problems of adaptation are necessarily geographically specific and thus understood as inherently private goods.⁵ As such, the political "problems" of climate change can for many environmental social scientists be reduced to specific sets of "collective action" problems, to be managed through the negotiation and construction of environmental regimes, the facilitation of collectively rational public and private cooperation and competition, and other such political administrative and technical means. In terms familiar to the social scientific literature, many of these approaches can

Convention on Climate Change, the "political" institution on climate change and its annual Convention of the Parties (COP) climate negotiations.

⁵ For more on the distinction between "mitigation" and "adaptation," see IPCC 2014. For more on the various ethical and political dimensions of the problem of climate change, see Gardiner 2006; Steffen 2011; and Jamieson 2011.

be understood through the framework of climate or Earth System "governance" (see, e.g. Chukwumerije, et al 2009; Stevenson and Dryzek 2012 and 2014; Biermann 2014; Biermann, et al 2012; Gupta 2014).

More specifically within the field of environmental political science and climate change politics, we can further identify "moderate" and radical perspectives on climate change politics according to whether or not they view the "politicization" of climate change as a primarily a "problem" or as a "solution." At least this is how the debate is framed by science communications scholars Yves Pepermans and Peter Maeseele (2016), who identify four main types of "consensus-building" approaches to climate change. The "technocratic" approach sees climate change as an objective, scientific phenomena, which requires the right kind of communication strategies to convince individuals to change their minds, and their behavior, with regards to climate and the environment.6 Accordingly, there is much overlap between this group and the "social marketing" approach, which emphasizes the role that political psychological "framing" can play in addressing climate change. These approaches emphasize political strategies and techniques that highlight climate change's effects on security, economics, and other politically relevant categories that voters respond to and act upon (e.g. Kahan 2012;

⁶ Pepermans and Maeseele cite popular science websites such as "Skeptical Science" and "The Consensus Project" as examples where "scientists aim 'to remove the politics from the debate by concentrating solely on the science'" (2016, 479). Other examples of this approach could include ecomodernists more generally, including those at neoliberal thinktanks such as the Breakthrough Institute (Asafu-Adjaye, et al 2015), as well as most mainstream "economistic" approaches to climate politics (e.g. Stern 2007; Nordhaus 2015).

Nisbet and Fahy 2015; Nisbet and Myers 2007; Zia and Todd 2010). These two sets of approaches, which together might be seen as complementary,⁷ can be understood as "common sense" (Gramsci 1971) conceptions of climate politics from a rationalist, secular, natural scientific worldview. As such, these perspectives are ubiquitious and hegemonic among those who share a broadly "liberal" or "progressive" outlook on climate change.

The third and fourth types of politically moderate, consensus-building approaches take a generally more "normative" environmental political theoretical approach. "Green republican" approaches emphasize the role that constructing discourses, institutions, and practices around a conception of a "green citizenship" or "green state" can play in addressing climate change. These approaches expand upon the narrowly individualist or consumer-oriented conceptions of the technocratic or social marketing frameworks by adding a more explicitly "political" dimension, in the more "classical" sense as bound up with "political community," to their environmentalism (e.g. Eckersley 2004; Eckersley and Barry, eds 2005; Dobson and Bell,

⁷ What might be seen as a crucial dividing line among these two approaches is their respective theories or outlooks on democracy. As their names suggest, "technocratic" approaches may endorse, implicitly or explicitly, "elitist" (or Schumpeterian) theories of democracy, whereby climate scientists, regulators, bureaucrats, and their institutions should be politically insulated from the citizenry or public opinion. Accordingly these perspectives often express outrage and dismay against what they see as the reactionary wave of "populism" embodied in figures like Donald Trump (Wintour 2017). On the other hand, "social marketers" clearly have a more generally "optimistic" perspective on the masses, who just need more "persuasion" with respect to environmental and climate issues. Their theory of democracy is still an attenuated one, at most advocating a more broadly representative, proceduralist, or liberal institutionalist conception.

eds 2005; Dobson and Eckersley, eds 2006). "Deliberative" greens go beyond the republican's conception of a universal or objectively-identifiable "good life" by drawing upon Habermassian-inflected theories of political and ecological engagement and participation, most notably in the work of John Dryzek and his collaborators (Dryzek 2013; Stevenson and Dryzek 2012, 2014). Political theorist Amanda Machin uses a similar four-fold framing of mainstream approaches to climate politics in her 2013 book *Negotiating Climate Change*.8

Together these approaches, while sharing important differences betweeen them, can all be understood as "consensus-building" insofar as they all agree that the lack of progress in resolving the climate crisis is a *result* of the *politicization* of climate change. That is, ideological and partisan divisions are seen as inhibiting the potential for cooperation and collaboration in jointly addressing the climate change issue. Climate change here is understood as a fundamentally objective phenomena that can be apprehended and rationally managed through scientific and deliberative means, and thus the recommended strategies and tactics for addressing the crisis are those which de-emphasize political divisions, and antagonisms, and instead seek to promote compromise. "Politics," in other words, is the obstacle to be overcome in order to

⁸ Machin's typology consists of "techno-economic," "ethical-individualist," "green republican," and "green deliberative democratic" approaches, against which she advances her "radical democratic" alternative. Note that it might be necessary to consider additional social scientific and political theoretical approaches within this "moderate" framework, such as green Rawlsianism (e.g. Vanderheiden 2008) or other forms of environmental democratic (Ellis 2016). This framing is not meant to be exhaustive as much as illustrative, largely derived from the "radical democratic" literature on climate politics that my critique is primarily addressed towards.

achieve success in addressing the climate change issue (Pepermans and Maeseele 2016, 479-480). I call them "moderate" according to Ollman's typology insofar as the climate problems they identify can all be parsed out according to their distinct and specific causes and effects, which are in turn to be handled by distinct policy approaches and disciplinary specialists. More importantly however, they are moderate to the extent that while criticizing actually-existing political practices and institutions, the solutions they propose are essentially compatible with or re-inforcing of the status quo – that is, they are reformist, as the political structures and institutions themselves are not seen as a fundamental *source* of the political *problems*, but rather primarily the source of their potential *solutions*.

On the other hand, the radicals criticize the moderates on their inability to grasp the structural-systemic inequalities and injustices that define the socio-ecological context of climate politics, which itself is seen as symptomatic of the "post-political" tendencies of neoliberal globalization (Swyngedouw 2011). This other, radical side of the politicization debate insists that the fundamental problem in climate politics is the exact opposite of that identified by the moderate "consensus-builders": rather than seeing "politicization" as a key problem to be overcome or avoided, this other group of scholars argues that it is a *lack* of politicization around the climate change issue that obstructs any real capacity for resolving the crisis (Pepermans and Maeseele 2016). By affirming a rationalist, positivist, and natural scientific worldview as the *only*

scientifically- and socially-responsible approach to climate politics, the moderates simultaneously exclude or dismiss dissenting perspectives, which seek to call into question those fundamental structures and relations they take for granted, as irrational, extremist, or unrealistic. As Gert Goeminne notes, this tendency of the moderates to occlude more "systemic" critiques of climate politics, and (thereby the potential for) more "radical" solutions to the crisis, seeks to erase or suppress the fundamentally "political" nature of climate politics, which then manifests as a "return of the repressed" in the form of political reaction (2012) – a point laid bare in the wake of the 2016 election and the rise of anti-ecologism qua reactionary nationalism, or what Wainwright and Mann call "Climate Behemoth" (2013; 2015; see also Haeringer and Mueller 2016).9

Against this moderate, "depoliticizing" approach, the radicals insist that, due to the very nature and profundity of the crisis, the discourse around climate change *must* place contentious questions and debates about the means and ends of how to organize society and our relations within nature at its very core. The radicals, or what Pepermans and Maeseele call the "critical debate" perspective, affirm the need for contention and struggle around these essential questions precisely because the climate crisis is so deeply entwined with practically every facet of our social lives, and cannot be neatly separated from the actually-existing inequalities and injustices in our modern world-

⁹ Naomi Klein makes similar point in *This Changes Everything* (2014) when she acknowledges that the political reactionaries and climate denialists of the Heritage Foundation and other right-wing thinktanks and industry fronts have a more sophisticated perception of the climate crisis than most liberal environmentalists and scientists.

system (480-481).

As we can see, the problem in the division between these two approaches – the moderate and the radical – is not merely that they adopt different epistemological stances (foundationalism or post-foundationalism) or even that their diagnoses of the problem are distinct: rather, it is that what follows are fundamentally oppositional strategic political implications. It is not enough to say that both sides agree on the necessity of resolving climate change "politically," but rather that what precisely this necessitates stand in distinct contradiction. To seek a goal of "social consensus," as the moderates do, requires "communication strategies and public forums which diffuse ideological polarization and increase consensus" (Pepermans and Maeseele 2016, 478) - strategies and conditions recognizable to liberal, republican, and deliberative democratic approaches in political theory.

However, if the goal is "opening the space for debate between different choices for alternative socio-environmental futures," through a political position known as "agonism" (Pepermans and Maeseele 2016, 478; Machin 2013), this implies a critically necessary role for *conflict* and *opposition*, not consensus and cooperation. According to these radical theories of climate politics, it is essential to foment opposition and dissent to the alleged "consensus," not fall in line with it. These are two diametrically opposed strategic positions from the standpoint of what otherwise could be a common cause: to respond politically to the challenge of climate change. Ultimately, I think the radicals are right to acknowledge the need for a conception of politics that includes not just "consent" and "cooperation" but "resistance" and "a(nta)gonism" as well. Indeed, we might say, this is immanent to the world-historical nature of the Anthropocene thesis, taken to its logical political conclusion: that the crisis we face requires a fundamental rethinking and re-engagement with the taken-for-granted nature of our politics (let alone our political theory). We cannot assume that the social and political structures and institutions which have given rise to this crisis are adequate to the task of resolving it. And to the extent that the radicals force us to acknowledge the immanently political nature of the crisis and its systemic relations, they provide a more adequately and appropriately *political* approach to the climate crisis of the Anthropocene.

The problem with the radicals, however, is that they, much like the liberals in fact, are incredibly vague about the root cause(s) of the crisis – that is, they do not adequately specify the nature of the crisis as derived from the social and ecological contradictions of *capitalism*. As a tendency, the radicals go beyond the moderates insofar as they acknowledge that the existing institutional and structural relations are inadequate to the task of addressing the problems of climate change, and they are right that we need to not only allow but to actually facilitate these critical perspectives to achieve more radical political change. However, the radicals lack a coherent conception of the nature of the problem of climate change, which in turn leads to incoherent

political "solutions" - more deliberation or agonism and resistance may be *necessary* but are by no means *sufficient* to even be *able* to 'resolve' the crisis – assuming of course we can even imagine a potential resolution to this crisis, a point which may be resisted by post-humanists and nihilists (e.g. Mitchell 2016). Returning to Ollmann's critique of moderate and radical political science, without a clear identification of the crisis as derived from the specific social and historical conditions of capitalist reproduction, or at least the acknowledgement that *overcoming capitalism* is itself a necessary (even if still not totally sufficient) condition for resolving the crisis, we are at best still left grasping for a way out.

At their worst however, the radicals risk falling into the worst sort of ecopolitical misanthropy, whereby it is not the historically *specific* and socially *contingent* nature of *capitalism* (as a socio-ecological phenomena) that lies at the heart of the crisis, but rather the *determinancy* of (human) *nature*. This may take the specific, essentialized form of our *politics*, as in the ontological priority to *the political* that is presupposed by agonists like Machin, Swyngedouw, and Mouffe. For these theorists, the priority of the political is not merely a *social* or *historial* but fundamentally an *ontological* condition, constituted in the the dualistic separation between political identities and their others, that is in the very consitution of the political itself, as a political community which is constituted by other political communities. This particular conception of the political is one rooted in the friend/enemy, man/nature, subject/object dualisms predominant in Western political philosphy, including among the works of Thomas Hobbes and Carl Schmitt (among many others).

While political theorists like Lois McNay have used critical social theory to critique the "social weightlessness" of this abstract ontology of "the political" (2014), contemporary political theory has so far inadequately addressed the *ecological* dimensions of this reductionism, including as it presents itself in the ecological theory of the new materialists. Rather than falling into the reductionary *dualism* of the agonists, the radical ecologists embrace a monism that similarly reduces, or collapses, the "social" into the "natural," but by abolishing the distinction altogether rather than subordinating the former to the latter. Below I will elaborate this point through a critique of Jane Bennett's vital materialism, but consider Audra Mitchell's embrace of nihilism through the ontological implications that a focus on extinction poses for world politics (2016). Rather than affirm a collective meaning-making, in the form of the production of a collective subject of (cosmopolitical) transformation, the spectre of extinction effectively forecloses any truly "revolutionary" or world-changing potential by consigning us to a certain, indeed pre-determined, fate. Any radical contingency of the social or historical (and ecological) is displaced by an emphasis upon the certainty of our own loss. Rather than "opening up" radically new horizons of political possibility through a *transformation* of the underlying social, political, and ecological conditions, these radical materialists impel towards a politics of acceptance and

resignation, sharing a distinct similarity with the "uncritical" Anthropocene scholars, who define the contemporary crisis by reducing the radical diversity and plurality of human social and historical forms to a singular *anthropos* (CITES). The radical ecologists therefore end up leaving us without an adequate conception of a potential political alternative, or means of resolving the crisis, just as the radical democrats and social scientists described by Ollmann. [Clarify/elaborate \rightarrow conclude with lead-in to next section]

III. Marxist Ecological Perspectives on the Crisis

Fortunately there is a way out of this theoretical and political dilemma, and it is through the framework of a Marxist ecological and political approach to the crisis of climate change. Marxist ecology has a coherent (if not unified or singular) conception of the problem, as well as the necessary resolution: climate change is a result of, or derived from, the crisis tendencies inherent to the capitalist mode of reproduction – that is, a *global* capitalism with corresponding socio-ecological contradictions and antagonisms that is becoming increasingly *planetary* in scale and scope (this is, again we might say, the Anthropocene problematique). The necessary resolution of the crisis is thus a social and ecological revolution that overcomes capitalism and its political system. Agreement on these essentials is what links together the otherwise diverse approaches of the Marxist ecologists, of which I will briefly discuss three approaches: the environmental sociology of James O'Conner and John Bellamy Foster, the critique of fossil capitalism by Andreas Malm, and the world-ecology of Jason Moore.

First, the environmental sociologists locate the root cause of the crisis in capitalism's endlessly expansionary tendencies, manifest in the "second contradiction" (O'Conner) and "metabolic rift" (Bellamy Foster) theories of capitalism: that capitalism tends towards the destruction or erosion (over-exploitation) of the material basis for its reproduction. [Need to elaborate]

The second example of Marxist ecology I identify is in the work of Andreas Malm, whose book *Fossil Capital* (2016) takes a much more historiographically-informed approach to identify the root cause of the crisis as located in the class struggles between workers and capitalists over the conditions of reproduction. More specifically, the thesis of *Fossil Capital* is that the origins of the climate crisis must be traced to the switch from riverine hydraulic power to coal-fired steam power in England in the 19th Century, which occurred not because coal was "cheaper" than water, but rather because of the ability it afforded capitalists to discipline and control labor (Malm 2016).

The third Marxist ecological perspective to consider, that of Jason Moore's "world-ecological" framework, also takes a historically-informed approach to the crisis, but insists that to understand the origins of the crisis it is not sufficient to begin with England's "industrial revolution," but rather, we must go further back to the "long 16th Century" and the early development of a capitalist world-system under the aegis of the

Dutch Republic. Capitalism here must be understood as a world-making (and unmaking) social and ecological force, as the endlessly expansionary drive to accumulate capital tends towards the casting of the world in capital's own image, that is, as an alienated, external, differentiated, quantifiable, and assimilable world of "things," rationalized in the form of Cartesian dualism. Capitalism, as a historical formation, not only produces knowledges of "Nature" (with a capital-N) as something external, "quantifiable," and ultimately exchangeable (and thereby "value-able"), but relies upon the "appropriation" of nature and its unpaid "work" outside the immediate circuits of capital and the production of exchange value as much upon as "exploitation" (of human "labor") within these circuits. Capitalist civilization is therefore not just a "mode of production" but fundamentally a way of organizing and reproducing relations with(in) nature (Moore 2015).

While each of these approaches has their own distinguishing characteristics and differences, replete with their own, often vehement, disagreements, ¹⁰ in terms of understanding the ecological and political dimensions of our contemporary climate crisis of the Anthropocene (or what Malm and Moore argue should be more properly called the "Capitalocene," "an ugly term for an ugly phenomena" [Moore, ed 2016, 5]) I argue that it is more productive to see their differences as complementary, rather than contradictory. What matters for our purposes is that the Marxist ecologists agree on the

¹⁰ For an overview of these debates, including their unfortunately personalistic dimensions, see Proyect 2016.

fundamentals: that the current crisis is not derived from something intrinsic to "man" as a biological or even political animal per se (this is, we might say, the *uncritical* Anthropocene thesis, a myth which many critical scholars across the social sciences and humanities, Marxists and non-Marxists alike, have spent much time and energy dispelling [Malm and Hornborg 2014; Cox 2015;]). Rather, the planetary ecological crisis is a product of the distinctly social and historical relations of our contemporary conditions within a system of an increasingly globalized capitalism.

What the Marxist ecological approach has contributed thus far to the study of climate politics is the diagnosis of the problem: that capitalism and the specific form of its relations with nature is responsible for generating the contemporary global ecological crisis of climate change and the Anthropocene. Capitalism is a system that is predicated upon the limitless exploitation of nature(s), human and otherwise. For humans and the Earth, capital's intrinsic drive towards endless reproduction and accumulation has devastating material consequences, whether in the form of the exhaustion of "natural resources" (again both human and extra-human), or the more directly physical, symbolic, and structural violence of capitalism's regimes of exploitation, appropriation, and accumulation, including centuries of colonization, slavery, racialized and sexualized oppression, and other forms of state and extra-state violence.

Beyond this common acknowledgment which underpins all such eco-political

analyses we can identify as Marxist, there are competing explanations regarding what might be considered the "causal pathway" of the climate crisis. For Andreas Malm, the climate crisis is best understood as the specific result of the class struggles during the fossil-fueled industrialization of England, and subsequently the rest of the world (2016). Thus, for Malm, the climate crisis is primarily understood in the specifically "fossilized" form of contemporary capitalism, derived from class struggles at the site of production, not from the inherent material properties of modern politics in the form of "carbon democracy" (Mitchell 2011) or the Earth itself (Yusoff 2013).

More explicitly *ecological* Marxist perspectives emphasize the relation of the climate crisis within a more general theory of ecological crisis at a planetary scale. Again, defining the particular dimensions of the crisis are what divides Marxist ecologists: scholars such as John Bellamy Foster and Ian Angus highlight the crisis in terms of capitalism's threats to the "natural limits" of the Earth system (Foster, Clark, and York 2010; Angus 2016). Accordingly, these analyses dovetail closely (yet critically) with the narratives of the Earth scientists, who date the onset of the "Anthropocene" from the mid-20th Century onwards and the various geophysical "golden spikes," including atmospheric CO2 and temperature levels, the sixth great extinction, mass production and accumulation of synthetic materials (such as plastics) in the environment, and the planetary register of nuclear radiation from atomic bombs [CITES].

On the other hand, Jason Moore, like Malm, argues that the origins of the ecological crisis must be traced much earlier, to the development of capitalism itself. Here Moore differs with Malm on grounds that parallel broader debates in Marxist historiography regarding the "origins of capitalism." Malm's narrative, like that of Robert Brenner (and Maurice Dobb), emphasizes the more "internal" dynamics of capitalism and its resulting crises (class struggle over production and exchange in England), whereas Moore's "world-ecological" approach, like that of Immanuel Wallerstein and other scholars of the capitalist "world-system," emphasizes the "external" dimensions of capitalist development. For Moore, the onset of capitalism can be traced much earlier than the 18th Century and across a much larger geographical space, from the timber and peat frontiers of Northern Europe to the sugar and slavery nexus of the South Atlantic, evolving with the shifting dynamics of "commodity" frontiers" and colonization. Accordingly, for Moore the "fossilized" nature of the current crisis is obviously relevant due to the greenhouse effect, yet we cannot overlook the other ecological dimensions of capitalism's drive to self-reproduce, which has produced multiple eco-political regimes of accumulation and energy. These regimes include a reliance on non-fossilized carboniferous sources during the Dutch Republic (timber and peat in particular) and, as we are beginning to see, capitalists are increasingly turning towards "alternative" sources of energy (eolic, solar, geothermal, nuclear, etc.). A "post-fossil" capitalism in this framework is thus not only

"conceivable," but may not in fact turn out to be any more beneficial ecologically (that is, socially and environmentally) than its predecessors. How many rare Earth minerals and heavy metals would it require to refit the existing fossil capitalist infrastructure? Would the replacement of electricity sources from fossil fuels to nuclear really be any "greener"?11 In any case, such questions regarding the shape of any potential future society, capitalist or otherwise, can only be resolved "politically": that is, how they can be answered concretely and materially only comes as a result of actual political struggles, and as such, are still to-be-determined. As is the question of whether or not we can achieve a global ecological revolution at all.

The problem for our purposes is that as yet, the Marxist ecologists have not sufficiently developed the "resolution" to the crisis, beyond simply identifying the resolution in the form of an ecological socialist revolution (this, of course, should not be surprising to us) – it is my contention, which I intend to develop in the rest of my dissertation project, that we can identify the immanent potential for the "resolution" of the crisis in the form of the global climate justice movement. If the Marxist ecologists have sufficiently theorized the historical and systemic nature of the *origins* of the crisis, I want to argue that, theoretically, our best means of apprehending the necessary *resolution* to the ecological crisis of the Anthropocene comes to us via the Marxist

¹¹ This is of course not to consider the radically differential effects of capitalist distribution of access to these energies sources, which of course remains primarily a question of climate mitigation; we can and should expect even greater injustices with respect to capitalist climate *adaptation*, as poor, marginalized, oppressed, and otherwise vulnerable communities at a global scale will continue to become "sacrifice zones" in the face of coming disasters and catastrophes.

political theory of Antonio Gramsci.

IV. Climate Justice and the Struggle for Hegemony

In this section, my goal is to extend the Marxist ecological framework politically, or more specifically through a political theoretical critique of contemporary radical theories of "the political." In doing so, I draw upon Gramscian political theory to lay the basis for a Marxist ecological geopolitics, literally a "politics of/for the Earth." In this framework, whereby "politics" is understood in Gramscian terms as the struggle for and exercise of hegemony, the ecological- and geo-political dimensions are understood in terms of the struggle to realize a socially and ecologically emancipatory, anti-capitalist politics at a world scale, that is, a planetary communism (or "geocommunism" [Saldanha 2013]). With respect to ongoing struggles for climate justice, this means the recognition that the realization (or materialization) of climate justice can only be achieved through overcoming capitalism and its politics. In other words, the struggle for climate justice is the same struggle to overcome the planetary ecological crisis of capitalism, which must be understood as the struggle to achieve an alternative form of hegemony over the "metabolic relation" of humans and the rest of nature (Marx 1976; Foster 2000; Clark and York 2005; Moore 2015) at a planetary scale.

As we saw in the previous section, while the Marxist ecologists have thus far theorized the *nature* of the crisis, I argue they have thus far failed to sufficiently theorize

the *political* dimensions of the crisis. In particular, we need a political theory *for* that political potential (and potential politics), political theory to inform political practices, goals, tactics, and strategy (ie *praxis*) for social and ecological revolution and emancipation. Against critical theorists and even Marxists (like EO Wright [2010]) who effectively foreclose the possibility of a planetary communist ecological revolution, I affirm the *necessity* of such political theoretical work, even if only speculative (e.g. Wainwright and Mann 2013; 2015), in the face of the crises that confront us. And for such reasons, I argue a Gramscian political theoretical framework offers not just a better *descriptive* alternative of actually-existing climate politics, but it also offers an important and useful *prescriptive* framework of and for a politics of climate justice.

[Here I need a paragraph or two to transition, first by highlighting the role that Mouffe's agonism plays in the radical democratic theory of the agonistic climate theorists; then better pull together this section on Gramsci's PT with the ecological Marxism of prior sections, perhaps referring to the resurgence of Gramscian political theory – Gramsci never went away but we are still learning from the PN]

The political theoretical approach of Antonio Gramsci, or "philosophy of praxis," influenced by Marx and Marchiavelli, synthesizes/transcends the dichotomy between a conception of the political defined in terms of consensus *or* agonism, "consent" *or* "coercion," cooperation *or* conflict, by placing *all* these dimensions of politics in dialectical relation via the concept of "hegemony." This is a point that Peter Thomas

elaborates masterfully in his Gramscian critique of the concept of the political (2009a, 2009b). Thomas argues that, against post-Marxist radical democratic and agonistic political theories, including the "not-so-well-disguised Platonizing theories" of Carl Schmitt and his intellectual descendants (agonistic democrat Chantal Mouffe perhaps most notably), the body of work of Antonio Gramsci provides a more adequately materialist and historicist perspective on the nature of politics under capitalism.

According to Thomas, in the Prison Notebooks Gramsci

"attempt[s] to rethink the concept of the political in both non-metaphysical and concrete terms by means of a theory of hegemony... [H]e attempts to provide an analysis of the 'production' or, more exactly, 'the 'constitution of the political' [– constitution in both the active and formalized sense –] as a distinct social relation within [what *The Prison Notebooks* describe as] the bourgeois 'integral state'. 'Hegemony' describes the process of this constitution, or the way in which historically identifiable political practices – the social relations of communication, coordination and organization of the project of a particular class or social group – have come to define the nature of 'politics' as such... [T]his analysis forms the foundation for an attempt to think the possibility of a notion of a political 'of a completely different type'... a notion and practice of 'the political' that would be adequate to the formation of what Gramsci calls a 'self-regulated society'." (28-29).

[Elaborate Gramsci's political theory, with focus around the note entitled

"Prediction and Perspective," which includes discussion of "Machiavelli's centaur" and

the "dual perspective" in "political action and rational life"12]

¹² Relevant notes from Gramsci:

⁻On "politics": "Machiavelli and Marx" (SPN 133-136; Notebook 13, §20*): 'politics as an autonomous activity'; "Elements of Politics" (SPN 144-147; Notebook 13, §13*): 'Primordial' political fact of the existence of 'leaders and led'

⁻On "hegemony": "Some theoretical and practical aspects of 'economism'" (158-67; Notebook 13, §18): Hegemony must take account of interests of "led"; hegemony is ethico-political but necessary

To apply this Gramscian lens to the politics of climate change is to recognize both that the "consensus building" approach of the moderates is ultimately predicated upon the maintenance of a capitalist hegemony, while the limit of the radical, agonistic approach13 is that it isn't enough to see "opposition" or resistance as an end in itself: the goal, in other words, is to win! Or, the goal ultimately, should be to achieve hegemony - albeit of a distinctly different sort than that which prevails under capitalism, to bring a different conception of the world into hegemony. Capitalist hegemony is predicated upon the "leadership" of one class over another, specifically the "capitalist class," whereby the leading "conception of the world" corresponds to the maintenance of existing class relations (Gramsci 1971, Wainwright 2013). The goal of social and ecological resistance struggles therefore should not be merely to reform the existing institutions that can themselves be understood as derived from the underlying contradictions of capitalist reproduction. Rather, the goal must be to achieve an alternate form of hegemony over the social and ecological reproduction of society and its relations with the Earth, predicated upon the abolition of class distinctions and

-"The formation of the intellectuals" (SPN 12-13; Notebook 12, §1*): (integral) State as unity of Civil Society and "State" and role of hegemony; function of intellectuals w/r/t hegemony -On "integral state": "Sociology and Political Science" (SPN 243-5; Notebook 15, §10): State defined as entire complex of practical and theoretical activities with which ruling class...

[&]quot;economic"; "Prediction and Perspective" (SPN 169-70; Notebook 13, §14): "dual perspective" in political action and national life; Machiavelli's centaur

^{-&}quot;Statolatry" (SPN 268-9; Notebook 8, §179): State as dialectical unity of civil society and "political society"

¹³ Its worth noting that in contemporary political theory, what Pepermans and Maeseele refer to as the "agonistic" or "critical dialogue" approach are commonly framed in opposition to one another, 'agonism' and 'dialogue' (Honig 2007).

inequalities between humans and the rest of nature.

[Return to radicals for contrast with this Marxist perspective: Swyngedouw, Kenis & Lievens; Mouffe quote in *The Nation*]

The upshot therefore is this: the struggle for climate justice must be understood in terms of a struggle for (anti-capitalist, social-ecological) hegemony. We can thus put this Gramscian political theoretical framework together with the rich tradition of Marxist ecology that I have previously discussed, enabling us to understand the conditions of the planetary crisis, both in terms of climate change itself and the inability of the global political system to effectively address the problems climate change generates, as derived from the social and ecological contradictions of capitalist reproduction. The political responses in the form of "climate governance" represent, under conditions of capitalism, the hegemonic attempts to manage the crisis in and through existing social property relations of capital and political relations of the state system at a global, and increasingly, *planetary* scale.

The global struggle for climate justice, which I identify with the climate justice movement, must therefore be understood in "negative" terms of resistance against the hegemonic political institutions that are predicated upon maintaining the contradictory ecological relations upon which capitalism is predicated [climate governance]. But the "positive" aims of the movement must be affirmed as well, which go beyond merely opening the space for radical democratic participation and ecological citizenship, and

towards the actual resolution of the eco-political contradictions of capitalism and the state system, through the achievement of an alternative social-ecological hegemony. Resolving these contradictions will not (necessarily) be an end to "politics" per se but rather an end to politics as we have known it to be, under capitalism and previous historical-ecological-political regimes.

V. Climate Change and the Ecology of the Political: Marxist vs. New Materialist Perspectives

In this penultimate section I want to elaborate upon this Marxist ecological conception of the political by putting the work of Marxist ecologists Jason Moore and Joel Wainwright and Geoff Mann into contact with the "new materialisms," specifically the work of critical eco-political theorist Jane Bennett and her "vital materialist" framework. To summarize: the world-ecological crisis of capitalism can (and indeed must) be understood as representative of the social and ecological failures of the hegemony of capital to regulate the social metabolism of the Earth system. To overcome this crisis, a world-ecological revolution is necessary, in order to install an alternative, ecologically-oriented hegemony over the relations between humans and the rest of nature. Whatever form this revolution must take must ultimately take into account the "agency" of "extra-human natures," but at the same time must have a critically *humanist* perspective (one that is oriented, in other words, towards "social" as well as "environmental" *justice*). Politics, and "the political," in other words is not just *historical* and *social*, but fundamentally *ecological* as well. This is an insight adequately captured by the "historical materialism" of Marxist ecology as in the work of Moore and Wainwright and Mann, but not sufficiently in the "new" or "vital" materialism of Bennett and others.

[Summary/overview of new materialisms: Bennett 2010; Coole and Frost, eds 2010; Schmidt 2013; Coole 2013; Chandler 2013; Connolly 2013; Connolly 2017]

Now let's turn to Moore, who himself begins with the relevant unit of analysis: the capitalist world-ecology, that is, the dialectical totality of of human and extrahuman relations within nature, or what Moore also calls the "oikeios," the "creative, historical, and dialectical relation between, and always within, human and extra-human natures" (2015, 35). Moore chooses to focus on a unified conception of the nature and society as a totality, organizing his project around the capitalist world-ecology or oikeios *instead of* a conception of "society" *and* "nature" because to do so "open[s] up the question of nature - as a matrix rather than resource or enabling condition - for historical analysis" (2015, 35-36). This is intended to overcome the traditional conception of nature as the passive backdrop *upon which* politics and the broader human drama takes place, and instead dialectically integrate nature *with* politics (and

politics with nature).14

¹⁴ Moore explicitly defines his project as an attempt to overcome the hegemony of the "Cartesian dualism" that has defined the ideological representations and material conditions of our relations with nature in the modern world. While his work is deeply indebted to previous generations of critical ecology and eco-socialist thought, Moore argues that most of these approaches are still susceptible to a dualism in the form of "Green Arithmetic," where the formula "society plus nature" doesn't add up to

Here Moore's argument closely mirrors and builds off the work of Marxist geographer Neil Smith, for whom relations with nature are never simply "given," but rather nature is "produced," socially and environmentally, materially and symbolically. The production of nature is an immanently *political* process, defined by the intersecting dynamics of class struggle, ideological representation and scientific practices, state power, and other such processes and relations (Smith 2008). Nature, Moore argues, "is not offered as an additional *factor*, to be placed alongside culture or society or economy[...] instead[...] the matrix within which human activity unfolds, and the field upon which historical agency operates." From this perspective, world-ecological formations or "civilizations" such as capitalism do not interact with nature as much as "develop *through* nature-as-matrix." And here Moore explicitly refers to climate change as his example: "Civilizations develop by internalizing extant climate realities... "Climate" is not a historical agent *as such*; it is no more historical agent, in itself, than empires or classes abstracted from the web of life [another synonym for the "oikeois" or "world-ecology"]" (2015, 36).

It is in this discussion of political agency that Moore's argument begins to resemble, at least on the surface, that of Jane Bennett's vital materialism. Bennett draws upon the monism of Spinoza and Latour to develop an ecological conception of political agency that goes beyond the human: "the efficacy of effectivity to which that term

an adequately dialectical synthesis for critical ecological analysis of the contemporary crisis (Moore 2015, 5).

[agency] has traditionally referred becomes distributed across an ontologically heterogenous field, rather than being a capacity localized in a human body or in a collective produced (only) by human efforts" (2010, 23). Agency is no longer exclusive a "human" phenomena; it can in fact be considered independent of any direct human experience or interaction.

This displacement of "agency" from a "centered" location in the (exclusively) human can also be read in Moore's own definition of agency, which he notes is directly derived from Marx:

> To lean on Marx, a species (or biospheric process) that does not have its agency outside itself does not exist. Agency, in other words, is not a property of Nature and (or) Society - not even humanity's spectacular forms of sociality. Agency is, rather, an emergent property of definite configurations of human activity with the rest of life. And vice versa. (2015, 36).

Moore further elaborates his conception of agency as "a relational property of specific bundles of human and extra-human nature" (2015, 37), paralleling Bennett's use of *actant* and *assemblage* to define the relational nature of agency in her own work (2010, 20-24).

At this point we should note perhaps a bit of slippage in Moore's own conception of political agency. As we can see, perhaps the one crucial difference in in Moore's and Bennett's respective conceptions of agency is the relation of the "human" to the definition. Whereas Bennett is more consistent in her insistence that "agency" is a property of extra-human matter, without presupposing a distinct role for "humanity"

as such (or so she claims),¹⁵ Moore on the other hand is apparently more ambivalent. Like Marx before him, Moore's argument consistently comes back to the place of the human, *in relation with* the rest of nature and history. And yet he also claims that we can identify "agency" with not only "biospheric processes" but "[c]limate, weeds, disease" and other natural things which have "the capacity to induce historical change (to produce ruptures), or to reproduce extant historical arrangements (to reproduce equilibrium)" (2015, 36-37). By explicitly acknowledging the extra-human agency of natural relations, Moore appears to suggest (like Bennett and the new materialists) that nature can exercise "agency" independent of any human interaction.

But Moore is quick to clarify: "It is not, however, clear how nature's agency whether conceived in Cartesian or dialectical [or, for that matter, Spinozist] terms might clarify the making of the modern world." We must be careful about how we assign agency to extra-human natures, and to what ends: while "[c]limate, weeds, disease... 'have' agency," they do so in a manner that is only "analogous" to that of "classes, capital, and empire" (2015, 37). In other words, it might be the case that there

¹⁵ I say this because Bennett's own examples from her work appear to belie her displacement of the role of the human subject in politics. Consider her brief discussion on the "thing-power" of the debris she encountered "in the grate over the storm drain to the Chesapeake Bay in front of Sam's Bagels," where she "glimpsed a culture of things irreducible to the culture of objects" (2010, 4-5). Ultimately the "effectivity" of these things are only recognizable in the recognition or acknowledgment of those objects *as things, by a subject*. The object-power of the debris she observes only has its effects by virtue of the existence of a subject to perceive them. Bennett actually explicitly endorses a form of *anthropomorphism* of (otherwise) inanimate objects, "to counter the narcissism of humans in charge of the world" (2010, xvi). We might counter that Bennett's claim may address "Cartesian" or even "Kantian" ontologies, but does not adequately address more "Hegelian" or Marxist worldviews, whereby 'subject' and 'object' (not to mention "nature" and "society," etc.) are always already *dialectically* (and historically and socially) intertwined.

was some "pre-historical" natural "agency" (as we can observe different periods of Earth history which pre-date human history, in which geophysical and biochemical processes made and unmade ruptures and equilibriums). We may even recognize distinctly "social" and "political" behavior in the lives of extra-human natures [CITES]. Yet the very act of acknowledging these things *already presupposes* human intervention in the form of our observation of these historical facts. In the famous (and oft misquoted) words of Derrida, "there is no outside-text": there is no (human) acknowledgment of extra-human agency without a (human) subject to observe or produce such a thing. There is, in other words, no recognition of (extra-human) agency without a (human) subject to perform the recognition.¹⁶

What this means in practical terms is not just an essential political role for *agency* but *subjectivity*: that is, the cognizance or self-awareness of one's agency as such. That we "humans" have a unique, hitherto-unmatched capacity for self-reflection and organization *as a self/selves* (so far as we know), realizable through the medium of language, is what makes us (as recognized since Aristotle, at least), by nature, "political animals" (*zoon politikon*), *similar* to, yet *critically distinct* from, the rest of nature, "like bees [and] other gregarious animals" (*Politics*, Book 1, Chapter 2; 1995, 10).

¹⁶ At this point, to remain properly "ecological," it is perhaps necessary to make a further disclaimer: that the qualifier "human" in this instance might be replaced with "beings like us" or "fellow political animals." That is, we might be able to imagine or conceive of the possibility of extra-human natures with agency, and subjectivity, independent of ours, such as intelligent extra-terrestial life. Yet, in the absence of such an encounter, we can only really "know" of a conception of agency that "presupposes" the human subject.

The problem with Bennett and the new materialists' account of political agency is their lack of acknowledgment of this point. Rather than an *expanded* conception of historical agency, we are left with a *reduced* conception, whereby "agency" is dispersed within and among extra-human natures to the point that the distinction between "human" and "extra-human" is meaningless. Rather than an *empowering* conception of natural, historical agency, whereby our unique subjective capabilities are seen as *emergent* from our relations within nature, Bennett's neo-materialism leaves us an attenuated conception. Her perspective appears to afford us an ethnographer's eye towards the effectivity, actant capacity, or thing-power of macro-scopic processes and assemblages like evolution or climate change (as well as the more micro-scopic "agency" of clumps of trash or omega-3 fatty acids), but seemingly little else with relevance for practical, political struggles unfolding on the ground. [Elaborate more on Bennett's discussion about the removal of political responsibility, her lack of political economy, etc.]

[Link this Marxist critique of new materialisms to the climate justice movement]

To the extent that the "new materialisms" and "post-humanisms" are compatible with this struggle, they are to be seen as radical comrades; to the extent they see themselves as incompatible with our struggle, their politics will be insufficient to our cause. We should in fact question what "common cause" is there to be found with the "interests" of "things" - I argue we should affirm a radical *subjectivity* rather than deny
or occlude it. [Elaborate with more reference to Jane Bennett. Also note that there are those who affirm the compatibility of the "historical" and "new" materialisms; however I argue that we should better understand the latter as derived from the former (Edwards 2010).]

Lastly, building off the work of Marxist ecologists Joel Wainwright and Geoff Mann, who draw upon Nicos Poulantzas's conception of the "political" as the historically and socially-derived "grounds" on which "politics" takes place (2015, 315-16): What the global ecological crisis of climate change demonstrates is that 'the political' does not merely have a *history* but an *ecology* as well. The politics of the Earth under capitalism are currently undergoing a profound transformation, in turn reflecting and reproducing the ecological transformations signaled by the Anthropocene. This recognition of the historical and ecological dimensions of the political form require a critical, dialectical analysis, which I argue are best represented by the Marxist ecological analysis I have put forth. To be able to grasp the world-historical significance of the Anthropocene epoch and its politics, in order to change them, it is necessary to understand the conflicting goals, strategies, and tactics within global climate change politics as the struggle for hegemony over the social metabolism of the Earth system, the political relations of humans within nature. Such is the task before us, both as critical intellectuals in this age we call the Anthropocene, and as participants in the global social struggle for climate justice.

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[VI. Conclusion – Marxist Ecology and the Politics of Climate Justice

Summarize previous sections, point towards future research agenda which includes Marxist ecological analysis of climate justice movement and climate justice]

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