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Socio-ecological Security: Moving Beyond the Human-Nature Dualism

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MARTIN WIKÖREN MOGSTAD, AUG 5 2016

Socio-ecological Security: Moving Beyond the Human-Nature Dualism in the Environmental Security

Literature

INTRODUCTION

What is nature? What is humanity's place in nature? And what is the relationship of society to the natural world? (Bookchin, 1990, p. 1).

Nature is material and it is spiritual... nature is order and it is disorder, sublime and secular, dominated and victorious; it is a totality and a series of parts, woman and object, organism and machine... In our range of conceptions of nature all of these meanings survive today, but even in their complexity they are organized into an essential dualism that dominates the conception of nature (Smith, 1984, pp. 1-2).

... nature isn't just "there" anymore, it is also unavoidably "here", in part a consequence of human activities, that, ... cannot remain out of mind in considering matters of world politics and the radical endangerment of human beings as a result of the practices of securing modern modes of existence (Dalby, 1998, p. 314).

Nature

The quotes above are what really triggered my interest in conceptualisations of nature and what this means to the way we act in our daily life, but also at the local, regional, and global economic and cultural level amongst other things. Above all it made me realise that conceptualisations of nature matter. That nature is just as much material as it is social/ideational. And, that this dualism is part of the reason as to why we live in a world in 'ecological breakdown' and that moving beyond it is part of the solution (Bookchin, 1990, p. 1).

Throughout my studies I have become aware that nature is always in some way implicitly present in International Relations (IR) theory and mostly conceived as a fixed, either external or universal[1], entity, but rarely explicitly discussed and talked about. I have also come to the realisation that the human-nature dualism is not a reflection of what I consider to be the relational "reality" we live in. This "reality", as I see it, is a world where the human relation to Earth is contributing to the degradation of our own means of existence because social and ecological systems are ontologically interrelated and vulnerable. In which case, it seems odd not to include the very basis upon which we rely on for survival in any theoretical endeavour. Without nature we would not be, we would not think, we would not live in society. But, it is because of the social/discourse that we conceive of nature in particular ways, as either external or universal.

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Security

That the 'ecological breakdown' (Bookchin, 1990) we currently live in is fundamentally a security issue is for me important. Especially as naming something a security issue has traditionally been linked with elite decision-making power, extraordinary measures, and funding, so one should be careful about naming something a security issue (Wæver, 1995). On the other hand, if something is labelled a security issue it does something in particular about that issue in terms of where it is placed on the political agenda and what resources are allocated to it, which is why there has been a broadening of security issues in an attempt to make claim to some of those resources (Mutimer, 1999). Being interested in the social constructedness of security issues, it was only logical for me to extend my interest in conceptualisations of nature in relation to conceptualisations of security, especially the literature concerning environmental security.

Nature is the ever-present backdrop against which the environmental security literature is constructed and this is done in relation to issues such as anthropogenic climate change, development and human security (Barnett, 2007, UNDP, 1994). If how we conceptualise nature is important to how we act in relation to it, I find it problematic that it is not being explicitly discussed in the literature concerning environmental security, especially if what that literature is trying to secure is an unsustainable socio-ecological relation. The external/universal conceptualisation of nature is evident in the environmental/ecological security literature and this also reflects the human-nature dualism (Brown, Hammill & McLeman, 2007; Foster & Wise, 1999; Græger, 1996; Homer-Dixon, 1991; Kaplan, 1994; Keller, 1996; Mathews, 1989; Mische, 1989; Pirages, 1997; Shaw, 1996). For example, Kaplan's (1994) realist understanding of environmental security sees the environment as an external threat to human society and thereby makes nature an "Other" to the human. Nature is made the enemy. At the same time, Kaplan's account of environmental security contains a universal conception of nature, where humans are at the hands of an all-powerful nature that can be responsible for separating Africa 'from more-developed regions' (*ibid*, p. 54). On the other hand we have Mathews (1989), who shifts the referent object of security to the Earth, and thus presents humans as the threat by universalising and idolising nature. Both accounts uphold the human-nature dualism.

Simon Dalby argues that most of the critical security literature has only looked at one side of the coin; they have expanded the concern of security, but not sought to fundamentally challenge security as we have come to understand it in contemporary society (1998, p. 293). He believes this can be done by analysing this from an ecological point of view, and stresses that the environment in environmental security has not been taken seriously enough as a line of inquiry (*ibid*). I agree, and this is why socio-ecological security, the concept I will try to construct here, tries to shift this emphasis yet again to include both elements by trying to secure a sustainable relationship between social and ecological systems. It is not necessary to locate the study of the human-nature relationship within the study of security, but I have chosen to do so in an effort to reconceptualise the concept of security and arrive at a sustainable conceptualisation of security. In other words, I want to reconceptualise security in a new and less destructive way (Dalby, 1998, p. 293). What is to be secured is not the nation-state, the human or the Earth specifically, but a sustainable socio-ecological relationship. In order to do this I argue one must first move beyond the human-nature dualism and arrive at a conceptualisation of nature that sees humans as fully internal to nature.

Capitalism

Dalby (2007) argues that ecology is about changing the mode of production and Hobbs *et. al.* (2011) recognises the importance of the socio-economic context when dealing with ecological questions. As this dissertation has ecological thought as its starting point, it therefore becomes necessary to include an analysis of capitalism. It is my view, and many else's, that the main culprit of the current ecological degradation is capitalism (Dalby, 2007; Foster, 2001). Capitalism, as a system of production that requires infinite growth in a finite system, is by definition unsustainable in its relation to nature (Foster, 2001, p. 10). It is therefore so important to understand how we 'produce nature' (Smith, 1984), or how nature is socially constructed under capitalism and how this matters to how we act.

I am not assigning all blame to an economic system. I am simply arguing that capitalism is one of the problems, perhaps currently the biggest, in terms of turning over a new leaf when it comes to living in a sustainable socio-ecological relation. The capitalist mode of production warrants a particular conception of nature, and has created a

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rift in the metabolism between society and nature (Foster, 2009). I see this as part of a larger problem of *a priori* essentialism (Laclau & Mouffe, 1985). This is the problem of dualism as a mode of thought that separates subject/object and society/nature (Bookchin, 1990). This is why I will explore Laclau and Mouffe's (1985) concept of change and the impossibility of fully constituting identities. Some form of categorisation is needed for us to live out our daily lives, but when that categorisation frames some things as natural or/and normal, and thus excludes other things (as is particularly evident with the image of women in capitalist society (Smith, 1984, p. 25)), it becomes highly problematic.

Methodology

Some points about methodology; first I would like to note that I have purposely chosen to write this in first person. This is my interpretation and engagement with the academic literature with the hope of formulating something new. Borrowing from Næss (1989), one could say that this is my ecosophy T, my attempt at what I interpret to be a different and new ecological philosophy. An ecosophy is an ecological philosophy applied to questions involving nature, and ourselves, that reflects 'one's own personal code of values' and world-view and whose 'insight should be directly relevant for action' (Næss, 1989, pp. 36-37). At the same time I think it important to state very clearly that I do not believe this is an objective truth or a perfect concept. I do this, as I believe, as does Næss, that it is important to maintain some form of pluralistic open-mindedness towards theory, and perhaps particularly when thinking about one's own theoretical views (*ibid*). However, I obviously believe this to be a worthwhile and important contribution to both ecological theory in International Relations and the security literature.

Secondly, rather than starting from a concrete example, I aim to start at the abstract level and reflect on contemporary conceptualisations of nature and security. I see the abstract, conceptual world of discourse as inherently interconnected and related to the socio-ecological reality we currently live in, and starting with the abstract level I hope to gain a better understanding of the contemporary relation to nature. This means producing a wholly conceptual and philosophical dissertation focusing on questions of ontology. In recognising the problem of dualism and pursuing an ontology of immanence that is influenced by eco-Marxists and post-Marxists I could be accused of mixing together theory that 'are sharply at variance with each other logically', but I hope to show that there is a relation and relevancy to the literature I engage with (Bookchin, 1990, p. 140). Immanence is here defined as that which rejects 'the transcendentalist separation of the ideal from the real' (Karaman, 2012, p. 1288). There is a lack of engagement with the ontological assumptions and philosophical foundations in much of the literature, which is why I deem it important to go down this route. By doing so I hope to address an unacknowledged problem in the environmental security literature and from this basis form an alternative conceptualisation through an analysis of the human-nature dualism in the texts by Næss (1973 & 1989), Butler (2003, 2005 & 2012), Foster (2009), Smith (1984, 1996 & 1998) and Laclau and Mouffe (1985).

Thirdly, I have chosen to perform more in-depth analysis of the texts I deem important to the concept of socio-ecological security. The literature under review does therefore not present a vast amount of literature, but some examples that I believe cover enough ground to make my point clear to the reader. This is also why I believe my project to be a worthwhile endeavour, as I believe this is a field that needs further elaboration[2].

Structure

I will therefore present four aims of this dissertation; (1) reconceptualise nature by explicitly analysing how this is conceptualised in the literature I have chosen to analyse, (2) reconceptualise security by changing the referent object of security by reviewing the environmental/ecological security literature, (3) try to move beyond the human-nature dualism, (4) construct and define the concept of socio-ecological security. The objectives are first; to construct something new in the ways of thought about nature, society and security, and second; to address the unacknowledged problem of how undertheorised the ontological and philosophical foundations of the concept of nature is in the environmental security literature. The question thus becomes whether it is possible to move beyond the external/universal conception of nature and the human-nature dualism, and replace it with socio-ecological security? I aim at doing so by analysing literature with this essential dualism in mind, and see how different authors from different theoretical fields (Næss, 1973 & 1989; Butler, 2003, 2005 & 2012; Foster, 2009; Smith, 1984, 1996 &

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1998; Laclau & Mouffe, 1985) can contribute to the concept of socio-ecological security.

The first chapter will undertake a review of the literature on environmental and ecological security, and will highlight how the human-nature dualism and the conceptualisation of nature as either external or universal is upheld in the literature. Furthermore, I will examine how some authors are restricted by the language that they use and explain why I propose to use the concept of socio-ecological security as an alternative. Moving on to the second chapter, I will look more closely at the concepts of relationality/interrelationality and vulnerability by undertaking an analysis of texts by Arne Næss (1973 & 1989) and Judith Butler (2003, 2005 & 2012). Næss (1973 & 1989) will provide the foundation for the relational ontology in socio-ecological security and will be used as a platform throughout the dissertation. Butler (2003, 2005 & 2012) will contribute with her social starting point and the necessity of exposure through cohabitation leading to a condition of ontological vulnerability. In the third chapter I will provide a definition of sustainability and explore the contradictions of capitalism. Here I will draw on Foster (2009) who will help constitute anti-capitalist-struggle as an element of socio-ecological security. The fourth and final chapter will analyse the production of nature thesis by Smith (1984, 1996 & 1998), to explore further how contemporary capitalist social relations are unique and can produce nature because it is part of nature. Furthermore, Laclau & Mouffe's (1985) concept of change and the impossibility of fully constituting identities will be explored through their focus on articulation, antagonism, democratic struggle and hegemony. This will show how socio-ecological security can be part of an anti-capitalist democratic struggle. Finally, the conclusion will provide a definition of socio-ecological security and provide an example of how this might look like in practice.

CHAPTER ONE: ENVIRONMENTAL OR ECOLOGICAL SECURITY?

This section will provide a review of the literature concerning environmental security. It will do so by highlighting how nature is conceptualised as either external or universal, and also how the human-nature dualism is upheld in the literature and through this make the reader aware of an unacknowledged problem in the literature. The literature is seen to focus too much on distinctions of 'threat' and the construction of an 'enemy', and of being too narrow in scope, and those that do seek to overcome the human-nature dualism are restricted by the language they use. This does not mean that the problem is merely a linguistic one, only that the linguistic element matters in shaping the material. As such this reflects the lack of engagement with the philosophical and ontological assumptions that are implicitly made in the literature. The literature chosen here is seen to reflect a diverse selection of the literature on the topic and have been chosen to highlight the different strands of thought in environmental security. This chapter will start by looking at the construction of a/an 'threat'/'enemy' in relation to nature in the literature and how this is part of constructing the human-nature dualism. Secondly, I will look more closely at those who do engage more with questions about nature, and how they are hindered by language. Finally, I will make clear what this contributes to socio-ecological security.

Threat, Nature and Dualistic Constructions

As mentioned in the introduction, nature is ever-present in discussions about environmental security. By being present it is also presented in a particular way in every different account and perhaps most strikingly so in relation to nature being either a threat or something that is to be defended. 'Threat' is one of the words that occur frequently in security literature, whether it is concerned with the environment or not. The use of the word 'threat' is also often accompanied by something one is to defend. This is the creation of one of the most common binaries in the environmental security literature. Sometimes nature is considered a threat against humanity (Homer-Dixon, 1991), and sometimes humanity is considered a threat to nature (Mathews, 1989). These are different conceptualisations of nature as either external or universal. This 'threat' – 'defence' logic, or 'friend-enemy distinction', (Trombetta, 2008) is also synonymous with the human-nature dualism where humans/society and nature are constructed as separate entities. Most of the literature concerning environmental security works within a traditional realist theoretical framework. Here nature, or the environment, is mostly presented as an external threat to humanity or human well-

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being and is also frequently presented as a driver of conflict (Brown, Hammill & McLeman, 2007; Foster & Wise, 1999; Græger, 1996; Homer-Dixon, 1991; Kaplan, 1994; Keller, 1996; Shaw, 1996). As already noted in the introduction, Kaplan (1994) provides the prime example of environmental security within a realist paradigm in which nature is presented as an external threat to humanity, where environmental degradation creates traditional security problems. This also constructs nature and humans as separate entities and thus reflects the human-nature dualism.

Ecological security literature also frames one side of the human-nature dualism as a 'threat'. Even though this is treated more holistically, nature is universalised and idolised and humans can become the 'threat' instead of nature. In Pirages (1997), we can see both conceptualisations of nature. The Malthusian elements (population growth and demographic change leading to environmental scarcity, change and conflict) apparent in the environmental security literature are also present in Pirages' (1997) conception of ecological security. The onus is on 'a broader conception of threats to human-well being' and so this is ecological security for humans, and an emphasis to maintain equilibrium not only between human populations, but also between human populations and environmental systems, other species and microorganisms (*ibid*, pp. 37-38). Population growth, migration, graying and social insecurity, and differential growth are presented as separate fixed entities who all link up to ecological and economic challenges (*ibid*). Pirages' account is one of ecological security for humans where ecosystems and society are separated. But, at the same time there is an idolisation and universalisation of nature through seeking to live in harmony with nature, and perception of nature as capable of exerting 'retribution' through floods, droughts and famines, thus also constructing nature as an actor separated from society (*ibid*). Even though the referent object of security is here broadened and deepened, this account still upholds the human-nature dualism.

What all of these accounts agree on is an expansion of security to include environmental threats/elements, and in presenting environmental/ecological changes/degradation as threats they also agree on a separation of nature and society. Even though environmental degradation/change is seen to be anthropogenic in origin (Brown, Hammill & McLeman, 2007; Homer-Dixon, 1991), one side of the dualism is presented as the enemy. In short, by focusing on security in a threat – defence logic, the literature 'perpetuates a dualistic understanding of the relationship between humans and the natural world' (Barnett, 2001) where the relation is one of enemies and not one of interdependent development between society and nature (see; Bookchin, 1990). All of these accounts also fail to link degradation to the current system of production and the effects of socio-economic inequality.

Universalisation and idolisation of nature is also apparent in Mathews' (1989) article about redefining security. Even though Mathews (1989) emphasises the interdependent nature of environmental degradation and society through the means of production, Mathews constantly presents human intervention in nature as unnatural and humans as a threat to nature, thus upholding the duality between nature and society. Land is considered to have a 'natural state', thus fixing the identity of nature as pure, undefiled by humans, and some forms of local ecological damage are seen to be reversible (*ibid*, p. 163). Tropical forests are presented as fragile and 'extremely vulnerable' (*ibid*, p. 165) to local direct human interference, but Mathews fails to mention the socio-economic context of, for example, Latin America where many are driven into tropical forest areas through ecological marginalisation (Howard, 1998). This is odd, as mentioned earlier; she sees nature and society as interdependent through the means of production (Mathews, 1989).

Some progress has been made in the literature connecting human security to environmental security. The *Human Development Report* (UNDP, 1994) tries to make apparent the interconnectedness between the components of the concept and also broadens and deepens security by changing the referent object of security to people. Even though the UNDP definition contains radical potential and shows signs of holistic understanding, it ultimately rests on a liberal anthropocentric world-view that upholds an objectivist reality, as exemplified by the clear focus on the individual human as the referent object of security (1994). Although humans are seen to have an impact on the environment in the report, and economic growth is seen as a means towards human development (*ibid*, pp. 17-19 & 28-29), this rests on a fundamentally objectivist world-view where the mind – and in extension the human – is seen as external to material reality (Castree, 2000), thus upholding the human-nature duality.

Liotta (2002) argues that there is a need to converge national and human security and fundamentally that one should focus on the long-term environmental aspects, as this might come back to haunt us, and also distinguishes between

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threats and vulnerabilities arguing that one of the reasons for inaction is because environmental issues are considered vulnerabilities rather than clear threats. I want to highlight the two tables in Liotta's article (*ibid*, pp. 475 & 478) where in the former, environmental security is considered 'non-traditional, potentially extreme', and different forms of security are made distinct and categorised. In the latter, which looks at different security aspects and how they interact with different forms of security, environmental security is seen as the only one to have 'an influence' on the global/planetary scale (*ibid*, p. 478). What Liotta here fails to recognise is that they are all connected and to make these distinctions is too parsimonious. In looking at the language behind human security, Paris (2001), in arguing that human security as a concept is too vague and analytically useless, also fails to grasp the interconnectedness of security issues in general and perhaps environmental security issues in particular.

Mische (1989) tries to reconceptualise security from an ecological perspective and thus focuses on 'the primacy of ecological security' mainly through a critique of traditional sovereignty. Human activities are here presented as a threat to ecological security and ecological security is seen as the necessity for human security (*ibid*, pp. 391-393). While I agree with Mische that everything is interdependent, that reality is in temporal and spatial flux/change and that threats can be considered social constructs (*ibid*, pp. 391-392), Mische universalises nature by assigning too much value to the security of ecological systems at, it seems, the cost of humans. The logic of threat – defence is still present, only reversed.

Language Barrier?

To me, both Dalby's account of ecological security (1998 & 2007) and Barnett's account of environmental security (2001) gets close to moving beyond the human-nature dualism and showing how humans are internal to nature; that nature is presented neither as external or universal. Like Mische (1989), both Dalby (1998 & 2007) and Barnett (2001) start by looking at security from an ecological perspective; assuming that everything is interconnected. Barnett tries to develop an ecologically influenced, human-centred approach to environmental security and does so by trying to 'empty it of its existing meaning and refill it with notions of human security and positive peace' (2001, p. 121). Dalby (1998) looks at how applying ecological metaphors to security can challenge the traditional spatial and temporal ontologies associated with security discourse. Dalby explicitly discusses how nature, and what is framed as natural, is conceptualised by looking at, for example, the construction of parks and golf courses, and links this to both the social and economic system that is capitalism and how this contributes to a binary understanding of society and nature (*ibid*, p. 308). For Dalby (2007, p. 159) '[E]cology', and in extension ecological security, '... is not about parks and protection; it is about changing the modes of production and consumption... for sustainable human existence'. This link to the capitalist mode of production is left out in much of the literature. And where it is included, as in Thomas (2000), the environmental element is left out[3].

Being concerned about the 'ecological myopia' in 'the study and practice of world politics' and security discourse more specifically, Litfin (1999) explains how both environmental security and ecological interdependence are socially constructed discourses that revolve around an inherently social nature[4]. If we see conceptualisations of both security and nature as socially constructed it means they have been constructed by multiple actors and also that they can, importantly, be changed (Litfin, 1999, p. 364; Trombetta, 2008). Barnett is very aware of both this, and that 'in the realm of discourse key words matter' (2001, p. 120). And even though I would agree with Barnett that ecological security is hindered by the use of the word ecological, which is the main problem with Dalby's account of security, I do not agree that maintaining the environmental security label is the best option. Because Barnett aims at a pragmatic approach to security by maintaining the environmental security label and being very clear that people are the referent object of security (as this is 'a keener political incentive' (2001, p. 129)), Barnett's account ends up being anthropocentric and maintains the human-nature dualism.

Summary

The already existing literature on environmental/ecological security still upholds the human-nature dualism and conceptualises nature as either external or universal. The literature that tries to move beyond the human-nature duality is however, restricted by the language it uses. Because both environmental security and ecological security fails to move beyond this dualism I argue we need a new concept, a concept that can move beyond the human-

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nature dualism. This also means that nature cannot be conceptualised as external/universal. I would argue that this is the concept of socio-ecological security. Socio stands for society, people, humans, the social, and ecological for ecological, both biological and physical, systems. Simply shifting the language so that the concept includes both social and ecological in the name is of course not enough, even though this is seen as part of the solution. Therefore the next chapters will outline the philosophical and ontological foundations of socio-ecological security in order to reconceptualise both security and nature in order to arrive at a concept that aims at shifting the referent object of security to sustainable socio-ecological relations through moving beyond the human-nature duality.

CHAPTER TWO: INTERRELATIONALITY AND VULNERABILITY

This chapter will start to look at the philosophical and ontological assumptions of socio-ecological security, and this will be continued in the next two chapters. Philosophical and ontological assumptions about nature are rarely reflected on in the environmental security literature, and this is therefore an attempt to address this. I will start by looking at the ecological principle of interrelationality through Næss' (1973 & 1989) relational ontology, as I too (as did Dalby, 1998 & 2007, and Barnett, 2001) seek to reconceptualise both nature and security from an ecological point of view. The chapter will then continue by discussing how Butler (2003, 2005 & 2012) links up with Næss and how Butler can help establish a condition of ontological vulnerability, of humans, and nature, as essentially vulnerable and thus interrelated. Thirdly, I will look at how both Butler and Næss derive their ethics from their relational ontology and how this becomes a call for action. Fourthly, I will critically assess whether or not Butler and Næss forego of materiality and finally, through a summary show how these texts contribute to the concept of socio-ecological security.

Interrelationality

Perhaps the most important aspect of socio-ecological security is its relational ontology and by analysing the texts of Næss (considered the "Father" of deep ecology) I hope to make the concept of interrelationality more clear. I have chosen the texts by Næss because of his standing in ecological thought and because of his comprehensive exploration of nature as a concept and the human relation to nature. Indeed, of the authors mentioned in this dissertation, I would argue Næss is the only one that explicitly goes into such detail about this.

The fundamental principle in ecology is one of interconnectedness in which 'all things hang together' (Næss, 1989, p. 36). But what does this mean? To Næss it means a '[R]ejection of the man-in-environment image in favour ofthe relational, total-field image' (1973, p. 95, emphasis in original). This also puts deep ecology as such in opposition to the shallow ecological movement, or environmentalism, that mainly tries to fight pollution (*ibid*). In principle this means the rejection of nature as an external entity to the human (present in 'the Shallow Ecology movement' (*ibid*)), and an affirmation of humans/society as internal to nature. As moving beyond the human-nature duality is one of the main goals of this dissertation one might easily assume that this *simple* move is enough, and that all is already done and dusted, but it is not so. We have to understand the ecosophy of Næss more fully to be able to comprehend whether or not this moves beyond the dualism or not.

With his relational ontology Næss aims to move beyond a description of nature that is either objective or subjective and arrive at a description of nature where characteristics and the reality of things are *bound in an interdependent relationship* to our conception of the world' (1989, p. 48). Although one does not see what the thing is in itself, one arrives 'at networks or fields of relations in which things participate and from which they cannot be isolated' (*ibid*, p. 49). In other words, even though these characteristics rely on our relationship to them, and in this relational move Næss is trying to move away from Kant 'and his *Ding an sich* about which *nothing* positive can be said' (*ibid*, p. 49). Næss also points out that theoretical science can provide abstract structures to reality, such as 'oblong', 'square', 'degrees of longitude and latitude', but that these structures, even though they belong to reality, are not reality (*ibid*, pp. 48-50). For these structures to be universal, as I read it to provide a common ground, they must be considered in

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constant flux, which means abandoning fixity in favour of 'persistent relations of interdependence' (these characteristics are considered primary qualities of reality) (*ibid*, p. 50). More importantly, secondary (sensory reality) and tertiary qualities (darkness, sombreness etc. (see; *ibid*, pp. 65-67)) become ontologically relevant when primary qualities are considered 'ideal abstract relations' (*ibid*, p. 56). Næss provides water as an example to explain this (*ibid*, p. 54-55, emphasis in original):

Suppose we have kept one hand in our pocket, and the other in the cold open air. If we put both hands in a bucket of water, the one hand may report that the water is warm and the other that the water is cold... matter in itself has all the properties which are perceived by each individual... by the very fact that the water manifests itself for some as cold and for others as warm, it is both.

But this is surely contradictory? If the water is warm it cannot also be cold? Næss would say that water holds both the characteristic of being warm and cold, but only when water arrives at a relational junction with an individual does it become either warm or cold. Thus the water can be ontologically both cold and warm at the same time because the relational junction that the water converges with the individual is a different one. According to Næss this also achieves undermining the belief that organisms can be isolated from their milieu, or environment, as 'a person is a part of nature to the extent that he or she too is a relational junction within the total field' (*ibid*, p. 56). What this means is that we are part of a whole and that '[N]o part of experience stands entirely alone', but also that the '[W]hole and part are internally related' (*ibid*, pp. 58-59). In some sense what Næss does here is actually to put humans at the centre of ontological relational reality. Even though we are part of a whole we cannot understand how for example a dog conceives of its relational junction, we can only partly understand our own individual relational junction. This is what I mean by interrelationality. That we, as people, are part of a total, relational field where we conceive of reality by virtue of the qualities of other things; that we cannot conceive of our own reality without other things, beings, and structures; that we exist in interrelationality[5].

Vulnerability

Although Næss provides an excellent analysis of nature, he does not provide a full evaluation of what this means socially. By starting with the social, Butler can provide important insights into some of the social elements, especially that of the unchosen condition and vulnerability, of socio-ecological security. As Butler writes within a different theoretical field (feminism), and socio-ecological security aims to be an inter-disciplinary/theoretical concept, this is an important contribution as well. Even though we are bound together with both the human and non-human through interrelationality I would like to propose another ontological element that binds us together that is dependent on a relational ontology. In trying to explicate on the ontology of moral philosophy Butler (2005) discusses how the "I" can give an account of oneself by drawing on the work of Adorno, Hegel, Nietzsche, Foucault, Levinas, Arendt and Cavarero. Butler arrives at a relational ontology in which it is not possible for the "I" to give an account of oneself without a relation to "the Other", where the "I" is always socially embedded into a structure of norms and discourse that it cannot free itself from (*ibid*). In the same way that the individual in Næss' ecosophy is ontologically constituted through relations with "the Other", whether that is human or non-human, Butler's "I" cannot conceive of itself without "the Other". They are in other words, interdependent and exist in interrelationality.

But, Butler adds another element through looking at what she calls the 'unchosen condition' (2012). By simply being, existing, we necessarily cohabit the earth and as such we are exposed to each other and able to give an account of ourselves in relation to others, but by being exposed we also become vulnerable (*ibid*, pp. 144-148). As we cannot chose whom we inhabit the earth with, we are vulnerable to destruction by others and this '[P]recarity exposes our sociality, the fragile and necessary dimensions of our interdependency' (*ibid*, p. 148). Importantly, and interestingly, Butler also links this to non-human elements as 'we are invariably confronted with the bodily conditions of life', the 'bodily dependency and need, hunger and the need for shelter, the vulnerability to injury and destruction' (*ibid*, p. 147). This vulnerability also precedes the formation of the "I" and is in a constant state of becoming (Butler, 2003, pp. 20 & 36). We are therefore by our vulnerability dependent on nature, and thus part of it, not external to it. Butler does well to recognise that vulnerability is unequally distributed (as does Barnett in relation to environmental insecurity (see; 2001, pp. 17-21)), by showing how this is 'dependent upon the organisation of economic and social relationships' (Butler, 2012, p. 148). This needs to be expanded to include not only human systems, but socio-

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ecological systems – that is 'societal (human) and ecological (biophysical) subsystems in mutual interaction (Gallopín, 2006, p. 294) – and in this regard vulnerability can be defined as 'describing states of susceptibility to harm, powerlessness, and marginality' (Adger, 2000, p. 268).

Even though I agree that the existential claim of vulnerability ceases to be so when articulated in its specificity, I still maintain that vulnerability constitutes an ontological condition, as we are all vulnerable, human as well as non-human, even though some are more vulnerable than others. But the fact that some are more vulnerable than others is important as this provides the framework for ethical/normative considerations in both socio-ecological security, and the texts discussed by Næss and Butler.

Ethics Derived from a Relational Ontology

Both Næss and Butler discuss ethics in relation to their relational ontology. In Næss' account we can trace ethics to evaluation, to emotion, to gestalts, to a relational ontology that also designates tertiary qualities of things as reality (such as a tree being dark and sombre (1989, p. 63)). This is all part of what Næss calls Self-realisation[6] (*ibid*, pp. 168 & 173). Through the principle of biospheric egalitarianism we are to come closer to Self-realisation by our appreciation for the Self-realisation of others in the greater whole[7] (*ibid*, pp. 163-176). This identification with the other as integrally important to your own individual Self-realisation means both a recognition of plurality/diversity as an essential element of existence as well as recognition of the coexistence of antagonistic relations. Even though Næss places the individual at the centre of ecosophy it is important to remember again that the "I" 'is developed through interaction with a broad manifold, organic and inorganic. There is no completely isolatable I, no isolatable social unit' (*ibid*, p. 164). In other words, what Næss calls ethics, that there is a 'right to live' or 'a right to unfolding and self-realisation' (*ibid*, p. 165), becomes more than a feeling. The 'quietness of the lake' or wanting to save 'the heart of the forest' is more than just a feeling, but part of a whole, that is based on a fluid, relational ontology where the spontaneous experience is not simply an emotion, but given ontological status. We thus have an ethical, and ontological, obligation to care for non-human organic and inorganic things[8].

In the same way Butler uses relational ontology, and our necessary exposure to "the Other", as a justification and obligation to 'oppose genocide and to sustain life on egalitarian terms' (2012, p. 148). Butler also argues that the exclusion of some to have this primary human physical vulnerability is the reason their lives are dehumanised and thus not found 'grievable' when discussing the war on terror (Butler, 2003, p. 20). They both therefore incorporate ethics into their ontology. There is also a likeness between the non-narrateable (such as norms and exposure (see; Butler, 2005, p. 39)) aspects of Butler's account and the abstract structures in Næss' account. There are of course differences in the two accounts as Butler writes from a social point of view and only adds an ecological element, whereas Næss' point of view is ecological and strongly linked to the social. As a consequence these ethical obligations, for Butler, means we have to 'preserve the lives of those we may not love', and that these obligations 'emerge from the social conditions of political life' (Butler, 2012, p. 150). For Næss however, these ethical obligations emerge, not from social conditions, but from interrelationality between organic, inorganic and human entities. It is a much more expanded foundation. However, it is interesting that both Butler and Næss make this a call for action either to struggle for a minimisation of precarity and the establishment of economic political equality (Butler, 2012, p. 150) or a call to live in, by and for nature, as this is a vital need (Næss, pp. 130-131).

Where Is the Material?

It is however perfectly understandable to ask where this leaves the material in these accounts? Does Næss forego of materiality when primary qualities are seen as abstract ideal relations? Does not Butler arrive at a fully discursive account of reality? My answer to the two latter questions would be no. Butler's materiality lies in the interdependent individual. For example, by questioning the naturalisation of the "human" in "Western" humanism, Butler uses our common materiality (our physical vulnerability) to show how the social can frame what we consider to be human, and what we consider natural; that is, what we consider to be in a natural state, which one could extend to nature (2003, p. 21). Butler's example shows clearly how the 'contemporary workings of humanism' can create an "Other" that is not considered natural, thereby constructing a human-nature duality. If the individual is truly interdependent, and relational, all human beings are human, and all humans are natural. Butler's materiality can also be found in her link

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to being in an interdependent relationship to the biophysical systems of the earth (2012, p. 147), but one could argue that this materiality is inconsequential when linked with Næss' ecological relational ontology as I have done above.

It is clear to me that Næss, by trying to explicate how we are internal to nature, sometimes both universalises and idolises nature. One might therefore ask whether or not this simply happens when making humans internal to nature? The problem is that universalising nature also means the construction of society and nature as separate. That is why it is problematic that Næss is very clear that '[W]e are not outside the rest of nature and therefore cannot do with it as we please without changing ourselves' (1989, p. 165), but then also talks about 'free nature' as nature without human imprint (*ibid*, p. 140). The problem here is one of definition. How major are 'major signs of present human activity' when defining free nature (*ibid*)? Is it not major that we as humans now have the ability to actually make a global impact on the climate system in ways that local direct non-presence does not account for (Dalby, 2007)? And when Næss states that '[F]avourable conditions for Self-realisation extend the radiation of good feelings to more and more nature', he constructs nature as something external because Self-realisation is rooted in the individual human, even though this is supposed to be relational. The human is therefore not nature, but that cannot be the case if humans are part of nature. Then what we make, create and achieve must by definition also be nature! But, as Næss states; '[H]ere is a difficult ridge to walk: To the left we have the ocean of organic and mystic views, to the right the abyss of atomic individualism' (1989, p. 165).

Even though primary qualities of objects are assigned abstract structures, and Næss' ontology is relational and everchanging, this to me does not mean materiality is lost. The abstract structures are still very much part of reality, shaping our perception of it. The same goes for a relational ontology. Even though the ontology of things can change depending on the relational junction it is in, the qualities of objects are still real, they are material to us, which from Næss' point of view is what matters! Is it necessary that we assign fundamental ontological qualities to all entities? Perhaps not.

Summary

To summarise, a relational ontology does not necessarily mean one has to forego of all materiality, and I believe some of that materiality is present through our common vulnerability, both physical and social, and that this commonality still holds even though some are more vulnerable than others. A relational ontology is also a basis for ethics, perhaps especially when some are ontologically more vulnerable than others. Næss' ecological account is problematic because it universalises and idolises nature, thereby constructing a human-nature duality. However, Næss' relational ontology can radically reconceptualise the human-nature relationship if applied in socio-ecological security. Furthermore, both Næss and Butler provide socio-ecological security with a normative aspect of what to struggle[9] for whether this is socio-economic equality and the minimisation of vulnerability or to live with, in, and for nature. Indeed, both Næss and Butler view these aspects as interrelated, and so does socio-ecological security. By exploring sustainability and capitalism, the next chapter will further try to explicate elements of socio-ecological security.

CHAPTER THREE: SUSTAINABILITY AND CAPITALISM

As alluded to in the introduction, capitalism is seen to be inherently unsustainable in its relation to nature. This inherent contradiction is what this chapter will explore. It will do so by first, providing a definition and thoughts on sustainability in order to move on to second, exploring the contradictions of capitalism by looking at the concept of growth as well as the environmental sociologist Foster's (2009) account of 'the metabolic rift' created by capitalism. Finally, a summary will be provided showing how this contributes to socio-ecological security.

Sustainability

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The referent object of security in socio-ecological security has been presented as sustainable socio-ecological relations, but I have not given a definition of what sustainable/sustainability means in relation to this. 'Sustainability' is by Dovers and Handmer, 1992, and, Handmer and Dovers, 1995 (as cited in Dovers, 1996, p. 304, emphasis in original) 'the ability of a natural, human or mixed system to withstand or adapt to, over an indefinite time scale, endogenous or exogenous changes perceived as threatening'. Even though this definition can be used as a starting point there are several problems I would like to address about it. In socio-ecological security the referent object of security is so-called mixed systems, but this compartmentalisation of systems is false as there cannot be purely natural or human systems. If humans are part of nature, then human systems are also equally natural. Implicitly, this means that if there is only one system (the socio-ecological bio-physical system constituted by interrelationality and in constant change) social systems can never be more than subsystems. Even though there is only one system, it is not contradictory to argue there can be subsystems as long as these are considered part of the larger system as a whole and therefore interrelated. This means we can distinguish between social and ecological systems, as a heuristic, but we have to recognise that they are part of the larger system. This larger system can then be considered nature, and all subsystems are thereby also nature.

This has a consequence in relation to endogenous or exogenous changes too. Changes will then only be endogenous. This does not mean that subsystems cannot influence the holistic system; indeed they can be part of changing it (as we shall se in the next section with capitalism). In trying to move away from the language of *threats*, this implicitly means that there can only be *changes*, never *threats*, to the system. Drawing on Lovelock (2007) we can see how climate change can have a massive impact on Earth (or Gaia), contributing to massive changes, even the possible creation of different conditions for life on the planet, but this does not necessarily mean that the system as such is under *threat*. How we choose to act in relation to this change is therefore a normative question. And change is important, because sustainability is about the ability to be in change, to adapt, not against something threatening as this this creates an inside/outside dualism, but to form sustainable relations. This means that an evaluation has taken place where, under socio-ecological security, massive climatic change is seen as undesirable. This does not mean that change is essentially seen as bad. Indeed, change is a necessary and unavoidable element of nature, broadly conceived, and it is impossible to 'step in the same ecosystem twice' (Hobbs *et. al.*, 2011, p. 444).

Even though I criticised Barnett (2001) for his human security focus, we seem to have a greater feeling of obligation to that which is near us, whether this is justified or not (Butler, 2003 & 2012; &, Næss, 1989, p. 170). It therefore seems logical that humans would want to secure ourselves as a species first, but there is a huge difference in claiming this through human security – thereby creating an anthropocentric view – and a realisation that this can only be struggled for through sustainable socio-ecological relations, thus giving inherent value to the non-human as a means to sustainability. That this is a struggle also means that there is something to struggle against, something that one wishes to change. The next section will explore how capitalism is inherently unsustainable and thereby provide a justification for anti-capitalist struggle in socio-ecological security.

Contradictions of Capitalism

If ecology – and ecology is the starting point of this dissertation – is 'about changing the modes of production... for sustainable human existence', then it is necessary to explore why the contemporary capitalist mode of production is undesirable and unable to provide sustainability (Dalby, 2007, p. 159). This is exactly what Foster (2009) seeks to explicate in his analysis of Marx as an ecologically aware sociological theorist, which is also why I have included him in this dissertation. I agree with Foster (2009, p. 13) that '[A]t the crux of the ecological problem of today is capitalism'. It has to be noted that there are those that seek a sustainable capitalism (see for example the literature on ecological modernisation; Huber, 2007; Jännicke, 2008; Mol & Sonnnenfeld, 2000; &, Mol & Spaargaren, 2000), but as this dissertation makes the assumption that capitalism is indeed unsustainable this is what I will be focusing on. Foster (2009, p. 48) recognises three contradictions of capitalism: '(1) the treadmill of production; (2) the second contradiction of capitalism; and, (3) the metabolic rift'. I will focus here on the first and latter of the three, noting only that O'Connor's (1988) concept of the second contradiction relies on a perception of capitalism under-valuing (under-producing) nature (the conditions of production) thus upholding the human-nature dualism by constructing nature as external (Castree, 2000, p. 19).

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I would like to start by focusing on the concept of growth in capitalism, and as such on the treadmill of production. The concept of the treadmill of production is an image of capitalism as a subsystem that needs infinite growth within a larger finite system, the earth, thus being by definition unsustainable (Foster, 2001, pp. 10 & 44-45). This 'hypergrowthmania', where we see the depletion of 'geological capital and ecological life-support systems' as net income is connected to the view of nature as external to society and the 'money fetishism that arises when society shifts its focus from use value to exchange value' (Daly, 1991, pp. 183 & 186). Daly (*ibid*, see image on p. 181) uses the second law of thermodynamics (the entropy law) to argue that an economic subsystem that does not take into account the inputs and outputs of that system in its calculation as unsustainable. While Daly also focuses on the desirability of growth (see pp. 187-189), Næss (1989, pp. 104-129), I would argue, takes this one step further by focusing especially on the normative aspects of economic growth and rather suggests focusing on human well-being as an indicator for welfare rather than gross national product (GNP). If growth is considered a normative argument rather than an objective aim, by seeing the economy as part of a whole, one has to take account of the underlying assumptions of that normative judgment (Næss, 1989, pp. 116-121). To highlight this Næss states that '[E]very use of anti-depression pills is a plus in GNP' (*ibid*, p. 113).

The last of the three contradictions mentioned, 'the metabolic rift', 'suggests that the logic of capital accumulation inexorably creates a rift in the metabolism between society and nature, severing basic processes of natural reproduction' (Foster, 2009, p. 49). Foster focuses on labour as the medium through which the relation between humans and nature take place (*ibid*, pp. 161-200). Marx, Foster states, made apparent the antagonism between town and country through the reallocation of soil nutrients when these where brought from country to town, thus undermining the conditions of reproduction (*ibid*, pp. 170-172). This led to the large importation of Peruvian guano (bird droppings) and Chilean nitrates in the mid-1800s and failing to maintain the means of reproduction (only made possible by fertilisers), or to maintain a sustainable metabolic relation between humans and nature, was an argument for violating the basic conditions of sustainability (*ibid*, pp. 177 & 180).

The concept of the metabolic rift is interesting in two regards: (1) it provides an opportunity for a dialectical conceptualisation of socio-ecological relations; and, (2) it does so by focusing on labour/production as the means of interaction between society and nature. A full philosophical elaboration of the compatibility of dialectics and a relational ontology is beyond the scope of this dissertation, but it is worth mentioning that Foster here provides the opportunity of a dialectical account of socio-ecological relations that is perhaps not so different to Næss' relational ontology. The materialist conceptualisation of nature Foster presents here is complex, tracing the conscious human through co-evolution to develop both the hand and the brain as a result of human relation with nature; the human is the product of labour relations with nature (2009, pp. 148-153). In Foster's argument, however, nature and society are still separate as distinctions are made between what is natural and what is human. For example, fertilisers are seen as non-natural because they are replacing the 'natural conditions for the reproduction of the soil' (ibid, pp. 49-50). Arguably all things produced through human labour has its base at some point in nature, so if humans are to be considered "natural" their products must also be considered so. I am not saying the widespread use of fertilisers is a good thing, only that the distinction we make, and that is being made in Foster about some things being natural and others not so, is problematic. "Artificial fertilisers" can be natural, yet their use can still be unsustainable. This presents a dualistic world-view where some things are real outside of society (they are natural) and others are created by society (artificial).

Summary

In this chapter I have argued that sustainability is about the ability to be in endogenous change in the socio-ecological system, and that capitalism as a system does not have that ability because of the contradictions within capitalism (the treadmill of production and the metabolic rift). This constitutes sustainability as an element of socio-ecological security and also provides an incentive and justification for anti-capitalist struggle because of the inherent unsustainability of capitalism in socio-ecological relations. The introduction of capitalism as inherently unsustainable can be seen as the creation of a *threat* to the system. However, I would like to argue, through further exploration of capitalism and through exploring the production of nature thesis, that capitalism, rather than being an external threat, can change the system because it is part of it. The concept of change will also be explored and will contribute more towards the social, and action, element of socio-ecological security.

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CHAPTER FOUR: THE PRODUCTION OF NATURE AND CHANGE

This chapter will, firstly, explain how using the critical geographer Smith's (1984, 1996 & 1998) concept of 'the production of nature' can establish humanity as internal to nature through human labour and show how the capitalist relation to nature is unique. It will, in other words, show how socio-ecological security can gain from including the production of nature thesis. Secondly, as change is an important element of socio-ecological security this chapter seeks to expand on the concept of change, explore the impossibility of fully constituted identities in Laclau and Mouffe's (1985) relational ontology and compare this to Næss, Butler and Smith's contribution to either concept. Finally, a summary of the chapter will be provided where I make clear the contributions this chapter makes to socio-ecological security.

The Production of Nature?

In trying to move beyond the human-nature duality, I would like to focus more on labour through the concept of 'the production of nature' as proposed by Smith (1984, 1996 & 1998). Smith (1984, p. 47) states that '[T]he contemporary relation with nature derives its specific character from the social relations of capitalism'. The social relations of capitalism are thus described as one where two classes are produced: (1) those who own the means of production, but do no labour; and, (2) those who only possess their 'own labour power which they must sell to survive' (*ibid*, pp. 47-48). To come to this, Smith has traced the development of production from production in general, through use-value economies, exchange economies and then to capitalist production that produces two distinct classes, but also produces nature at a world scale (*bid*, pp. 32-60). In capitalism, 'nature becomes a *universal means of production* in the sense that it not only provides the subjects, objects and instruments of production, but is also in its totality an appendage to the production process' (*ibid*, p. 49). In other words, capitalist production removes the distinction between first and second nature, achieved by the complete immersion of all nature in the production process (Smith, 1984, p. 50; Smith, 1996, p. 50).

The removal of the distinction between first and second nature, where first nature is increasingly 'produced from within and as a part of second nature', thus hints at a social construction of nature, not nature completely constructed by nature, but increasingly so (Smith, 1996, p. 50). For example, even though modern science has provided us with "the laws of physics", we did not need these to avoid jumping of great heights (Smith, 1998, pp. 274-275). As Smith (ibid) states, '[T]his practical knowledge is not even exclusively human: even goats respect gravity' however little they know of "the laws of physics". This, for me, is similar to primary quality, as Næss understands it: primary qualities as abstract structures. Capitalism is thus, as a mode of production, unique, as it has allowed human beings (or one could say social systems) to produce nature at a world scale, and global warming can be considered one example (Smith, 1984, p. 54; Smith, 1998, p. 273). Just to drive this point home one can say that the ontological distinction between first nature and second nature 'was obsolete as soon as it no longer referred to the division between the human and non-human worlds', and when first nature is produced from within and part of second nature, the production of nature is made the dominant reality (Smith, 1984, p. 58). We, as a species under capitalist relations, now have the ability to change the very conditions of existence for life in a way we have never had before. It is important now to specify that production, as well as labour, here is meant as a broad term, and not as the production of commodities, as the example of global warming shows. Even though one can easily see how the production of nature, or the ability to produce nature, can be misinterpreted as control over nature, Smith (1996, p. 50), is adamant that the making of nature (through production) or the making of, for example, global warming arises from the lack of control over nature, however much it is socially produced. We, in other words, produce nature through our socioeconomic relations (capitalism) and existence in nature, and we do so both willingly and unwillingly.

Both the production of nature and Næss' relational ontology can help refashion our conceptualisation of nature and give us the opportunity to move beyond the human-nature duality. In emphasising production, Smith shows how humans are made internal to nature, and how the universalisation of capitalism and the production of nature at a

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world scale help us move beyond the human-nature duality. Although we have always been internal to nature, in both Næss and Smith, the production of nature at a world scale under capitalist socio-ecological relations is for Smith a negative necessity – as this means ecological degradation because of the contradictions of capitalism – but this also presents us with an opportunity to seek to control how nature is produced[10].

However, there are elements of Smith's account that I find problematic. Smith's approach is teleological as the contradiction that occurs with the unity of nature under capitalism is seen to lead to an inevitable revolt as, 'it is a law of nature that the human animal, deprived of the means to fulfil its natural needs, will react to this deprivation' (1984, p. 60). Furthermore, even though Smith claims to move beyond the human-nature duality his analysis is founded on a distinction between first (the material) and second nature (the social). Smith claims that capitalism involves 'a qualitative development in the relation with nature', but goes on to argue that capitalism (indeed a social product) and the working class (a product of capitalism), are unnatural (1984, pp. 59-60). It seems to defy logic that capitalism can produce nature at a world scale yet, its product (the working class), and itself, are still unnatural. Furthermore, in arguing that the 'fundamental distinction that must be made is, rather, between what can and what cannot be destroyed (ibid, p. 59, emphasis in original), Smith is essentially establishing a distinction between the "real/natural" (gravity) and the "social/unnatural" (the law of value). Combined with Smith suggesting that we (humans) have always produced nature, such as Yellowstone National Park (to which I would agree); the historically specific universalisation above loses a lot of its credibility.

Whether or not Smith's analysis is completely right is not really important here. What matters is what the concept in itself can bring. If we strip down the production of nature to the essential, that human labour is part of producing nature[11], of shaping reality, or indeed of constructing it, we can see how our relation to nature is a holistic one, where nature and the human cannot be separated. Additionally, Smith's analysis (and Foster's) of capitalism is important, as Smith is right in suggesting that our relation to nature now is different to what it has been. Capitalism is therefore unique, and unsustainable because of its internal contradictions, but cannot be considered unnatural because it is a product of social relations. If we are to move beyond the human-nature duality, we must consider even capitalism natural[12]. Additionally, both Næss and Smith propose concepts of agency. In this regard Smith's production of nature enables us to struggle for understanding of and social responsibility of the ability of humans to produce nature because we are internal to nature. It also constitutes capitalism as a unique feature of the contemporary relation to nature that is unsustainable. This presents us again with change as being part of socioecological security, which the next section will explore further.

Change and Identity

As explained above, there is an inherent element of change in the production of nature thesis. Change is the main emphasis of the work of Laclau and Mouffe and I would therefore like to proceed with an analysis of, particularly, the third chapter of *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics* (1985). Even though Smith, and Laclau and Mouffe, have the element of change in common, I would think both Laclau and Mouffe, and Smith, might object to being called similar. It is clear that Laclau and Mouffe (1985, pp. 96 & 177) would disagree with Smith's teleological and definite account of the separation of society into two distinct classes when they state that the 'character of every identity' is precarious. What this means is that identities (such as the working class) are open. They can never be truly fixed or not fixed, and so they are in constant flux, continuously changing, and as a consequence 'all identity is relational' (*ibid*, p. 113). Even though this is the main point I would like to take from Laclau and Mouffe, this does not entirely represent their ontological standpoint. If we can understand Laclau and Mouffe's ontology in more detail we can understand how their social analysis contributes socio-ecological security with a pluralistic democratic element. In order to understand this we need to delve deeper into their assumptions, starting with the role of the discursive.

Like Butler, Laclau and Mouffe are first and foremost social theorists, and therein lies their starting point, as well as their strengths and weaknesses. Focusing on articulation as 'any practice establishing a relation among elements such that their identity is modified as a result of the articulatory practice', Laclau and Mouffe (1985, p. 105) point to the ability to change, and construct, identity through articulation (and the 'structured totality'/discourse resulting from articulatory practice), and also the ability to partially fix meaning/identities as they must be partially fixed if they

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cannot be completely fixed or not-fixed. This gives discourse a very central role in their political theory (*ibid*, p. 109). In other words, because articulatory practice (discourse) is part of constituting partial fixity, 'all identity is relational and all relations have a necessary character', and, 'every object is constituted as an object of discourse, insofar as no object is given outside every discursive condition of emergence' (*ibid*, pp. 106-107). Does this mean that all is discourse and that nothing exists outside discourse? Laclau and Mouffe (*ibid*, p. 108, emphasis in original) continue by stating that this has:

... nothing to do with whether there is a world external to thought, or with the realism/idealism opposition. An earthquake or the falling of a brick is an event that certainly exists... But whether their specificity as objects is constructed in terms of 'natural phenomena' or 'expressions of the wrath of God', depends upon the structuring of a discursive field.

This seems at first to make a separation between what can be considered a first/primary material nature and a discursive/social second nature. It is, in other words, not enough to 'affirm the *material* character of every discursive structure' if one wants to move beyond the material/ideational dualism (*ibid*, p. 108, emphasis in original). However, it becomes apparent that Laclau and Mouffe have a more complex view of the matter. What they mean by affirming the material character of discourse is in fact an acknowledgement of the *relation* between the discursive and the material in which discourse is 'part of the primary terrain itself in which the social is constituted' (*ibid*, p. 110). Materiality is to provide 'certain regularities' that 'establish differential positions for us to be able to speak of a discursive formation' (*ibid*, p. 109). What we arrive at then is a materiality that allows for discursive formation (*ibid*, p. 109). The material/nature is thus left with little agency. The material is not fully socially constructed; it exists, but only in relation to the social. Næss' (1989, pp. 48-50) relational ontology, however, takes relationality much deeper by explicitly engaging with the concept of nature and how this is constituted in society and why this matters, and also assigns nature an immanent reality that is not constituted in discourse. But where Laclau and Mouffe (and also Butler) falls short (with their conceptualisation of nature), they can contribute much in terms of distinct social theory, which can help explain the social elements of a social nature.

To Laclau and Mouffe (*ibid*, p. 109) it is important that articulatory practice 'pierce the entire material density of the multifarious institutions, rituals and practices through which a discursive formation is structured' because this makes possible contradictive relations and antagonisms. Antagonism[13] is here defined, not necessarily as a contradiction, but as part of that which breaks down the subject/object dualism by constituting the 'limits of every objectivity' (*ibid*, p. 125). It presents us with the possibility of living in a relational world of differences where the 'presence of the Other is not a logical impossibility: it exists, so it is not a contradiction', but, 'the presence of the 'Other' prevents me from being totally myself' (*ibid*, p. 125). This is very similar to exposure, cohabitation and vulnerability in Butler (2005 & 2012) where one cannot give an account of oneself without a relation to the "Other". We arrive yet again at coexistence in interrelationality.

However, the formation of antagonism also means the necessary expulsion or externalisation of that to which the socially constructed identity is opposed (Laclau & Mouffe, 1985, pp. 164-165). As such the construction of social identity, of the subject, and through that the construction of the political is constructed in a domain of essential exclusion (Butler, 1994, p. 154, footnote 1). Butler (ibid) sees this negatively, and indeed Laclau and Mouffe (1985, p. 128-129) are giving negativity a real existence when they see antagonisms as constituting the limits of objectivity and the impossibility of fully constituting the self. If capitalism is seen as a hegemonic formation that is essentially unsustainable, and if socio-ecological security seeks the transformation of capitalism through a reconceptualisation of nature, this means a necessary exclusion of capitalist social relations[14]. Laclau and Mouffe (ibid, p. 132-137) argue that the 'conditions of political struggle in mature capitalism' no longer consist of two clear camps in the same political space (popular struggle), but a plurality of political spaces consisting of struggles that exist in antagonistic relations. They refer to this as democratic struggle (ibid, pp. 132-137). And, these conditions, constituted under capitalism and liberal-democratic ideology, must be deepened and expanded through democratic struggle in order to get closer to a radical and plural democracy (*ibid*, p. 176). This is only possible because of the impossibility of fully constituting identities and antagonistic relations as such (ibid, pp. 166-167). It is possible to see this as a fundamental incompatibility between the relationalism apparent in Næss (1989) and Butler (2005 & 2012), as they present a more positive outlook on coexistence through interrelationality, whereas Laclau and Mouffe focus more on

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conflict. But, it is still an essential fact of Laclau and Mouffe (1985) that these partially fixed meanings/identities in antagonistic relations constructed through articulatory practice are interrelated, and as such depend on the existence of the "Other" for their own existence, just as much as this "Other" constitutes the limits of meanings/identities. Furthermore, I would argue that Laclau and Mouffe (*ibid*, p. 137), through the concept of pluralistic democratic struggle and hegemony, could add an important element to socio-ecological security by situating socio-ecological security as part of democratic struggle. Even though their relational ontology in combining the material and the discursive is perhaps not fully elaborated[15].

Laclau and Mouffe, drawing on and developing Gramsci's concept of hegemony, enables us to view, for example, capitalism as a hegemonic formation where 'social and political space' is 'relatively unified through the instituting of nodal points and the constitution of tendentially relational identities' (1985, p. 136, emphasis in original). Importantly, 'every form of power is constructed in a pragmatic way internally to the social... power is never foundational (ibid, p. 142). What this means is that power is socially constructed and does not objectively reside anywhere, but it does however reside in specific points, such as capitalism (ibid, p. 142). However, this also means that where power resides can be changed. This does not take account of nature, but provides us with a rationale for the possibility of a change in social relations, which is seen as necessary in socio-ecological security. In relation to socio-ecological security, and particularly perhaps, the concept of security and the analysis of capitalism, this means that it is possible, through articulation, to change the security discourse in a way that will manifest itself materially. This assigns a very positive value to change, and even though the maintenance of current conditions of existence is an implicit aim of sustainability; change, no matter how disruptive and dangerous, 'is part of ecological existence' (Dalby, 2007, p. 160). Change is also desirable in socio-ecological security, especially in relation to capitalism because capitalism is seen to be inherently unsustainable. Thus, the conceptualisation of security presented in this dissertation can contribute to the democratic struggle for sustainable socio-ecological relations. Equally, it is possible to discursively construct alternatives to capitalism that will have an effect on socio-ecological relations especially if the focus is directed towards how nature is produced under capitalism, and how we can change how this is at least socially "controlled", for lack of a better word.

Summary

The production of nature helps us come to a realisation that humans, as part of nature, can fundamentally alter the foundation of our own and other species' existence at a world scale under capitalism. Because this larger system change is undesirable in socio-ecological security, this also means recognising that humans can be an integral part of acting in the interest of sustainable socio-ecological relations, because of how we produce nature. It also means that part of this struggle is anti-capitalist and as such is critical of the endless search for quantitative growth within the capitalist system of socio-economic relations. Through an exploration of change and identity in Laclau and Mouffe (1985) this chapter has showed the impossibility of fully constituting social identities through antagonistic relations, but also the possibility of changing the locus of power through the articulation of democratic struggle. If Smith (and Foster) provides socio-ecological security with the justification for anti-capitalist struggle, Laclau and Mouffe provides us with the possibility of changing social relations through democratic struggle in antagonistic relations, and the opportunity to contribute to positive change as far as socio-ecological security is concerned. The conclusion follows, in which I will provide a definition of socio-ecological security and some examples of how this might look in practice.

CONCLUSION

In conclusion, I have here significantly expanded the concept of nature compared to how it is presented in the environmental security literature. All human products must be considered natural if humans are to be considered internal to nature. The question thus becomes normative; whether or not practices/things/systems are sustainable or desirable, rather than whether or not these are "natural" or "unnatural". This tries to move beyond the human-nature dualism as by removing the distinction of humans/society and nature as being separate entities. This allows the

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referent object of security in socio-ecological security to be sustainable socio-ecological relations as we thus can focus on both instead of focusing on one element leading to the necessary separation of it from the other. Socio-ecological security can thus be defined as a relational, and normative, concept that sees humans as internal to nature and seeks to secure sustainable relations between ecological and social systems. It recognises that humans, especially under capitalist social relations, have a unique place in nature, and that we can produce nature at a world scale, which is why it is so important that this is done with sustainability in mind. Capitalism has been identified as inherently unsustainable, and socio-ecological security thus constitutes democratic anti-capitalist struggle as an essential element. This cannot be done without valuing that which we are interrelated to, and live in antagonistic relations with, as necessary elements of current conditions of existence. In other words, changing the current mode of production would significantly alter our relation to nature and this change is desirable because socio-ecological security values diversity!

In practice anti-capitalist struggle, as conceptualised here, means struggling for the existence, and furthering the interest, of the marginalised in nature. This means explicitly looking at how we produce nature or contribute to change in socio-ecological relations. The potentially negative implications of producing nature are to me very clear in the creation of parks, conservation and preservation projects. Katz (1998, p. 54) points to the 'intrinsic contradiction' in preservation projects, as they require that 'a particular patch of nature be cordoned off as an island in space and time'. Preservation projects thus present us with a separation of society in nature in which areas of wilderness 'can be located, fixed, and preserved outside of culture' (ibid, p. 55). The parks or areas that are to be preserved are thus constructed as "natural" because they do not have human inhabitants (Dalby, 1998, p. 308). In Feral (2013) Monbiot takes a critical look at conservation and restoration projects in Britain (as well as others), arguing that most contemporary conservation efforts aim at preserving a cultural landscape that more closely resembles a desert because of, amongst other things, sheep grazing, and suggests a rewilding of land, through reforestation and introduction of wildlife, and sea, that is not trapped in space and time. I would suggest that non-human predators, such as wolves (see; ibid, pp. 90-120), could be considered marginalised in Britain and so struggling for socioecological security could mean struggling for the reintroduction of wolves in Britain[16]. It is important to note that I disagree with the use of the word 'rewilding' as it suggests that nature is somehow supposed to be "wild" and society "civilised" and thus creates a separation between humans and nature.

As Hobbs et. al. (2011) notes, restoration and conservation is still prevalent in ecological science, in both teaching and policy, and argues that this presents a false image of the reality of socio-ecological relations. Restoring ecosystems to a "pristine" state is impossible as ecosystems always change and 'exacerbates the human-nature dualism that has resulted in our current environmental mess' (ibid, p. 443). Going forward we should aim instead to 'conserve systems that are temporally and spatially dynamic' (ibid, p. 444). This means intervening in ecosystems, but we constantly do this at a planetary scale, and so what is important is to recognise why and for what reason we intervene. We need in other words to approach this with humility and respect for the interrelatedness of our existence (ibid. p. 448). This could mean the introduction/reintroduction of for example wolves and beavers, as Monbiot (2013) suggests. Furthermore, we must stop obsessing about pristine states of nature or try to restore areas to a previous state. This means letting go of the non-existent control we so desperately cling to, and let change happen, by for example not trying to conserve and preserve "cultural landscapes" that are biological deserts (ibid, pp. 62-69). Recognising our fundamental relational existence and exposure means valuing diversity of life-forms, and under socio-ecological security we should therefore struggle for biologically diverse landscapes, even if this means a change in landscapes. It is important to consider this in a wider socio-economic context, which is why this dissertation has emphasised the importance of anti-capitalist struggle. Fighting for a change in how we view our relationship to nature is thus part of a democratic anti-capitalist struggle if done under socio-ecological security.

Finally, I would argue that this dissertation has contributed with something new to the literature on nature and security through a reconceptualization of the concepts, even though there are many elements that need further elaboration. Furthermore, I would argue that this dissertation has sought to address the undertheorised concept of nature in the environmental security literature. A logical next step would be to apply socio-ecological security to more concrete examples from different places in the world, and to look more at what this means for policy. However, the focus should always be on diversity through the struggle of a marginalised entity whether this is human, non-human, organic or even inorganic.

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REFERENCES

Adger, W. N. (2000), 'Social and Ecological Resilience: Are they Related?', *Progress in Human Geography*, 24(3), pp. 347-364.

Adger, W. N. (2006), 'Vulnerability', Global Environmental Change, 16, pp. 268-281.

Barnett, J. (2001), *The Meaning of Environmental Security: Ecological Politics and Policy in the New Security Era*, London: Zed Books Limited.

Barnett, J. (2007), 'Security and Climate Change', Global Environmental Change, 13, pp. 7-17.

Barnett, J. & Adger, W. N. (2003), 'Climate Dangers and Atoll Countries', Climatic Change, 61, pp. 321-337.

Bookchin, M. (1990), *The Philosophy of Social Ecology: Essays on Dialectical Naturalism*, Montréal: Black Rose Books.

Brown, O., Hammill, A. & McLeman, R. (2007), 'Climate Change as the 'New' Security Threat: Implications for Africa', *International Affairs*, 83(6), pp. 1141-1154.

Butler, J. (1994), 'Contingent Foundations: Feminism and the Question of 'Postmodernism', in Seidman, S., *The Postmodern Turn: New Perspectives on Social Theory*, Cambridge: Cambridge University Press.

Butler, J. (2003), 'Violence, Mourning, Politics', Studies in Gender and Sexuality, 4(1), pp. 9-37.

Butler, J. (2005), Giving an Account of Oneself, New York: Fordham University Press.

Butler, J. (2012), 'Precarious Life, Vulnerability, and the Ethics of Cohabitation', *Journal of Speculative Philosophy* 26(2), pp. 134-151.

Castree, N. (2000), 'Marxism and the Production of Nature', Capital & Class, 24(5), pp. 5-36.

Dalby, S. (1998), 'Ecological Metaphors of Security: World Politics in the Biosphere', Alternatives, 23, pp. 291-319.

Dalby, S. (2007), 'Ecology, Security, and Change in the Anthropocene', *The Brown Journal of World Affairs* 13(2), pp. 155-164.

Daly, H. E. (1991), Steady-State Economics, 2nd ed. Washington D. C.: Island Press

Dovers, S. R. (1996), 'Sustainability: Demands on Policy', Journal of Public Policy 16(3), pp. 303-318.

Foster, J. B. (2002), Ecology Against Capitalism, New York: Monthly Review Press

Foster, J. B. (2009), The Ecological Revolution: Making Peace with the Planet, New York: Monthly Review Press.

Foster, G. D. & Wise, L. B. (1999), 'Sustainable Security: Transnational Environmental Threats and Foreign Policy', *Harvard International Review*, Fall, pp. 20-23.

Gallopín, G. C. (2006), 'Linkages between Vulnerability, Resilience, and Adaptive Capacity', Global Environmental

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Change, 16(3), pp. 293-303.

Græger, N. (1996), 'Environmental Security?', Journal of Peace Research, 33(1), pp. 109-116.

Hobbs, R. J., Hallett, L. M., Ehrlich, P. R. & Mooney, H. A. (2011), 'Intervention Ecology: Applying Ecological Science in the Twenty-First Century', *BioScience*, 61(6), pp. 442-450.

Homer-Dixon, T. (1991), 'On the Threshold: Environmental Changes as Causes of Acute Conflict', *International Security* 16(2), pp. 76-116.

Howard, P. (1998) 'The History of Ecological Marginalization in Chiapas', Environmental History, 3(3), pp. 357-377.

Huber, J. (2007), 'Pioneer Countries and the Global Diffusion of Environmental Innovations: Theses from the Viewpoint of Ecological Modernisation Theory', *Global Environmental Change* 18, pp. 360-367.

Jännicke, M. (2008), 'Ecological Modernisation: New Perspectives', Journal of Cleaner Production 16, pp. 557-565.

Kaplan, R. D. (1994), 'The Coming Anarchy', in Tuatheil, G. O., Dalby, S. and Routledge, P. (eds.) 2nd ed. London: Routledge, pp. 188-196.

Karaman, O. (2012), 'An Immanentist Approach to the Urban', Antipode, 44(4), pp. 1287-1306.

Katz, C. (1998), 'Whose Nature, Whose Culture? Private Productions of Space and the "Preservation" of Nature', in Braun, B. & Castree, N., *Remaking Reality: Nature at the Millenium*, pp. 46-63.

Keller, K. H. (1996), 'Unpackaging the Environment', World Policy Journal, 13(3, Fall), pp. 11-23.

Laclau, E. & Mouffe, C. (1985), *Hegemony and Socialist Strategy: Towards a New Radical Democratic Politics*, London: Verso.

Liotta, P. H. (2002), 'Boomerang Effect: The Convergence of National and Human Security', *Security Dialogue*, 33(4), pp. 473-488.

Litfin, K. T. (1999), 'Constructing Environmental Security and Ecological Interdependence', *Global Governance*, 5, pp. 359-377.

Lovelock, J. (2007), The Revenge of Gaia: Why the Earth is Fighting back – and How We Can Still Save Humanity, London: Penguin Books.

Mathews, J. M. (1989), 'Redefining Security', Foreign Affairs, 68(2), pp. 162-177.

Mische, P. M. (1989), 'Ecological Security and the Need to Reconceptualize Sovereignty', *Alternatives*, 14, pp. 389-427.

Mol, A. P. J. & Sonnenfeld, D. A. (2000), 'Ecological Modernisation around the World: An Introduction', *Environmental Politics* 9(1), pp. 1-14.

Mol, A. P. J. & Spaargaren, G. (2000), 'Ecological Modernisation Theory in Debate: A Review', *Environmental Politics* 9(1), pp. 17-49.

Monbiot, G. (2013), Feral: Rewilding the Land, Sea and Human Life, London: Penguin Books.

Mouffe, C. (2000), The Democratic Paradox, London: Verso.

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Mutimer, D. (1999), 'Beyond Strategy: Critical Thinking and the New Security Studies', in Snyder, C. (ed.), Contemporary Security and Strategy, Basingstoke: Palgrave Macmillan, pp. 77-101.

Næss, A. (1973), 'The Shallow and the Deep, Long-Range Ecology Movement. A Summary', Inquiry 16, pp. 95-100.

Næss, A. (1989), Ecology, Community and Lifestyle. Cambridge: Cambridge University Press.

O'Connor, J. (1988), 'Capitalism, Nature, Socialism: A Theoretical Introduction', *Capitalism, Nature, Socialism*, 1, pp. 11-38.

Paris, R. (2001), 'Human Security: Paradigm Shift or Hot Air?', International Security, 26(2), pp. 87-102.

Pirages, D. (1997), 'Demographic Change and Ecological Security', *Environmental Change and Security Program Report*, 3, pp. 37-46.

Shaw, B. (1996), 'When are Environmental Issues Security Issues?', *Environmental Change and Security Program Report*, 2, pp. 39-44.

Smith, N. (1984), Uneven Development, Oxford, Blackwell.

Smith, N. (1996), 'The Production of Nature', in Robertson, G., Mash, M., Tickner, L., Bird, J., Curtis, B. & Putnam, T. (eds.), *FutureNatural: Nature, Science, Culture*, pp. 35-54. London: Routledge.

Smith, N. (1998), 'Nature at the Millennium: Production and Re-Enchantment', in Braun, B. & Castree, N. (eds.), Remaking Reality: Nature at the Millenium, pp. 271-285. London: Routledge.

Thomas, C. (2001), 'Global Governance, Development and Human Security: Exploring the Links', *Third World Quarterly*, 22(2), pp. 159-175.

Trombetta, M. J. (2008), 'Environmental Security and Climate Change: Analysing the Discourse', *Cambridge Review of International Affairs*, 21(4), pp. 585-602.

United Nations Development Programme (1994), *Human Development Report*, available at: http://hdr.undp.org/sites/default/files/reports/255/hdr_1994_en_complete_nostats.pdf (accessed on 1 May 2015), Oxford: Oxford University Press.

Walker, J. & Cooper, M. (2011), 'Genealogies of Resilience: From Systems Ecology to the Political Economy of Crisis Adaptation', *Security Dialogue*, 42(2), pp. 143-160.

Wæver, O. (1995), 'Securitization and Desecuritization' in Lipschutz, R. (ed.), *On Security*, pp. 46-65, New York: Columbia.

ENDNOTES

[1] Neil Smith (1984) uses this terminology to distinguish between different conceptualisations of nature that separate humans and nature.

[2] I could for example have chosen to address this through the literature on socio-ecological resilience, which has frequently been linked to vulnerability (which I will address) and security, but I hope that approaching this from a

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different angle will prove fruitful and interesting (see; Barnett, 2001; Adger, 2006; Walker & Cooper, 2011).

- [3] The unsustainability of the capitalist mode of production will be explored in more depth in chapter three.
- [4] This does not mean that nature is fully socially constructed, only that it is influenced by the social. This will be explored in the following chapters.
- [5] Coexisting in interrelationality conceptualised as it is here through Næss' relational ontology assigns a unique place to the conscious human, even though this is not a phenomenological account, but rather one of immanence. However, one questions whether it is possible to assign a special place to the human in a truly relational account of reality? Can we assign boundaries for the human that separates us from other entities? Even though this is problematic, I do not have space to elaborate on this in the dissertation.
- [6] Capital S for the Self as something greater than the individual, as in wholeness or oneness.
- [7] Here Næss is heavily influenced by Spinoza and an ontology of immanence.
- [8] Recognising the uniqueness of humans and the value assigned to that which is closer to oneself it would be logical to argue for the care of that which is closer and especially that which is human. But, in a relational ontology that could only be achieved by also caring for others in the relational junctions (such as snails or trees) of which you are part. A full elaboration of what we should care for is however, beyond the scope of this dissertation.
- [9] It is important to note that this struggle for Næss, drawing on the principle of non-violence from Gandhi, should always be non-violent and that you should treat the "Other" in a conflict with respect and listen to their arguments (see Næss, 1989, pp. 146-150).
- [10] This does not mean that we can control nature, only that we have agency in determining the social elements of socio-ecological relations, and as such controlling the social relations of our economic system by seeking socio-ecological relations that are sustainable.
- [11] When labour and production are conceived of in broad terms.
- [12] Controversial as this may seem.
- [13] It has to be noted that Mouffe has since rejected antagonism in the constitution of democratic struggle in favour of agonism (agonistic pluralism) in her book *The Democratic Paradox* (2000), however, antagonism as presented here is considered similar enough to continue using antagonism rather than agonism as my analysis focuses on *Hegemony and Socialist Strategy* (1985).
- [14] This thus creates an antagonistic relation between socio-ecological security and capitalism, and as such also a new dualism between the two concepts. It is somewhat of a paradox that the achievement of socio-ecological security would also mean in some ways the removal of some of the conditions for its existence as democratic struggle. However, a full elaboration of this is beyond the scope of this dissertation.
- [15] Even though it has not been explored in this dissertation I would again like to point out that Næss (1989, pp. 146-150) is heavily influenced by Gandhi and his form of non-violent resistance. Næss recognises that conflict is an essential element of struggling for/with nature, and indeed argues that 'all 'sophical' insight should be directly relevant for action (ibid, p. 37, emphasis in original).
- [16] As was done with great success in Yellowstone National Park (see; Monbiot, 2013, pp. 84-86).

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Written for: Lucy Ford Date written: 09/15