Ocean Views

An investigation into human-ocean relations

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Declaration of originality

I declare that this dissertation is my own account of my research and contains as its main content work that has not previously been submitted for a degree at any tertiary institution.

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Abstract

This dissertation investigates some conceptions of oceans in modern Western societies that are highly influential in shaping human-ocean relations. My main aim in this dissertation is to demonstrate that the Western discourses of law, science and the aesthetic of the sublime illuminate characteristics of human-ocean relations in Western societies. I argue that the conceptions developed and perpetuated in the discourses of law, aesthetics and science unnecessarily constrain the possibilities for human-ocean relations and undermine just existences of oceans. A further aim of this dissertation is to set out an ethical political approach that is inclusive of a diversity of ocean views that facilitate improved knowledge about the oceans and transform dominant human-ocean relations into more just relations.

In approaching my critique of Western discourses of law, aesthetics and science I canvas a range of philosophical, social and political theories, but make most use of the insights of feminist and ecological feminist thinkers into forms of oppression and environmental justice. I also move beyond critique to set out an approach for structuring ocean policy debates and outcomes with a form of political epistemology that de-centres influential Western conceptions of oceans and is inclusive of a diversity of perspectives.

In carrying out this dissertation's investigation I find that particular conceptions of oceans in the discourses of law, aesthetics and science narrowly define how Western human subjects think, feel and interact with oceans. These discourses provide a dominant position for Western subjects over those of other people and the oceans. This is how, in basic terms, I suggest that Western discourses undermine just existences for oceans. A common feature in the discourses that frame the conceptions of oceans that I discuss is the exclusion of a diversity of human-ocean relations from consideration. To counter the exclusionary practices of Western discourses I find that robust democratic processes are essential for just ocean existences. The importance of democratic processes is not only that they constitute ethical processes, and should be valued highly for that reason, but also because of a capacity to produce and deliver improved knowledge about the oceans and transform

human-ocean relations. I advocate in particular the approach to political epistemology of Bruno Latour as one way to work toward just ocean existences. In the approach I advocate, oceans participate in democratic processes as agents, not as mere objects awaiting human benevolence or exploitation.

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Chapter 1

Introduction

Many of my childhood memories are of time spent sailing on the Indian Ocean around Perth and surrounding waters in the south of Western Australia. Having lived at the edge of (and, at times, on) the Indian Ocean for most of my life, I am oriented and shaped by it. But the experience of coastal living is a familiar thing in Australia, where 80 per cent of the population are coastal dwellers. In the affluent city of Perth, the population has the highest level of boat ownership in the country; a country that itself has one of the highest levels of boat ownership in the world. [1]

So, while oceans significantly form the experience of Australians, I am led to wonder why the relations between Australians and the oceans have remained largely uncharted.[2] Indeed, Broeze notes in reflecting on the general history of Australians' relationship with the coast and sea that:

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[1] The *Strategic Plan* of the Boating Industry Association of Western Australia (2005) makes the observation that: 'Western Australia has arguably the highest boat ownership and use by capita of any state in Australia'.

According to the International Boat Industry (2002) in 2002, Australia had one boat for every 33 people. The highest levels of boat ownership in the world in 2002 were in Norway and Sweden, which had one boat for every seven people. In 2002, New Zealand's estimated boat ownership was one boat for every 12 people. Canada and Denmark's estimated boat ownership was one boat for every 15 people. The United States' estimated boat ownership was one boat for every 23 people. The Netherlands, which has a strong maritime history, was estimated to have one boat for every 64 people and the United Kingdom was estimated to have one boat for every 107 people.

[2] It is fair to say that in recent years the oceans have received increased attention in Australia with the development of Australia's Oceans Policy in 1998, Native Title claims to

> exclusive focus on land not only runs diametrically against Australia's physical existence as an island—or rather a galaxy of larger and smaller islands—surrounded by a vast ring of sea space but also contradicts the profound experiences of the country's involvement with the sea in history, heritage and social life. (1998, 1)

A lack of specific concern with ocean-related politics and ethics is no exception to the general lack of attention afforded oceans, not only in Australia but also across the globe. My dissertation is a contribution to overcoming the lack of attention given to the oceans, with a particular focus upon ethical and political issues.

Environmental politics and ethics are largely concerned with terrestrial environments or, at best, conflate notions of 'land' and 'ocean' with common-place conceptions of 'nature', 'earth', 'the planet', 'environment' or 'ecology'. Of the thousands of articles and books written on environmental philosophy and politics, only a very small proportion of them address the marine environment (Dallmeyer 2005). Norton, writing in what he refers to as the first book on marine environmental ethics, *Values at Sea*, characterises environmental ethics' disregard for the oceans and ocean dwellers in the following manner:

> We may see the day—at least the younger of us may—when terrestrialism is recognised as an intolerable moral oversight, as grievous as other forms of speciesism. For that is surely what it is, if we view it objectively, a form of despicably unexamined, massive speciesism that pervades human attitudes toward species that live below the ocean's—or, for that matter, any hydrological—surface. (2003, 33)

This is not to deny that the political and ethical issues relevant to human relations with terrestrial and marine environments interconnect in many respects. Certainly, this is an understanding that is becoming all the greater in the face of growing

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sea country, and, in Western Australia at least, the growing influx of Indonesians fishing illegally in Australian waters. Nonetheless, as Kenchington points out in relation to Australia's Oceans Policy, despite a series of reports and inquiries culminating in the policy, "[the ocean] is not widely known and many concepts are not intuitively obvious for people with little or no experience of the dynamics of marine environments" (2003, 41).

concern about rising sea levels. However, there are characteristics and issues particular to ocean ecosystems that need bringing to the surface so that they can be reflected upon.

The lack of attention afforded to the oceans is partly explained by the fact that the character of the human physical relationship with water complicates our ability to "get close" (Cuomo 2003) to ocean ecosystems and dwellers in ways that improve understanding and empathy with them, and add depth to relations.[3] Our knowledge of the oceans is, for the most part, a step removed from direct experience. As Benson, Rozwadowski and van Keuran (2004, xiii) note:

> [B]eyond the borders of the tidal zones and continental shelf shallows, the oceans are a forbidding and alien environment inaccessible to direct human observation. They force scientist-observers to carry their natural environment with them, such as with a deep-sea submersible.

This means the type of investigations scientists can make are both restricted and directed.

General knowledge of the oceans is highly dependent on what scientists report and this influences the balance between community and expert knowledges in policy-making. Yet as marine scientists have made clear, the very fluidity and interconnectivity, scale and opacity of ocean environments have complex ramifications for the marine sciences. The physical characteristics of the ocean environment curb scientific insights and capacity to respond effectively to problems and crises, much more so than for terrestrial environments (Avery 2003; Norse & Crowder 2005).[4]

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[3] 'Getting closer' "involves attempts to bridge knowledge and action by bringing thinkers, knowers, and actors closer to the worlds affected by our actions and inaction" (Cuomo 2003, 102).

[4] For further elaboration on this point see Norse & Crowder (2005, 7-18), where a range of factors are outlined that distinguish scientific pursuits in marine environments from terrestrial environments.

Dallmeyer (2003) suggests oceans have received little attention in environmental ethics based on an observation about property rights. Dallmeyer points out that terrestrially based property rights in the West have created particular privileges and responsibilities associated with and giving rise to an environmental ethic of land stewardship. By contrast, "[r]egimes of rights and duties, with correlative issues of control and compliance, are much less well developed for the marine environment" (Dallmeyer 2003, ix).

In this dissertation I chart several meanings attributed to oceans in modern Western societies that are highly influential in shaping human-ocean relations and highlight ethical and political issues to which we should respond. In so doing, the examination of conceptions of oceans I carry out throughout this dissertation does not provide a complete narrative of the historical development of meanings attributed to oceans in Western societies. Rather, this dissertation plots a particular course through the great, though insufficiently explored, expanses of Western conceptions of oceans. My approach examines meanings attributed to oceans that are anchored in the Western discourses of law, science and aesthetics.[5] I seek out these three discourses of law, aesthetics and science because they are productive dimensions for illuminating human-ocean relations in Western societies. Moreover, as these three discourses are complex, I deal with only a fraction of their possible scope. But to limit is sometimes to reveal and thus I hope the limited scope of my engagement has resulted in a purposive analysis of the way certain Western discourses have produced particular norms that influence the way the Western subject relates to the oceans.

I suggest that the contemporary discourses of oceanic lives I am concerned with have been totalising, leaving little room for diversity. They have also been colonising, leaving little room for non-human flourishing. I argue that totalising and colonising practices in relation to oceans need to be resisted in order to facilitate just existences for oceans. My focus on the facilitation of just existences for oceans will be

[5] In using the term 'discourse' I am referring to the particular specialised languages, ideas and social outcomes that are, according to Foucault, a phenomenon of social power (Jary and Jary 1991).

elaborated upon further in this dissertation. But to briefly indicate here how just existences for oceans may be facilitated, I argue for inclusive knowledge production and decision-making processes in which there is a capacity for a diversity of views to influence outcomes.

Part of my task in valuing and vouching for just ocean existences in this way—for humans and non-humans—leads me to argue in this dissertation that some conceptions of oceans are better than others. I concur with Haraway when she writes:

> We exist in a sea of powerful stories: They are the condition of finite rationality and personal and collective life histories. There is no way out of stories; but no matter what the One-Eyed Father says, there are many possible structures, not to mention contents, of narration. Changing the stories, in both material and semiotic senses, is a modest intervention worth making. (1997, 45)

Accordingly, my thesis is that particular conceptions of oceans developed and perpetuated in the Western discourses of law, aesthetics and science are highly influential in structuring contemporary human-ocean relations. Moreover, the conceptions that I discuss unnecessarily constrain possibilities for imagining and understanding human-ocean relations in Western societies. Consequently, just ocean existences are being hindered for identifiable reasons. Improving the prospects of just ocean existences can be achieved through the use of politically generated knowledges about oceans to shift policy towards a set of social-environmental goals that are not widely imagined by the Western mind.

As will become clear in the course of my discussion, the scope of my thesis does not provide for sustained engagement with specific marine environmental disputes or policy initiatives. My concern is with the discourses that frame debates and policy-making more generally, and then with a model in which specific disputes and policy-making activities can take place.

In arguing my thesis, I take on board and travel with a number of philosophical, social and political theories. Principally, the insights of feminist and ecological feminist thinkers into forms of oppression and social and environmental justice have stirred the analysis I carry out. The conceptual analysis and theoretical insights of a

variety of thinkers across a range of disciplines assist me to develop a critique targeted toward the social and cultural dimensions of human exploitation and degradation of oceans. I also go beyond critique to explore ways of acknowledging non-human agency that work toward addressing the abuse.

It is important to add that in going beyond critique I advocate for a view in which policy debates and outcomes are driven, at least in part, with forms of political epistemology that de-centres the experts—scientists in particular. Political epistemology is a term I use to conceptualise democratic "reciprocal knowledge making" (Fawcett 2000, 136). I also advocate for ocean policy that centres both the non-human realm (which is often backgrounded) and our active construction of reality (which is often overlooked). A theme in my interventions in this dissertation is to advocate for understandings of oceans that acknowledge "both our active construction of reality and nature's role in these negotiations" (Cheney 1994, 175). Political epistemology that is inclusive of a diversity of perspectives and roles—human and non-human—and takes seriously the possibilities of a democratic process is, for me, the basis of ethical politics.

My concern with democratic political epistemology is discussed in detail in my final Chapter. However, the central themes in my dissertation of democratic process and ethical politics bear further elaboration prior to introducing the contents of each chapter. The following preamble establishes the background against which much of my discussion of the Western discourses of law, aesthetics and science can be read. That is to say, much of what is considered the 'reality' of oceans through these discourses is a social construction wherein rarely, if ever, do these discourses take seriously the possibility that oceans have agency.

The social construction and agency of oceans: a preamble

> But though, to landsmen in general, the native inhabitants of the seas have ever been regarded with emotions unspeakably unsocial and repelling; though we know the sea to be an everlasting terra incognita, so that Columbus sailed over numberless unknown worlds to discover his superficial western one; though by

> vast odds, the most terrific of mortal disasters have immemorially and indiscriminately befallen tens and hundreds of thousands of those who have gone upon the waters; though but a moments consideration will teach, that however baby man will brag of his science and skill, and however much, in a flattering future, that science and skill may augment; yet for ever and for ever, to the crack of doom, the sea will insult and murder him, and pulverise the stateliest, stiffest frigate he can make; nevertheless, by the continual repetition of these very impressions, man has lost that sense of the full awfulness of the sea which aboriginally belongs to it.
>
> *Melville (1993, 227)*

> At such times, under an abated sun; afloat all day upon smooth, slow heaving swells; seated in his boat, light as a birch canoe, and so sociably mixing with the soft waves themselves, that like hearth-stone cats they purr against the gunwale; these are the times of dreamy quietude, when beholding the tranquil beauty and brilliancy of the ocean's skin, one forgets the tiger heart that pants beneath it; and would not willingly remember, that this velvet paw but conceals a remorseless fang.
>
> These are the times, when in his whale-boat the rover softly feels a certain filial, confident, land-like feeling towards the sea; that he regards it as so much flowery earth; and the distant ship revealing only the tops of her masts, seems struggling forward, not through high rolling waves, but through the tall grass of a rolling prairie.
>
> *Melville (1993, 401)*

Meanings ascribed to oceans in Western traditions are diverse and multi-layered. Ancient images coexist with more recent ones to form a complex picture drawn from, among other things, ambivalences and contradictions. Oceans are thought of as both formless matter and alive, complex, living entities. They are represented as a demonic, chaotic, female force that must be quelled and conversely as an archetype for the sublime, the ultimate 'other' that cannot be quelled. Herman Melville in the passages quoted from *Moby Dick*, above, envisions oceans as enigmatic, benign,

treacherous, unyielding and merciless. From other perspectives, oceans are or have been regarded as common property, private property, highly regulated, a locale of unlimited resources for exploitation, a barren waste, an uncivilised domain and an inherently valuable, independent sphere in their own right. Oceans are used as a metaphor for death or the great void to come, but also for rebirth and regeneration. They are the primal mother, the last frontier and ultimate wilderness. Oceans are the provinces of male work, adventure, sentiment, stoicism and chauvinism, physical and spiritual liberation. Oceans are also a symbol for the unconscious, which our conscious selves ignore at our own peril.

All of our understandings about oceans—all our scientific facts, religious beliefs, myths, laws, and feelings—are the composition of a highly complex interaction between human minds, bodies and oceans. Yet the ideas we form about the oceans are different from the ocean itself and in this language plays a pivotal role. Rorty, for example, writes:

> We need to make a distinction between the claim that the world is out there and the claim that truth is out there. To say that the world is out there that is not our creation, is to say, with common sense, that most things in space and time are the effects of causes which do not include human mental states. To say that truth is not out there is simply to say that where there are no sentences there is no truth, that sentences are elements of human languages, and that human languages are human creations. (1989, 4-5)

That is to say, there is certainly a nature that exists independently of humans, yet any accounts we make of nature cannot be separated from their human origins (Proctor 2001). When we speak of nature we rely on "human modes of perception, invoking human cultural apparatus, involving human needs and desires—in short, when we speak of nature we speak of culture as well" (Proctor 2001, 229). We never speak of the ocean itself.

The understanding that necessarily flows from our inability to distinguish between the reality of nature and its representation is that human capacity to know things about oceans is limited. Haraway lends support to Rorty's view when she says about the human condition: there is no God's eye view, only partial perspectives (1991a).

Or again, in Castree's words, "[w]hat counts as the truth about nature varies depending on the perspective of the analyst" (2001, 9). My point is that all perspectives of oceans are only ever partial truths about oceans: the ocean in itself is always more than we can say.

Humans form oceans in at least two ways: first, they are shaped and transformed materially by certain practices, such as over-fishing and climate change leading to rising sea levels. Second, they are experienced through discourses and representations. I suggest that interactions between these two modes are usually both present in any instance where humans are involved in forming oceans. Moreover, to the extent that humans form oceans, they are the result of historically specific economic, political, social, and sexual relations of production. The way in which these relations play out will inevitably give rise to a diversity of outcomes and therefore oceans are subject to a multitude of contested meanings.

In this dissertation, my main vehicle for discussing the social construction of oceans is through a focus on discourses and representations of oceans, more so than the material construction of oceans. I argue that in theorising about oceans it is important not to assume that "what is perceived as natural is self-evident, and exists *external* to the domain of power and politics" (Braun & Wainwright 2001, 42, emphasis in original). Rather, meanings attributed to oceans should be understood within the historical, material, socio-economic and culturally specific contexts in which they are created.

Social construction perspectives can be thought of as "a reaction against, and critique of, those naturalistic explanations that sought to explain societal evolution and reproduction as a continuation of natural processes" (Smith 2001, 117). Feminist and ecological feminists have been instrumental in providing constructionist critiques of the categories 'woman' and 'nature', demonstrating that there is considerable diversity within these categories and that the categories themselves are perpetually unstable (Sandilands 1999). Social construction perspectives of the non-human natural world offer "a way of seeing that functions as a guide to understanding the natural world that does not make exact predictions" (Scarce 2000,

10) but rather demonstrate how the meaning of nature changes in different periods and cultures.

The emphasis by social constructionists on the historical, material, socio-economic and cultural factors challenges any claims of pure objectivity in accounts of oceans. Social constructionists observe, for example, that scientific investigations cannot be separated from the social and cultural biases and political interests of the scientists and scientific discourses (Bleier 1984; Bocking 2004). Social constructionist critiques of conventional claims about the non-human natural world (such as the notion of 'ocean-as-resource', which is ubiquitous in a range of Western discourses) point out that the natural world is often defined to serve specific social interests (Soper 1995).

While social construction perspectives differ, some being stricter or more vociferous than others, few take the view that oceans are simply artefacts of culture. That is, few social constructionists would take the view that oceans are things we bring into being like a commodity made in an industrial process or nothing more than "a sign with shifting patterns of meaning determined only by its position in its systematic relations to other signs" (Smith 2001, 126).[6] As I emphasised with Rorty's quote above, to say there is a cultural context is not the same as stating that this is all there is to oceans. Oceans are living entities, constituted by complexes and systems that are independent of humans. We will experience oceans in a form that is not wholly, partially or at all caused by humans; nor do oceans rely on human witness for their being. Oceans could exist without humans but humans could not exist without them. The indifference of oceans to, and freedom from, humanity is given to us in clues and hints, such as the interplay between our bodies and the sea: for example, people commonly drown in it. While many writers ascribe conscious agency to oceans, I would simply highlight that oceans do place real limits on us that no amount of talking or any other making of cultural representations will change: a person who

[6] Smith (2001) notes that both sides of the realist-constructivist debate tend to simplify and misconstrue what is a complex spectrum of opinion. See Smith's (2001, 117-121) discussion of the 'natural realist/constructivist' debate.

stays under the water too long dies. This, in my view, is an example of a real constraint, as opposed to social constructionist ones.

Acknowledging that oceans do exist apart from human constructions of them is crucial to the possibility of ocean politics. If nothing exists outside of language, ocean politics becomes merely a process of deciding what kind of oceans should be formed to satisfy human policies of safeguarding or exploiting oceans: oceans can only ever be spoken for by humans in accordance with their passive identity. I argue that in working towards just ocean existences, oceans must be considered active participants in marine environmental disputes and policy-making that shape selves, culture and the values of humans. This needs to occur through pluralistic, democratic processes.

Dissertation outline

My major concern in Chapters 2 to 5 of this dissertation is with providing some of the social context for the development of particular and influential meanings ascribed to oceans in the Western discourses of law, aesthetics and science. These chapters are, furthermore, concerned with how the particular discourses discussed structure and delimit human-ocean relations. What I demonstrate about the meanings attributed to oceans in the discourses of law, science and aesthetics is that they define human-ocean relations too narrowly. Therefore, Chapters 2 to 5 are primarily focused on supporting that part of my thesis which states: particular conceptions of oceans developed and perpetuated in the Western discourses of law, aesthetics and science, are first, highly influential in structuring contemporary human-ocean relations and second, unnecessarily constraining of the possibilities for imagining and understanding human-ocean relations in Western societies. Chapters 2 to 5 contribute, nonetheless, to an understanding that a greater range of perspectives about oceans should be included in ocean policy debates.

Chapter 6, the final substantive chapter of the dissertation, supports the argument of my thesis that, in pursuing just existences for oceans, we need politically generated knowledges about oceans to shift policy towards a set of social-environmental goals that are not currently widely imagined by the Western mind. This shift will require a

greater inclusivity of perspectives within policy debates, including the creation of spaces for the agency of oceans to contribute.

Chapters 2 and 3: 'Freedom of the Seas' and 'Obliged to be Free: A Case Study of the Croker *Native Title Determination'.*

Chapter 2 provides a historical overview and analysis of the context for the development of the doctrine of *mare liberum* (or freedom of the seas). *Mare liberum* is securely embedded in European legal discourse and dominates the actions, if not the perspectives, of many other cultures and societies. Chapter 2 outlines specific factors in the close relationship between law and power, which underpin the notion of 'freedom of the seas' and contemporary international law of the sea.

The Chapter provides an examination of the work of Dutch lawyer, Hugo Grotius (1583-1645). Grotius is widely considered the progenitor of modern international law of the sea that takes as central the notion of freedom of the seas entailing universal public rights of access to oceans. The discussion of Grotius' work and the context in which it developed demonstrates that the meanings of oceans in Western law have evolved in line with economic and political interests of the European maritime powers and, more recently, the United States. The development of particular freedoms that people have in relation to the oceans is traced further into present structures that are given expression in the initiatives of the United Nations.

The meaning of the oceans in dominant European legal perspectives has effectively shifted from that which belongs to the sovereign to that of common property, governed by open access rights. Critically, European law has largely ignored a third reality, prevalent in many societies, of customary marine tenure in oceans. I argue that the customary marine tenure conception of oceans should become an important category in Western legal discourse. I argue that this conception of oceans is important in terms of its potential role in diversifying human-ocean relations beyond a narrow resource focused perspective.

Chapter 2 advances my thesis to the extent that I demonstrate Western legal discourses are highly influential in structuring human-ocean relations and are

unnecessarily constraining upon the way that human-ocean relations can be imagined. That customary marine tenure conceptions have never been seriously considered in Western legal traditions is, in my argument, an important example of the paucity of commitment that international law of the sea has to human rights and sustaining ocean environments.

The discussion of Chapter 3 provides greater depth to the argument of Chapter 2: that legal reasoning has served particular Western cultural assumptions and interests about the character of the ocean as the property of all. Chapter 3 provides a case study account and analysis of the Croker Island Native Title judgment (*Commonwealth of Australia v Yarmirr* or *Croker*) that was made in 2001. The Chapter highlights the difficulty Western law has in coming to terms with conceptions of oceans other than those of public rights as outlined in Chapter 2—as the finding of the majority in *Croker* was that public rights must prevail over customary rights.

However, my analysis of the High Court's majority and minority (dissenting) judgments in *Croker* shows that, arguably, there is nothing inherent in the law of sea as it affects Australian common law that makes it inappropriate or impossible to apply concepts such as occupation or possession in ways that would allow for Australian Aboriginal and Torres Strait Islander peoples' laws and customs to apply in various places and circumstances and constrain the 'universal' right to access of the sea.

The case study highlights the High Court majority's finding that common law does extend to the sea. Consequently, there is the recognition of an intersection between traditional law and common law, which is significant in that it recognises a wholly different system of law and thinking about human-oceans relations in Australia. At the same time, the case study establishes that the Croker Islanders' conception of seas is not equally weighted with Western conceptions, thus hindering just ocean existences for humans and non-humans.

The critique I make includes the observation that the High Court majority proceeded in making their determination that the Croker Islanders do not have exclusive possession on the basis of attitudes to sea territories characteristic of the dominant

culture upheld in Australian common law and international law of the sea. In coming to their judgments, the majority produced fixed, definitive statements, largely keeping from view the assumptions, processes and instruments that informed them. In contrast, I discuss Justice Kirby's dissenting judgment as breaking with this mould. Justice Kirby proceeds by placing the two social orders in a type of conversation, giving an indication of the contestable character of the subject matter, and finds that the Croker Islanders do have a 'qualified' form of exclusive possession.

Chapter 4: The Sublime: a common feeling for the ocean?

Chapter 4 details conceptions and representations of oceans in eighteenth century aesthetic discourse of the sublime. Eighteenth century aesthetic discourse has been important in determining Western subjects orientation to the oceans into the present time.

In my discussion of the sublime, I identify the work of Immanuel Kant (1724-1804) in particular as having had a great influence in shaping sublime representations of the oceans in the literature and painting of the Romantic Movement (1800-1900). These representations continue to inform our present day conceptions and representations of oceans.

The sublime is a discourse about human subjects' attempts to give expression to experiences of anything that are absolutely great, vast, overwhelming and incomprehensible, provoking responses of awe, wonder and especially 'delightful terror'. When appeals are made to a collective feeling for oceans in Western societies, we are usually tapping into eighteenth century Romantic traditions of the sublime. But in drawing on the sublime for a common appreciation of oceans I argue that we need to examine the usefulness of sublime aesthetics on three bases: one, the traditional sublime authorises human estrangement from oceans; two, sublime discourses' pretence to universality effectively erases feelings toward oceans that are not expressed in terms of otherness and mastery; and three, the sublime conceptualises the oceans as a vast wilderness and a culture-free zone. Reflecting upon these three areas of concern, I argue that the traditional sublime should be

viewed, at the very least, as a flawed reference point for the development of democratic ocean ethics and politics.

Thus, as with Chapters 2 and 3, Chapter 4 proceeds, in the first instance, by demonstrating how the sublime has been, and continues to be, influential in structuring contemporary human relations with oceans. The sublime is demonstrated to be unnecessarily constraining on our understandings and possibilities for human-ocean relations in Western societies. The sublime presents problems for an inclusive political epistemology because it obstinately denies some perspectives.

Chapter 4 also argues that aspects of the sublime do, nonetheless, provide possibilities for an ethical politics. I argue for a version of the sublime that is stripped of much of Kant's conjecture about the nature of subjectivity that includes the necessarily superior mind of man. Instead I argue that appeals to the sublime should emphasise its references to humility and respect before nature. My argument is that a reconfigured sublime brings to our attention ways in which the oceans can overwhelm our senses and physical being as well as an awareness of our limits in relation to oceans and our dependency upon them. The reconfigured sublime I promote highlights the agency of oceans, in particular, the idea that oceans will always exceed our ability to understand and represent them.

Chapter 5: Ocean science: Awash with values

In Chapter 5 I discuss two influential scientific conceptions of oceans: the production model view of oceans championed by conventional fisheries science and, second, an enclosed sanctuary, or reserve view, promulgated in marine protected area science (hereafter MPA science).

Conventional fisheries science receives considerable attention because it has dominated the more general developments in the ocean sciences and management in the twentieth century (Norse & Crowder 2005a; Preikshot & Pauly 2005; Rozwadowski 2002). I argue that the production model view of ocean dwelling life in conventional fisheries science pursues a narrow and highly instrumental agenda for the development and production of fish for consumption. In this model, fish are

conceptualised as resources with the sole purpose of meeting human ends; ocean dwellers and their ecosystems are without needs and agency of their own. The intimate relationship between human and ocean wellbeing is denied in the production model.

The production model conception of the relationship between ocean dwelling life and humans is often posited by fisheries science as the result of objective inquiries. My observation is, however, that the theories and practices of fisheries science are tied up with industry values and specific cultural beliefs and attitudes. That fisheries science is tied up with specific values and beliefs is an important matter to address in this dissertation because of the great store attached to the widely held conviction that science produces objective knowledge.

The influence of fisheries science in determining actual and possible human-ocean relations is a compelling reason to scrutinise its main cultural characteristics. In undertaking this task I draw on Plumwood's (1993) analysis of dualistic conceptual frameworks that structure thinking and relations with non-human nature in Western societies. This analysis discloses that nature is conceived in instrumental terms, as a resource or a standing reserve. My focus on the instrumentalist mind-set helps to demonstrate that enterprises such as conventional fisheries science are predisposed to collaboration and capture by industry and the rationalist economy. I illustrate this point with a discussion of the types of research models used in conventional fisheries science.

Conventional fisheries science is widely contested from within the scientific community and from without. Following my discussion of fisheries science, MPA science is contextualised as being, in part, a strategic response to the over-exploitation of oceans that the theories and practices of conventional fisheries science have legitimated throughout the twentieth century. MPA science is far more inclusive than fisheries science in the range of factors utilised in its approach to the production of knowledge about oceans and ocean dwellers. MPA science is not delimited by so close a connection to industry and resource management agendas but is fashioned from a different set of concerns and values. Having said this, there is reason to be wary at the present time of attempts to define oceans through the

frameworks of MPA science. My discussion demonstrates that MPA science tends towards a protective and authoritarian scientific approach—with the effect of excluding certain 'others'—and that this approach has been gathering momentum. I argue that understandings of oceans and resulting oceans policies should properly consider and act in concert with understanding of a range of cultural, social, political and economic dimensions.

Chapter 5 continues to focus on that part of my thesis concerned with some of the major Western discourses that structure contemporary human-ocean relations. Fisheries science and MPA science demonstrate how the most widely accepted variants of ocean-related science constrain our understandings and possibilities for interacting with oceans in Western societies.

The shortfalls of science point to the need to open up assessment and debate through processes that allow a broader range of communities, human and non-human, to contribute to questions related to the use, protection and well being of ocean environments.

Chapter 6: Political ecology and oceans

As we can see from the outline of chapter content thus far, a large part of this dissertation is devoted to discussing the authority and hegemony of Western rationalist representations of oceans in law, science and the philosophy of the sublime and the effects of this hegemony—namely: the narrow scope for views and relations with oceans and the rejection of different views and relations. Chapter 6 is intended as a further intervention to this hegemony. I set out an ethical political approach for negotiating just existences for oceans, first, through a critique of forms of marine environmental ethics and politics that separate nature from culture and second through a discussion of what is called a performative notion of nature.

I begin Chapter 6 with a discussion of the problems of essentialist and constructionist conceptions of nature and argue that we need conceptions of the oceans that are not reducible to human objectivity or subjectivity, nature or culture but rather conceptions that imagine oceans as co-constructions between humans and non-

humans. In this task I draw on particular ecological feminist theories and performative notions of nature in support of the idea that oceans are indissolubly mixed in with culture.

Chapter 6 includes a review of a range of approaches to ocean ethics and politics—a Sea Ethic, marine stewardship and environmental pragmatism. I suggest all three approaches have their strengths. But the meaning, value and ideas of all three approaches are interpreted only through a lens that focuses on what it means for humans. The approaches do not consider oceans in themselves, or the moral worth of the self-directedness of non-human oceanic life or how democratic representation might be widened to acknowledge non-humans as agents.

My advocacy of political epistemology involves an inclusive democratic process—of humans and non-humans—that seeks critical enquiry and cooperative solutions to shared problems. Latour (2004) provides a useful theoretical model in this regard that moves us toward consensus and cooperation in the pursuit of marine environmental policy through multifaceted engagement.

In setting out Latour's (2004) collective procedure, I highlight that this approach specifically addresses and facilitates non-human agency in a democratic process. Latour's procedure sets the stage for what is referred to as 'the performance of oceans.' Role-playing and bricolage are discussed as examples of reflexive forms of deliberation that help to perform ocean environments along new lines.

The argument in Chapter 6 supports the part of my thesis that states improving the prospects of just ocean existences should be pursued through a form of political epistemology. The political epistemology that I discuss can improve the prospects of just ocean existences by providing a forum in which all assertions of knowledge about oceans are held accountable through open and transparent democratic processes and decision-making. The rigorous application of open, transparent democratic processes that include oceans themselves as active participants in decision-making will generate knowledge about oceans and shift policy toward a set of social-environmental goals that are not widely imagined by the Western mind.

Chapter 2

Freedom of the Seas

For the past several hundred years, international laws of the sea have been based on the principle of *mare liberum*, or freedom of the seas. The principle of freedom of the seas holds that access and use of the oceans are common to all nations and individuals. Beyond its legal impact alone, freedom of the seas has become so firmly entrenched in Western societies it is typically taken for granted as part of the essential or 'natural' character of the oceans.

However, the legal concept of freedom of the seas is not self-justifying or natural. The oceans have not always been regarded as open for everyone to use and enjoy—examples of which I discuss in the course of this Chapter. The laws of the sea have shifted over time in relation to the economic and political interests of the European maritime powers and, more recently, the United States. Nonetheless, the concept of freedom of the seas has been securely embedded in European legal discourse since the eighteenth century, which is long enough, it would seem, for it to become regarded as normative, or even 'natural' across a society. Moreover, freedom of the seas has come to dominate the actions, if not perspectives, of many non-Western societies.

This Chapter outlines, with some specificity, how an alignment between Western law of the sea and powerful interests has occurred historically. This outline is intended

to establish the basis for making a number of observations about how human-ocean relations have been mediated by the legal discourses affecting the oceans.

This Chapter begins with an examination of the work of Dutch lawyer, Hugo Grotius (1583-1645), widely considered to be the founder of the modern theory of natural law (d'Entreves 1970). Grotius' work on the laws of nature has a legacy in international law of the sea that endures into the present. I will outline Grotius' development of natural law along the Enlightenment themes of scientific modes of reason and calculation. I review the historical shift of perspectives in Europe from a situation where both land and sea were seen to be held in common by all of human-kind, to one where land could become private property (that is, ownable), while the oceans remain the property of the global community. The development of particular freedoms associated with the oceans is traced further into present structures that are given their clearest expressions in the initiatives and pronouncements of the United Nations.

What unfolds in this Chapter is a discussion of the European legal conception of the oceans, which has effectively moved between two meanings: one that declared oceans to belong to the sovereign, and one that sees oceans as common property with open access. Critically, another legal possibility, that of customary marine tenure, has been overlooked by European legal traditions. I will argue that the potential of the customary marine tenure conception of oceans is important in a project that seeks to diversify human-ocean relations beyond a resource-focused perspective. If this possibility were realised, it would have the effect of diffusing some of the excesses of an instrumentalist view of oceans.

Historically, the principle of freedom of the seas has done little to instil an ocean ethic in Western societies that facilitates flourishing ocean lives. Significantly, user-rights to the oceans are not balanced with obligations and responsibilities. Holding the oceans in common, in which all are free to exploit its 'resources', has significant material consequences. As will become evident in this Chapter, the notion of freedom of the seas has more to do with how oceans in Western societies have come to be viewed than with how oceans commons must inherently operate. Moreover, the law of freedom of the seas is linked to international law's basis in European law,

which has historically denied alternative conceptions of the ocean that are found in some traditions, such as Australian Aboriginal and Torres Strait Islanders. I argue that in pursuing improved justice for ocean existences a diversity of legal regimes should be encouraged for regulating the oceans.

Chapter 2 advances my thesis to the extent that I demonstrate Western legal discourses are highly influential in structuring human-ocean relations but at the same time unnecessarily constraining on imagining human-ocean relations. That customary marine tenure conceptions of oceans have never been seriously considered in Western legal traditions is, in my argument, an important example of the paucity of commitment that international law of the sea has to human rights and sustaining ocean environments.

The world according to Grotius

Law and rationality

The natural law tradition of the ancient Greeks held that natural forces fashioned the universe, which was inhabited by both gods and people. Christian natural law evolved in the Middle Ages based upon certain interpretations of the Scriptures; laws were perceived as God-given and took precedence over man-made laws. God was considered the ultimate lawgiver to whom human laws had to conform for their validity. Ancient Greek and Christian concepts of natural law therefore required a constant assessment and adjustment of the validity of human law against a higher source of authority considered both eternal and universal. (Barnett 1998; d'Entreves 1970; Fitzpatrick 1992)

The natural law tradition was significantly transformed, however, when Dutch lawyer, Grotius, laid the foundations for a secular conception in *De Jure Belli ac Pacis (Laws of War and Peace)*, first published in 1625. Grotius developed natural law along the Enlightenment themes of scientific modes of reason and calculation.[1]

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[1] Grotius' theory of natural law restates in part the ideas of the Scholastic philosophers (d'Entreves 1970).

Pufendorf (1632-94), the first holder of a chair of Natural Law in a German university, and reputedly the greatest academic proponent of the theory of natural law in the seventeenth century, commended Grotius for drawing the "theory of the law of nature out of the 'darkness' in which it had lain for centuries" (d'Entreves 1970, 53). According to d'Entreves "[a]long with Bacon and Descartes in the field of philosophy, with Galileo and Newton in the field of experimental science, Grotius has a special place reserved in the field of jurisprudence as one of the prophets of our brave new world" (1970, 53).

In linking natural law to reason, Grotius reinforced the Enlightenment move toward eliminating the perceived deific obstacle from the intellectual search for truth and knowledge (Fitzpatrick 1992). Grotius aimed to construct a system of laws independent of theological presuppositions (d'Entreves 1970). Grotius maintained that natural law is "that body of rules which man is able to discover by the use of reason" and that these rules are "valid in themselves, independently of the fact that God willed them" (d'Entreves 1970, 54). Hence, the need to justify laws by reference to the authority of God became obsolete.

For Grotius natural law consists of a set of rules that are self evident and universally valid:

> I have made it my concern to refer the proofs of things touching the law of nature to certain fundamental conceptions which are beyond question; so that no one can deny them without doing violence to himself. For the principles of law, if only you pay strict heed to them, are in themselves manifest and clear, almost as evident as are those things which we perceive by the external senses. (1925 Prolegomena, sec. 39)

Grotius' view about the limits of God's power and the elevation of the human subject is distilled in his statement that, the "law of nature is a dictate of right reason. … [T]he dictates of right reason are whatever human nature and the nature of things imply that they must be" (cited in Sabine 1961, 424).

The importance of Grotius' theory of natural law did not lie so much with the content he ascribed to it as "he followed the well worn trails of the ancient lawyers" (Sabine 1961, 425). Rather, the importance lay with his methods of reason for discovering

natural law. Grotius provided "a rational, and what the seventeenth century could regard as a scientific, method for arriving at a body of propositions underlying political arrangements and the provisions of positive law" (Sabine 1961, 425).

The rationalist character of Grotius' new conception of natural law is most apparent in his analogy between mathematics and justice. He writes:

> Measureless as is the power of God, nevertheless it can be said that there are certain things over which that power does not extend. … Just as even God cannot cause two times two should not make four, so He cannot cause that which is intrinsically evil be not evil. (Grotius 1925, I, i, x)

In other words, there are some propositions in law that once discovered by reason are self-evident, correct, enduring and universal. Laws of nature form the fundamental nature of reality.

Grotius' method was modelled on the pioneering work of Galileo in the physical sciences and in mathematics, especially the logical certainty in the methods of geometry. Grotius' development of a "demonstrative system of law" was hugely important in its effect on the early modern development of social studies (Sabine 1961, 426). "Everywhere," Sabine writes, "the system of natural law was believed to offer the valid scientific line of approach to social disciplines and the scientific guide to social practice" (1961, 426). This was because, "it was believed to parallel the processes by which the physical sciences made dazzling progress in the interval between Galileo and Newton. These processes in turn were believed to depend upon the use of a method already well tried in geometry" (Sabine 1961, 426).

Descartes consolidated this method in his classical philosophical statement: "[r]esolve every problem into its simplest elements; proceed only by the smallest steps so that each advance may be apparent and compelling; take nothing for granted that is not perfectly clear and distinct" (Sabine 1961, 427). Scholars celebrated the method, "because the logical ideas of analysis, simplicity, and self-evident clarity appeared to be equally applicable to all subject-matters" (Sabine 1961, 427).

It is, of course, important to acknowledge the sound philosophical underpinning for Grotius, as it would be unfair to suggest he was unaware of tensions that often arise

between logical conclusions based on deductions and the empirical facts (both of which may be acceptable methods for establishing the 'truth' beyond reasonable doubt in legal proceedings). He was also well aware that an individual's capacity for 'free will' provides scope for varied responses in our relationship to nature without necessarily violating the rules of reason. But these tensions could be diffused on the basis that:

> Broadly speaking, [Grotius's] whole point of view, like that of most seventeenth-century science, was Platonic; the Platonism of Grotius's Prolegomena is unmistakeable. The law of nature was an 'idea', a type or model like the perfect geometrical figure, to which existence approximates but which does not derive its validity from agreement with fact. (Sabine 1961, 428)

Here, then, is the justification for an appeal to the higher order of reason and rationality, which was removed from the more direct association of empirical observation and the world of nature. Thus, as Sabine further notes: "the rational was supposed to fix its own standard of value to which rulers ought to make the positive law conform" (1961, 428). What is more, this basis for a rational system was also the justification by which customary or conventional practices could be considered as 'unreasonable' and thereby over-ridden.

The practical outcome of this whole approach was that natural law, so defined, became an ideal standard or normative system both for what is and what ought to be. As I emphasise at times in this dissertation, the normative system is based on practices of exclusion and assertions about universal truths that are readily demonstrated as the particular perspectives of dominant social groups in a close relationship with powerful institutions. This was the case for Grotius as will be elaborated in some detail in the following sections.

The principle of freedom of the seas

Grotius' (1916) basic argument in *Mare Liberum* is that states cannot acquire the high seas by occupation because natural law forbids ownership of things that have been created as common to all. Thus, freedom of the seas.[2]

Contrary to the widespread belief that Grotius was the first proponent of the principle of freedom of the seas, historical evidence suggests this principle was already being practised for mercantile purposes by Asian nations (the so-called 'East Indies') where the Dutch were trading (Anand 1983; Steinberg 2001). Anand summarises the practice of this principle as follows:

> Although we cannot trace its expression in the form of a doctrine as such until much later times, there is no doubt that freedom of the seas in the form of unobstructed freedom of navigation and commercial shipping was accepted by all the countries in the Indian Ocean and other Asian seas for centuries before history was ever recorded. (1983, 226)

Even at times when nations of the Indian Ocean region were at war with each other, ocean trade and relations continued (Steinberg 2001). Steinberg relates the practice of freedom of the seas by nations of the Indian Ocean to their construction of the deep sea as "an empty, unclaimable non-territory outside society, a surface across which ships of various states travelled as they carried their goods to far-off lands" (2001, 94). The diverse societies of the Indian Ocean region were governed by this "coherent ocean-space construction … until disrupted by the Europeans at the end of the fifteenth century" (Steinberg 2001, 41).

Grotius' innovation in international law of the sea lay in bringing together Asian state practice and Roman law with Christian theology and arguments of logic. In

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[2] Grotius' principle of freedom of the seas was first published in *Mare Liberum (The Freedom of the Seas, or the Right Which Belongs to the Dutch to Take Part in the East Indian Trade)* in the spring of 1609 and later as a part of his treatise *De Jure Belli ac Pacis (Law of War and Peace)* in 1625. However, *Mare Liberum* was originally the twelfth chapter of Grotius' much larger disquisition, *De Jure Praedae Commentarius* (Commentary on the Law of Prize) written between 1604 and 1606 but not discovered until 1864, published in 1868 (Van Ittersum 2006).

particular, Grotius relies on the Roman traditions underpinning European law and society. For example, in Chapter V of *Mare Liberum,* Grotius references "all the poets since Hesiod, the philosophers and jurists of the past" including the Scholastics, Cicero, Horace, Avienus and Seneca (1916, 22). Grotius' approach has the effect of layering many voices through time, all validating his thesis of freedom of the seas. Grotius "amassed 'testimonies' of authorities whose coincident statements can be attributed to some universal cause or element—which in Grotius' view was nothing other than 'a correct conclusion drawn from the principles of nature, or common consent' " Butler (1990, 213).

In Chapter V of *Mare Liberum*, the laws governing the seas as common to all nations are contrasted to those governing private property possession. Grotius' (1916, 23-5) views about how the evolution of common access to things changed to private property relations can be summarised as follows: In a 'Golden Age' there was no such thing as a particular or private right. Indeed, there was a time when "fields were not delimited by boundary lines, and that there was no commercial intercourse. As Avienus says 'the promiscuity of the fields had made everything seem common to all.' " But gradually, Grotius' narrative continues, distinctions in forms of ownership emerged. The first distinction Grotius identifies is where a substance is used and cannot be used again—such as food and drink. Here ownership belongs to the user. The next category Grotius identifies by reasoning that flows out of this first categorical principle is that clothes, movables and some living things belong to individuals. That is, individuals use them—albeit more than once—and therefore belong to those individuals. Eventually immovables, such as fields, were also apportioned. This, according to Grotius, is because fields were bound up with production and subsequent consumption of those products in the form of food and clothing. When this third category in the development of the conditions of ownership of land transpired the legal notions of 'occupation' and 'property' were born.

Grotius elaborates on the notion of occupation by observing that there is both public and private ownership of landed property. Public ownership means, quite straightforwardly, property of the people while private ownership means property of

individuals. A further observation is that ownership, both public and private, arises in the same way—that boundaries are set around areas of land. Grotius explains this by reference to the establishment of states:

> On this point Seneca says: 'We speak in general of the land of the Athenians or the Campanian. … For each nation', Seneca says in another place, 'made its territories into separate kingdoms and built new cities'. Thus, Cicero says: 'On this principle the lands of Arpinum are said to belong to the Arpinates, the Tusculan lands to the Tusculans; and similar is the assignment of private property. Therefore, inasmuch as in each case some of those things which by nature had been common property became the property of individuals, each one should retain possession of that which has fallen to his lot'. (1916, 26-7)

But for all these changes to the status of property in regard to the land, Grotius argues that the sea is perpetually "the common property of all, and the private property of none" (1916, 28). This is because the sea fits so completely into the following two concluding principles, which Grotius draws from his discussion:

> [First,] that which cannot be occupied, or which never has been occupied, cannot be the property of any one, because all property has arisen from occupation. The second is that all that which has been so constituted by nature that although serving some one person it still suffices for the common use of all persons, is and ought in perpetuity to remain in the same condition as when it was first created by nature. … All things which can be used without loss to any one else come under this category. (1916, 27)

Grotius argues first that any so-called occupation of the sea has merely been a "desire or intention to occupy rather than the capability to do so" (Butler 1990, 214). Grotius considered it physically impossible to occupy the sea or the seabed, in conjunction with custody or possession of it. Grotius does, however, qualify this idea, stating that if any part of the sea or shore became 'by nature' susceptible to occupation, that part of the sea "may become the property of the one who occupies it only so far as occupation does not affect its common use" (1916, 30). Second, in arguing that the oceans are common to all because the use of the sea by one person or group does not affect or prohibit its use by another, has at its core the idea of the

ocean as limitless. Grotius' argument here draws heavily on the idea of the ocean as a vast space (Steinberg 2001). Indeed, Grotius describes the ocean as,

> immense, the infinite, bounded by the heavens, parent of all things … perpetually supplied with water not only by fountains, rivers, and seas, but by the clouds, and by the very stars of heaven themselves; the ocean which, although surrounding this earth, the home of the human race, with ebb and flow of tides, can be neither seized nor inclosed; nay, which rather possesses the earth than is by it possessed. (1916, 37)

According to Grotius, it is on account of the ocean's vastness that it is "common to all" and "cannot become the possession of any one, and because it is adapted for the use by all, whether we consider it from the point of view of navigation or of fisheries" (Grotius 1916, 28).

For Grotius, the oceans are not *res nullius* or 'the property of no one' as nations of the Indian Ocean region generally conceptualised them. By contrast, Steinberg observes, although the ocean "lies outside state territory, it lies within (and encompasses) the global community of nations. … Users of the sea are bound to preserving *access* to the sea for all, since its major uses—navigation and fishing—are granted to all by natural law" (2001, 93). Nonetheless, Grotius claims the ocean "is not *res communis humanitatis*, a commons to which all are guaranteed their fair share of resources" (Steinberg 2001, 93). Grotius states:

> In Athenaeuis for instance the host is made to say that the sea is the common property of all, but that fish are the private property of him who catches them. And in Plautus' Rudens when the slave says: 'The sea is certainly common to all persons', the fisherman agrees; but when the slave adds: 'Then what is found in the common sea is common property', he rightly objects, saying: 'But what my net and hooks have taken, is absolutely my own'. (1916, 29)

Hence, in Grotius' conception of *mare liberum*, states can exercise social power within ocean confines to take advantage of it—to improve their status within the global community of competitive states, as Steinberg suggests—as long as it remains in the state that it was first created by nature.

This, in short, is the reasoning behind Grotius' conception of the principle of freedom of the seas. In Grotius' approach, the laws of nature, in all their potential complexity, are principally a comparison between land and sea in terms of property rights.

Legal argument, politics and a victory for freedom of the seas

Grotius believed that reason would demonstrate the truth of his position. As we have seen above, key in his approach was the gathering of historical evidence about the natural properties of the seas and arguing that these were derived from the laws of nature. Grotius' principle of freedom of the seas is upheld in international law of the sea and generally accepted in Western societies as universally inherent to the character of the sea.[3]

By sketching out below a wider historical context for the development of Grotius' concept of freedom of the seas, I want to draw attention to it as a value-laden construction rather than a 'law of nature.' A fundamental starting point is the historical evidence that access to the sea in European traditions has not always been treated as a universal right. Sharp (1996; 2002) identifies another European set of relations with the oceans. Those relations are to do with systems of inherited, locally based marine rights, found in ancient common property regimes, which existed prior to the seventeenth century. According to Sharp (1996), in England and Ireland the rights to sea domains were embedded in a family or clan who had face-to-face relations with seas adjoining their land. Clans held the rights to issue licenses to fishers to fish their sea domains and exclude other inhabitants. Sea tenures and

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[3] By way of illustration, Jackson (1995) found in her research into the assertions of ownership rights by some Australian Aboriginal and Torres Strait Islanders that non-Indigenous Australians opposed to such rights responded most popularly by stating that the sea cannot be owned because it is free. As Jackson states, "[t]o most non-Indigenous Australians, the notion of sea tenure would be an anathema to the ethos of unfettered recreational access to the beach and the legal doctrine of the freedom of the seas" (1995, 93). Only in the past 30 years have rights to local sea territories begun to be enquired into. Ethnographic field studies of local sea territories have generally been regarded as rare instances (Sharp 1996).

locally evolved social rules for fishing were located in oral tradition, some of which still survive. Irish legend, for example, suggests Irish coastal clans held rights to the sea up to a distance of nine waves (Heaney 1994).

However, such common property traditions of ownership were overturned during the revolutionary transformation of feudal and pre-feudal clan-based land and sea tenures, a process largely completed in England by the end of the eighteenth century (Sharp 1996). This transformation found legal expression in the seventeenth century concept of state territorial seas based in the work of Italian jurist, Albericus Gentilis (1550-1608) wherein customary marine rights of local coastal inhabitants moved to the Crown (Sharp 1996). In Great Britain,

> inherited coastal territories or domains were absorbed into greater state territorial seas as though they had never existed. … Beaches, estuaries, inlets, reefs, fishing grounds, often held in customary ownership by groups of local inhabitants, were absorbed into state territorial seas organised as anonymous space. (Sharp 2002, 158) [4]

The first twenty years of the seventeenth century were brimming with conflicting claims for dominion over seas and oceans by European nations (Butler 1990). Consequently, there was great interest in Grotius' ideas on natural rights and natural law, not least from the United Dutch East India Company (or VOC). In 1604 Grotius was commissioned by the United Dutch East India Company in a brief on the Law of Prize to justify the seizure of a Portuguese galleon and its hefty booty, the *Santa Catarina*, in the Straits of Malacca by a Company vessel two years earlier (Scott 1916; Van Ittersum 2006). In *De Jure Praedae* and *Mare Liberum* (published at the Company's request), Grotius refuted Portuguese and Spanish claims to the

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[4] Sharp (2002, 180) explains that:

> Gentilis' unique concern was with the jurisdiction of states. The change he was interpreting depended upon the replacement of the medieval idea, grounded in feudalism, that the law is derived from custom, to the radically new idea that the law may be created. Jurisdiction over the sea was not new; it had been exercised to suppress piracy and so create law and order on the seas. What was new was the extension of the power of the sovereign over the adjoining sea. The classic Roman doctrine of seas as common to all was placed within a new framework in the light of sovereign jurisdiction: citizens of the monarchical state have the freedom to fish and to enjoy the sea domain of the sovereign.

high seas to the exclusion of all other nations, and attested to the rights of the Dutch to participate in trade with the East Indies. [5]

In a "battle of books" Seraphim de Freitas, professor and monk, contested Grotius' thesis in *Mare Liberum* in providing the semi-official Portuguese response (Anand 1983, 102; Steinberg 2001, 89). Freitas proposed the allocation of rights of *imperium* in the deep sea to competent sovereigns, reflecting closely the rights to exercise power in ocean-space that Spain and Portugal had already claimed for themselves in the Treaty of Tordesillas (Steinberg 2001). While Freitas agreed with Grotius that sovereigns could not exclusively possess the ocean he argued that the right of navigation does not belong to everyone by natural law and that "Portugal has a right to police the sea", including the restriction of navigation (Steinberg 2001, 95). Steinberg observes further that de Freitas' argument was a pragmatic acknowledgement of the temper of the times. Both Grotius and de Freitas recognised that there was a shift from the Roman mono-state to a multi-state system. But while Grotius argued for open navigation, de Freitas argued "competent sovereigns" retained certain exclusive usufruct rights, but not possession, over specific long distance trade routes (Steinberg 2001, 96).

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[5] In her text, *Profit and Principle: Hugo Grotius, Natural Rights Theories and the Rise of Dutch Power in the East Indies, 1595-1615*, Van Ittersum (2006) discusses the cooperative relations between Grotius and the United Dutch East India Company. Van Ittersum notes that Grotius was most likely engaged by the Company just prior to the verdict being handed down by the Amsterdam Admiralty Court on the seizure of the *Santa Catarina.* She comments that this engagement "was the start of one of the most successful political and intellectual partnerships in history, which lasted for over a decade and marked a new departure in natural law and natural rights theories" (Van Ittersum 2006, liii). For Grotius' part, he "voiced his radical ideas at every possible occasion, greatly influencing the Company directors" (Van Ittersum 2006, liv). For example: "When the Company's federal board held its half yearly meeting in September 1609, the Gentlemen XVII inserted in their minutes a long and detailed justification of the privateering campaign of the previous six years, full of Grotian rhetoric about freedom of trade and navigation" (Van Ittersum 2006, liv).

At the same time,

> Grotius' natural law and natural rights theories were clearly distilled from the abundance of factual information about the VOC's trials and tribulations that reached him by way of the directors. Even though he conceptualised this material at a higher level of abstraction than anybody else, his theoretical concerns were always subject to the VOC's political needs and commercial interests. (Van Ittersum 2006, liv)

John Selden, an eminent British scholar and lawyer, on the other hand, defended the principle of *mare clausum* or 'closed seas' (Anand 1983; Butler 1990). Selden's comprehensive treatise, *Mare Clausum, seu de Dominio Maris Libri Duo* (*The Closed Sea or Two Books Concerning the Rule Over the Sea*) was published in 1635. Under the principle of *mare clausum,* states can claim exclusive jurisdiction in wide seas around them, facilitating exclusive rights principally to nearby fisheries (Anand 1983). Selden wrote on behalf of the British Crown who sought the legal means to exclude Dutch fishing vessels from territorial waters (Sharp 1996). Drawing on historical data for support, Selden maintained that almost all nations of antiquity practised maritime sovereignty (Anand 1983). He argued that English claims of exclusive jurisdiction in the surrounding seas, as a part of their territory had always existed (Anand 1983). According to Selden "the sea … under the law of nations is as capable of private dominion as is the land, and the king of Great Britain is lord of all the sea inseparably and perpetually appendant to the British Empire" (cited in Butler 1990, 211),

Like Grotius, Selden has been criticised for his overly selective use of evidence to support his position. For instance, in presenting his case for the principle of *mare clausum,* he refers only to the European states that claimed sovereignty and failed to include states such as India that did not (Anand 1983). It is clear that the treatises of Selden and Grotius were much more the pleading of personal and national desire than unbiased, juristic science.

In elaborating on this point, we can look at later developments in Grotius' reasoning in relation to freedoms of trade and navigation as discussed by Van Ittersum (2006). While Grotius' rights theories were well suited to dealing with the Spanish and Portuguese monopoly of the spice trade, they were not effective in refuting English claims to a share of the trade and so maintaining Dutch interests: "Freedom of trade and navigation was supposed to benefit [Grotius'] compatriots, not the English" (Van Ittersum 2006, 361). In an effort to ease the tensions that had arisen between the English and Dutch East India Companies over intense competition for the spice trade, the Anglo-Dutch colonial conferences were held in London in 1613 and in The Hague in 1615 (Van Ittersum 2006). Grotius led the Dutch delegation (Van Ittersum

2006). The English East India Company supported their claim to freedom of trade and navigation by quoting Grotius' arguments in *Mare Liberum*. As Van Ittersum explains:

> The EIC directors took *Mare Liberum* to mean that freedom of trade and navigation had been mandated by natural law and could not be abridged in any way, least of all by the spurious Iberian claims to the East Indies—i.e. the titles of discovery, the papal donation, prescription, possession, etc. They used the same argument against the VOC's obstruction of English commerce. Freedom of trade and navigation was a fundamental right of everyone, which could never be alienated or lost in its entirety, the VOC's contracts and alliances with the natives notwithstanding. (2006, 360)

Grotius, however, defended Dutch interests and actions—observed to have been strong armed tactics to prevent trade between the English and indigenous peoples of the East Indies—by citing the natural law principle *pacta servanda sunt* (meaning contracts must be honoured) (Van Ittersum 2006). Grotius "emphasized that the delivery contracts signed by the inhabitants of the Spice Islands remained binding even if the treaties deprived them of their right of self-determination" (Van Ittersum 2003, 490). Grotius now argued that contracts or treaties with peoples of the East Indies extinguished the liberty of the law of nature and nations (Anand 1983). As Van Ittersum states: "Although the universal freedom of navigation and trade, shared by Asians and Europeans alike, had been uppermost in his mind while writing *De Jure Praedae*, the observance of treaties was his biggest concern ten years later" (2006, 362).

Grotius argued further that the Dutch monopoly of the spice trade was payment for the considerable cost and danger incurred by the Dutch for fighting the Portuguese for a share of the trade. It was also payment for the heavy costs incurred by the United Dutch East India Company in protecting the Indigenous rulers of the East Indies against foreign aggression. Contradicting his earlier views in *Mare Liberum* that access to the sea was a perpetual public right of all nations, Grotius argued that many of the laws of nature and nations are indeterminate (Anand 1983).

Grotius' concept of freedom of the seas was not fully accepted by other European states for nearly two hundred years.[6] In this period of merchant capitalism, England and other European states drew upon the principles of *mare clausum* in order to control as much ocean-space as maritime strength would allow them (Anand 1983).[7] Steinberg (2001), however, suggests that a Freitian model of ocean-space was most characteristic, whereby individual states made claims to territory over specific ocean routes and uses of the sea in specific locations.

Towards the end of the eighteenth century law of the sea began to turn toward the Grotian model, evolving in a way that furthered European interests and protected European rights. Grotius' concept of *mare liberum* was gradually recognised as advantageous to colonial expansion—the basis for Europe's growing wealth—into Africa and Asia in the wake of the Industrial Revolution (Anand 1983). The powerful European nations came to an understanding that "the eastern world, the Americas and Africa, were big enough to be exploited by everybody, and better together" (Anand 1983, 126). European nations became preoccupied with their vast

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[6] Although as we have seen in the review above, the English among other European states used Grotius' principle of mare liberum when it suited their interests.

[7] The slowness for the shift in emphasis from *mare clausum* to *mare liberum* is illustrated in the tensions that still existed in an important case in relation to law of the sea that occurred in English jurisprudence. The case was *R v Keyn*, heard by 13 members of the Court of Crown Cases Reserved in 1876. The case was ostensibly about a collision between two ships in English territorial seas where a passenger died and an argument emerged about which jurisdiction was applicable to try a case for manslaughter. But in reaching a verdict, many issues about law of the sea that were uncertain were considered and clarified by the Court. As an indication of how difficult and contested the issues, the final determination was that by the narrowest of majorities—seven judges—decided that English law had no jurisdiction to try the defendant for manslaughter (it was a matter for an International law court) while six determined that it was within the jurisdiction of an English court. Of interest in the present context is that Mason J, in a significant 1975 case in the High Court of Australia, (the *Seas and Submerged Lands Act* case) noted in reflecting on *Keyn* in relation to two other cases that occurred soon after that:

> To the extent to which [those cases] are at variance with what was decided in *Keyn's Case* they do not in my opinion accurately reflect the law as it stood in 1900. They carry overtones of the ancient doctrine, enunciated by Selden and Hale, that the narrow seas were within the territorial sovereignty of the King, a doctrine which was then obsolete. They fail to acknowledge, as did the majority in *Keyn's Case*, that the territorial sea is a distinct concept which owes its origin, development and elaboration to international law and that it has been incorporated into British municipal law not as a supplement to the old notion of territorial sovereignty, but quite independently of it. (*Commonwealth of Australia v Yarmirr* (2001) 208 CLR, 10).

claims of land, and estimated that efforts to maintain particular claims on the high seas were far less important. The United States, from independence in 1776, also played an important role in the acceptance of the freedom of the seas in the Atlantic Ocean, and its restoration in Asia and the Pacific (Anand 1983). However, the British, unrivalled in terms of maritime might for most of the period between 1815 and 1914, became the strongest champions of the freedom of the seas. The reason for this was that: "there was so much trading and it could be done so much cheaper with a completely free and open sea, that the very idea of 'owning' the sea vanished" (McFee 1950, cited in Anand 1983, 129).

Steinberg links the ascendancy of the Grotian model in the late eighteenth century to the developing industrial capitalism of European societies observing that while industrial capitalism constructs the ocean as "an empty void outside society", as "non-territory" and "a friction-free transportation surface"—the oceans required social regulation because they were intensely used (2001, 125). Throughout this period, the regulatory idea of the Grotian model was only implemented in a weak form—ships could continue to act with freedom as long as they respected the freedom of other ships—so as to avoid any degree of territoriality. Social interactions in ocean-space were to be kept to the minimum necessary to preserve access to resources (Steinberg 2001).

Anand (1983), who contests the hegemony of European representation of the development of international law of the sea by highlighting the contributions of Asian and African societies to its development, claims that in these changed circumstances, Grotius was resurrected as a great hero and 'father' of maritime law by states such as Britain that had earlier practised *mare clausum*. Grotius' arguments became "holy mantras" and freedom of navigation and trade almost "divine rights" Anand (1983, 229). The political and economic reasons that led Grotius to write his famous doctrine of freedom of the seas, and the fact that he had abandoned it to defend the interests of the United Dutch East India Company and the United Provinces, were irrelevant to the new dominating interests of the European maritime powers.

What becomes apparent in this history of events is that the meaning of the oceans in international law has shifted in line with European desires to industrialise, colonise and accumulate wealth. In Grotius' own time, it was judged that controlling the oceans through military might was the best way to produce this wealth, whether we consider this to be within the framework of Selden or Freitas. As it transpired, two hundred years later and up to the present day, the generation of wealth is best realised by holding the seas in common. In particular, open access to the oceans continues to facilitate "frictionless trade", that is, the uninterrupted movement of goods as quickly, easily and cheaply as possible (Scorpeccio, cited in Correy 2003, 2).

Contemporary regulation of the oceans

The practices that have flowed from the concept of freedom of the seas have, of course, never been universal. As the Northern Land Council, a peak body that represents and advocates for the rights and aspirations of Aboriginal people in the top half of the Northern Territory of Australia, states:

> In western law and tradition, seas, unlike land, are regarded as owned by no one and belonging to everyone. This has created a popular impression that the seas are somehow 'unownable', while the facts are that the seas have been highly regulated and used over the years—and these regulations and uses have regularly been changed. Far from leaving the seas untouched, governments have regulated waters and seas in pursuit of shipping, conservation and fishing and mining objectives. (2002, 8-9)

The Northern Land Council points out here that while the Western legal tradition does not attribute ownership of the oceans to any one person, it allows for a sovereign to make rules over the sea for its use. This observation refers to historical developments that have occurred. State security is another objective of regulation (although not mentioned by the Northern Land Council) that was well entrenched by the end of the eighteenth century, wherein:

> [t]he new principle of freedom, when it approached the shore, met with another principle, the principle of protection, not a residuum of the old claim, but a new

> independent basis and reason for modification, near the shore, of the principle of freedom. The sovereign of the land washed by the sea asserted a new right to protect his subjects and citizens against attack, against invasion, against interference and injury, to protect them against attack threatening their peace, to protect their revenues, to protect their health, to protect their industries. (Root 1927, cited in Anand 1983, 137)

In short, early expressions of limits on the relationship between sovereignty over territorial waters (expressed as jurisdiction) and freedom of the seas were made on the basis of arguments about state security. The most salient expression of this concern is the so-called 'cannon shot rule', first introduced into international law by Dutch jurist, Bynkershoek, in 1703 and adopted by the larger maritime powers (Anand 1983). The cannon shot rule states: "the territorial dominion of a state extended as far as projectiles could be fired from cannon on the shore" (Anand 1983, 138). Thus, areas of up to approximately three nautical miles were considered as coastal state property—"precisely the kind of claim Grotius sought to deny in principle"—at least in his early work (Butler 1990, 216).

While this sovereign right to territorial waters of at least three nautical miles wide for the protection of coastal states was generally accepted in Europe, the specific extent of the various relevant jurisdictions was not, until very recently, settled upon. In 1982, the Third United Nations Conference on the Law of the Sea (UNCLOS III) established the extent of territorial seas to 12 nautical miles in the Convention on the Law of the Sea (LOS) (United Nations 1983). The rather straightforward codification that is 'the cannon shot rule' became a complex and comprehensive regime of law and order in the oceans governing all uses. Herein, sovereign regulation of the oceans involves large tracts—exclusive economic zones (EEZs) of up to 200 nautical miles in breadth, and in some cases further depending on the depth of the continental shelf and certain other considerations.[8] Within the EEZ, sovereign rights to certain 'resources' and economic activities coexist with some freedoms of the seas including free transit to all vessels (United Nations 1983).

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[8] See Article 76-definition of the continental shelf.
http://www.un.org/Depts/los/convention_agreements/texts/unclos/part6.htm

Inevitably, "[t]he state practice and international treaties of the post-1945 era have seriously eroded the original and uncompromising simplicity of Grotius' view of the high seas" (Butler 1990, 217).[9] In examining what is left of Grotius' original concept of freedom of the seas under UNCLOS III, Butler concludes:

> The measure of how far we have departed from Grotius' spatial conception of high seas is expressed in Article 86 of the 1982 LOS Convention: the Convention provisions regarding the high seas apply to all parts of the sea 'that are not included in the exclusive economic zone, in the territorial sea or in the internal waters of a state, or in the archipelagic waters of an archipelagic State'. (1990, 217)[10]

There is, then, a discernible move back to practices reminiscent of *mare clausum*—albeit with the introduction of wholly new principles within a web of reason than was utilised prior to the acceptance of Grotius' notion of freedom of the seas. These new principles continue to recognise the importance of freedom of the high seas but are largely premised on the desire to control ocean resources. Prior to World War II, the ocean had been perceived as limited in use with the exception of fishing and whaling and, therefore, of little importance (Anand 1983). The high seas had primarily been thought of as a means of navigation and transport to exploit and trade land-based resources with others. While navigation and transportation remain vitally important, in the post-War period the perception of the usefulness of the oceans has increased with the discovery of resources, especially oil, in the sea itself. In recent decades there has also been a push to secure coastal fisheries brought under pressure through technological innovation in navigation, fishing and ocean exploration (United Nations 2007). Therefore, part of my concern in this Chapter—that the way the

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[9] It should be noted, however, Grotius' contention in *Mare Liberum* that a state may not subject any part of the high seas to its sovereignty has been strengthened under the 1982 LOS Convention (Butler 1990). The LOS Convention (Article 138, Part XI) provides for "the benefit of mankind as a whole, irrespective of the geographical location of States, whether coastal or land-locked" (United Nations 1994). Additionally, freedom of the high seas now includes not only the traditional idea of freedom of navigation but further, freedom of overflight, fishing, scientific research, construction of artificial islands and other structures permitted under international law and the laying of submarine cables and pipelines (Butler 1990).

[10] This amounts to approximately 30 percent of all the oceans.

oceans are conceptualised in law of the sea has significant material consequences for the oceans—is, in scale and broad interest among nations, a recent phenomenon.

Fishing aside, my concern in this Chapter is tied up with the relatively new recognition of economic wealth in the ocean itself and the seabed. Negotiations leading to the LOS Convention have been, as in the past, largely marked by self-interest. But in this new era, European and United States expansion has not been dictated by old views about how the ocean can be used, which sought to control ocean trade movements. The primary focus now has become access to and control of ocean resources.

The concept of common heritage

In the post-World War II era, increasing claims of coastal states to exclusive national jurisdiction were opposed by the claim for collective international exploitation of marine environments (Mason 2002).[11] The push from coastal states for control of ocean environments was challenged with a radical new concept introduced at the 1967 United Nations General Assembly. Malta's Ambassador to the United Nations, Arvid Pardo, appealed to "moral concepts, reason and well-understood national interests", when he proposed that the oceans that are beyond the limits of national jurisdiction should belong to all (humans) as the "common heritage of mankind" (1967, 2).

The idea of the high seas as common heritage was proposed in response to specific factors arising in the 1960s: the commercial extraction of deep seabed manganese nodules (an important industrial mineral) became conceivable and policymakers, particularly from the United States, were concerned with the design of a regime to mine the nodules that did not impinge upon other elements of high sea governance (Steinberg 2001). The United States made the initial recommendation that the

[11] Anand (1983) and Steinberg (2001) provide detailed accounts of the conflicting claims of states to territorial waters and concern about the enclosure of the high seas abutting territorial waters after World War II. Anand (1983) and Steinberg (2001), furthermore, provide a commentary of the developments of UNCLOS I (1958) and UNCLOS II (1960) in ocean governance in response to these concerns.

seabed and its resources be declared "the legacy of all human beings" (President Johnson 1966, cited in Steinberg 2001, 181). At a July 1966 ceremony to commission an oceanographic research vessel, President Lyndon Johnson stated:

> Under no circumstances, we believe, must we ever allow the prospects of rich harvest and mineral wealth [of the deep ocean seabed] to create a new form of colonial competition among maritime nations. We must be careful to avoid a race to grab and hold the lands under the high seas. We must ensure that the deep seas and the ocean bottoms are, and remain, the legacy of all human beings. (cited in Steinberg 2001, 181)

The common heritage concept was given legal status in the 1982 LOS Convention. The concept is one of non-sovereignty and non-ownership (Borgese 1995). Section 2, Part XI of the Convention states that natural or juridical persons or States cannot make claims or exercise sovereignty over the high seas or its resources. The resources are vested in all of humankind and the benefits derived from the resources of the high seas and sea floors are to be shared amongst the international community. Characterised by principles of redistributive and intergenerational justice, the common heritage concept privileges the needs of developing nations and future generations. It also prioritises a principle of sustainable use of the marine environment and the use of the high seas exclusively for peaceful purposes. (United Nations 1983; Borgese 1995)

It is important to note, however, that the process of defining the concept of common heritage has been encumbered by controversy and, furthermore, some of the radical components of the concept initially put forward have subsequently been watered down. While Pardo's proposal for the concept was initially welcomed with enthusiasm, significant differences developed between First and Third World states about how the common heritage concept would govern the seabed and how the proposed governing body, the International Sea-Bed Authority (ISA) would operate (Steinberg 2001). Third World states embraced the common heritage concept, in view of the opportunity it represented for social justice:

> For the first time, economically productive space would be controlled by the whole of humanity, and a body representing the whole of humanity would have control

> over generating value from that space and determining allocation of profits. (Steinberg 2001, 182)

In contrast, First World states and miners argued that the concept was,

> fundamentally at odds with capitalism's assertion of the sanctity of production by competitive entities. … [T]he United States and its allies proposed that the ISA be little more than a global licensing agency that would receive claims, supervise production by national and private entities, and distribute 'tax revenues' to less developed countries and those states that produced similar minerals on land and were losing revenue due to competition from the international seabed. (Steinberg 2001, 183)

Over time a compromise was reached to Part XI of the Convention, which sets out the system for regulating mining of mineral resources from the deep seabed beyond national jurisdiction:

> A private or national mining company would prospect two potential mining sites of equal value. The ISA then would grant one site to the mining company/state and reserve the other to be mined by the Enterprise, the ISA's production company. The Enterprise would receive its initial capital and technology from mandatory contributions by mining entities, but soon it would become self-financing. (Steinberg 2001, 183)

However, the United States and other industrialised maritime nations refused to endorse Part XI of the LOS Convention in 1982. The United States and others objected to Part XI on the basis that the provisions were anti-mining and anti-free market (Brown 1997).[12] The United States objected on the grounds "that the Convention included provisions that would deter rather then promote future development of deep seabed mineral resources through the application of economic

[12] In effect, there was a range of factors that came together to produce this state of affairs. Steinberg (2001) sites several political and economic factors involved including the end of the Cold War, the global recession of the early 1970s that significantly reduced financial interest in deep-sea mining and the ascendancy of the Thatcher and Reagan administrations, which championed free market, capitalist ideology. Such factors created a new context for the negotiations of Part XI that strengthened the position of the United States and other industrialised nations.

principles inconsistent with free market theories" (Brown 1997, sec. 3, par. 5). The United States and other industrialised countries objected further to "the lack of adequate influence by the United States and other industrialized countries over the decisions taken by the Assembly and Council of the ISA and the absence of language guaranteeing the United States a seat on the Council" (Brown 1997, sec. 3, par. 5).

Part XI was adjusted in 1994 in the Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 largely to accommodate the objections of the major maritime powers (Borgese 1998; Brown 1997). The Implementation Agreement maintains the basic organisational structure of the ISA, but significantly alters the decision-making mechanisms of the Council (Van Dyke 2000). In summary, the Council's balanced decision-making process was manipulated whereby "three rich countries ('investors') could veto any decision made by the Council" (Borgese 1998, 112). In addition, "a powerful 'Finance Committee' was established which could decide, in due time, that the sessions of the governing organs of the Authority were not 'cost-effective' and thus should not be held any more" (Borgese 1998, 112). A range of measures were introduced that favoured the interests of the rich nations, including limits on the financial borrowing capacity of the ISA's production company (the Enterprise), the discontinuation of production limits, a system of Joint Ventures between the ISA and private capital and removal of technology transfer obligations (United Nations 1994). The Implementation Agreement, "wiped out all the benefits the developing countries thought they had conquered in the 1970s: The Enterprise was put on ice *sine diem*" (Borgese 1998, 112, emphasis in original).[13]

In short, there has been considerable resistance by the industrialised coastal states to the common heritage concept. This is in large part due to technologically advanced

[13] Borgese (1998) observes that developing countries did not intervene in the dismantling of Part XI of the Convention, but stood by idly and indifferently as the Implementation Agreement was passed. Steinberg (2001) makes a similar observation. This is no doubt due to a range of factors and the changing context for negotiations of Part XI as I mentioned in footnote 12 (above). Steinberg notes in particular that all states had an interest in ratifying the environmental management aspect of the Agreement, augmented by the 1992 United Nations Conference on Environment and Development (2001, 185).

nations seeking to safeguard their competitive advantage to freely exploit common spaces. The United States, for example, has advocated seabed mining, like fishing and navigation, as a freedom of the high seas. (Mason 2002)

Even as the Implementation Agreement confirms the common heritage standing of the seabed, it introduces principles of the free market into international law of sea that resonate with Grotius' idea that all of humanity has the right to compete for ocean 'resources' but not all are guaranteed their fair share of resources: resources are the private property of those who exploit them.[14] This construction of ocean-space continues to serve dominant industrial-capitalist political and economic interests, increasingly so as the commodification and homogenisation of ocean environments and ocean dwellers intensifies, driven by the practices and structural requirements of late capitalism.

Some ethical and political considerations

Historically, the Western conception of freedom of the seas has been antithetical to an ocean ethic and politics that pays attention to, and is inclusive of, the needs of oceans and ocean dwellers. There are several dimensions to this concern that bear consideration.

Conceptual clarity: open access and common property

Grotius' rationale for freedom of the seas was in part a belief that marine dwellers such as fish were inexhaustibly abundant. In contemporary times this assumption is demonstrated to be incorrect. A widely held view in Western resource management discourse about the threat posed by Grotius' concept of freedom of the seas to ocean environments can be summarised as follows: the right of open access exacerbates problems associated with limits to ocean 'resources' because it continues to facilitate

[14] Notwithstanding a stewardship provision: The international community now recognises that there are limits to the high seas and has ratified a regime of environmental protection in the LOS Convention accordingly (see United Nations 1983, Part VII, Section 2, 'Conservation and Management of Living Resources of the High Seas').

largely unconstrained levels of exploitation of the oceans (Bocking 2004). That is to say, open access provides for each state or individual to pursue their own best interest without regard for fish or ocean environments. By holding the oceans in common, theoretically they are available for everybody to use but effectively nobody takes responsibility for their ecological well being.

This view draws upon Hardin's influential thesis, 'tragedy of the commons', first published in *Science* magazine in 1968. Hardin, a resource economist, argues that freedom in the commons inevitably leads to a tragedy, which is basically that the gains to each individual user from over-exploiting natural resources will always compensate any individual for losses owing to degradation of the commons. Central to Hardin's thesis is the assumption that individuals will always attempt to maximise their own gains in spite of the wider and long-term consequences. In short, he equates the pursuit of one's own best interest in the commons with the irresponsible use of resources.

Hardin's thesis has successfully brought attention to the relationship between open access rights to the exploitation of oceans and ocean dwellers and their subsequent over-exploitation and degradation. Hardin writes:

> The oceans of the world continue to suffer from the survival of the philosophy of the commons. Maritime nations still respond automatically to the shibboleth of the 'freedom of the seas'. Professing to believe in the 'inexhaustible resources of the oceans,' they bring species after species of fish and whales closer to extinction. (1996, 178)

There is considerable historical evidence to support Hardin's thesis, especially since the mid-twentieth century wherein the alignment of technology and dominant industrial-capitalist discourse has led to the overexploitation and pollution of ocean environments at unprecedented rates, a topic I discuss in more detail in Chapter 5. Nonetheless, I want to make the case here that Hardin's notion of commons is narrowly defined and culturally biased and that this has had important repercussions for how matters of over-exploitation and degradation of ocean environments have been addressed. Critically, Hardin is concerned with commons such as the high seas that are characterised by their right of open access. Open access commons are not

the same as common property regimes historically associated with villagers in the English commons (Rigsby 1998). Nor are they the same as the communal property rights of traditional maritime cultures such as Australian coastal Indigenous groups. These types of commons—often referred to as communal sea tenure or customary marine tenure—speak of rights held by a well-defined community of users accompanied by certain agreed customs or rules involving cooperation (Rigsby 1998; Sharp 2002). The power to manage these types of commons lies with the community (Fairlie, Hagler and O'Riordan 1995).

Hardin's thesis is founded upon a Western orthodox economic interpretation of human behaviour that each individual will seek to maximise one's self-interest. This is a construction of human behaviour as unreserved individualism, itself influenced by scientific notions of competition, predation and parasitism (Rigsby 1998; Sharp 2002). We find this view in Charles Darwin's (1809-1882) influential theory of natural selection (or 'survival of the fittest'), for example, set forth in, *The Origin of Species*, and published in 1859.[15] The upshot of Hardin's cultural bias is that competition among individuals for natural resources is emphasised at the expense of cooperation (Berkes 1989).

Hardin's thesis has had the effect of framing the debate about what is to be done with regard to the over-exploitation and degradation of ocean environments primarily in terms of two options: unregulated open access or private use-rights (Rogers 1998). Situations that are characterised by cooperation between humans in relation to the non-human natural world have received relatively little attention in resource management discourse. The trend toward private use-rights in the oceans is a powerful one. Certainly economists and corporations have embraced private property rights to the ocean environment with enthusiasm (Fairlie, Hagler and O'Riordan 1995). The allocation of private property rights to fish has been the primary response to the knowledge that there are too many vessels chasing too few fish. The mechanism used to limit access to fisheries is the individual transferable

[15] Darwin's (1936) theory of natural selection holds that survival or extinction of each organism is decided by each organism's ability to adapt to its environment.

quota system (ITQs). ITQs are transferable quotas representing fish 'stocks' that can be traded between fishers and fishing companies. ITQ's have the effect of redistributing fish away from communities and individual fishers into the hands of powerful corporate interests. Under a system of ITQs, "cash is what will more and more determine access to the seas" (Fairlie, Hagler and O'Riordan 1995, 62).

The benefits of including a diversity of views

Despite the powerful trend to private use-rights, customary marine rights are being asserted around the globe. Customary fishing rights and marine ownership are claimed by Australian Aboriginal and Torres Strait Islanders, Maoris of New Zealand, Kanaks of Tahiti, native Hawaiians, the Treaty Tribes Northwest Coast of the United States, Tlingit and Haida peoples of Alaska, Inuit of Alaska and the Northwest territories, Mapuche Indians of Chile, Seri Indians of the Sea of Cortez, among others (Cordell 1993).

In debates about what is to be done about the over-exploitation and degradation of ocean environments, there are solid arguments to suggest that a diversity of human-ocean relations inclusive of communal property approaches is appropriate. Ethnographic research into communal property rights reveals the existence of local resource management practices, particularly in traditional fishing areas (Cordell 1993). In general, the limits to access in communal property regimes motivate holders to exercise restraint. This is not to say that there are within such common property systems conservation features that are readily translatable to Western conservation biology or ecology. Mulrennan and Sullivan make the important point that:

> Environmental planning and management concepts invoked in government programs commonly relate to western concepts of conservation in which value is placed on environmental attributes such as rarity or uniqueness, representativeness, threat, and diversity. ... Indigenous societies frequently maintain a strong conservation ethic, but it is philosophically very different from traditional western concepts of conservation. In indigenous societies conservation concepts are

> typically embedded within contexts of the practical use of environmental resources. (1993, 257)

Moreover, communal tenure does not always function to conserve the marine environment (Cordell 1993; Johannes 2003). Johannes observes that in Oceania, for instance, constructive and destructive practices coexisted in the past and present (2003).

Nevertheless, the element of cooperative restraint between humans in relation to ocean environments characteristic of communal property regimes can in some cases be thought of as marine conservation. Sharp elaborates on this point, noting that, "[t]owards the end of the 1980s, ongoing threats to the marine environment led some scholars to take an interest in the 'sea commons' " (2002, 174). An outcome of the scholars' interest was the formation of an International Association for the Study of Common Property in 1990. Research ensued, finding that:

> [c]ommon property situations, some of them ancient, others a few generations old, had generated and been guided more by values and practices cooperative than by an individualistic ethic. It was that moral force of cooperation which seemed to suggest an alternative to the values of possessive individualism, of the pursuit of rights without exercise of responsibilities which is characteristic of 'free riding'. (Sharp 2002, 174)

Indigenous interests in sea commons constitute much more than the management of natural resources, however. Indigenous perspectives offer altogether different ocean views from Western resource conservation perspectives. For example, Australian Aboriginal people interweave cultural, spiritual, ceremonial, territorial and economic systems together with communal property rights (Cordell 1991). Australian Aboriginal communal property rights are:

> closely bound up with kinship, traditional law and authority, and other structures that shape cultural identity, such as myths, totems and taboos, and story places in the seas. Clan or family leaders essentially act as trustees for land and sea holdings, assisted by elders and other important people who live and care for ancestral areas. The power to distribute and manage the use of collectively owned

> resources, to make cultural decisions and channel entrepreneurial activity resides with the custodians who speak for the territory they represent. (Cordell 1991, 109)

Nietschmann sums up the complex social and cultural connections and content of sea commons in his research with Torres Strait Islanders:

> Sea territories are not just bounded sea space but areas named, known, used, claimed and sometimes defended. … A territory, whether terrestrial or marine, is more than simply spatially delimited and defended resources for the exclusive use of a particular group. A territory is social and cultural space as much as it is resource or subsistence space. … Places used are places named. People conceptually produce the environment they use, delimit and defend. (1989, 60)

In attempting to convey Australian Aboriginal and Torres Strait Islander understandings of the oceans as imbued with social and cultural meaning, researchers have coined terms such as ‘sea country’, ‘cultural coastscapes’, or ‘salt-water country’ (Cordell 1991; Smyth 1997, 1993; Allen 1993).

Australian Aboriginal and Torres Strait Islander conceptions of oceans run counter to abstract Western utilitarian-economic conceptions that reduce oceans to resources and homogenised commons as we find inscribed in international law of the sea. Even though the United Nations has conceptualised the high seas as common heritage—including vital dimensions of social justice and environmental sustainability—the oceans continue to be cast in terms of utilitarian-economic ends (Dallmeyer 2005). Most conspicuous is the common heritage conception of the high seas as a frontier to be exploited. When Ambassador Pardo made his historic speech to the United Nations General Assembly he drew attention to the vast potential for commercial exploitation of newly discovered resources in the seas and on the deep seabed. He spoke of “possibilities of truly inestimable value” in the form of aquaculture, polymetallic nodules and other resources lying below the seabed’s surface (Pardo 1967, 3-5). Following Pardo’s speech, the concept of common heritage has become synonymous with the collective exploitation of marine and submarine resources for the benefit of all humankind.

In the common heritage concept, the exploitation of ocean resources is, moreover, specifically connected to a social justice dimension. For example, Article 138 of

Part XI of the LOS Convention states that activities in relation to 'the common heritage of mankind' shall take "into particular consideration the interests and needs of developing States and of people who have not attained full independence or other self-governing status" (United Nations 1983). Implicit in this principle is what Plumwood refers to as a moral dualism that hyper-separates "the group taken to be morally considerable ('persons') [from] the rest—which are 'things' (and, potentially at least, property), and are assumed not to matter or count ethically at all, hence to be open to rational instrumental use" (2002, 144). The concept of common heritage as a matter of justice further excludes ocean dwellers and ecosystems from ethical treatment by classifying them as 'resources' for the benefit an underprivileged class of persons. Plumwood evaluates this construction of human/non-human relations in her discussion of the "politics of conflict played out around moral consideration and person/property dualism" (2002, 146). She writes:

> the moral exclusion of the class defined as 'resource' is represented as nothing less than a matter of justice to less fortunate members of the 'person' class. … Just as poor whites were seen to be further deprived by the liberation of slaves, and working-class men by the liberation of women, so our duty to underprivileged humanity is seen to require the continued treatment of animals as mere resources, and of trees as mere fodder for timber mills. (Plumwood 2002, 145)

The type of redistributive justice effective in the common heritage concept works to reinforce the exclusion of the oceans from ethical consideration. By incorporating the populations of developing nations into the objectives of international law of the sea, it reinforces human-ocean relations whereby attention is paid only to the needs and interests of the human parties. Plumwood has characterised such relations between humans and non-human nature as monological (in contrast to a dialogue or conversation).

Significantly, in this monological approach, there was a lack of indigenous participation and representation in the negotiation processes leading up to the 1982 LOS Convention. The LOS Convention "does not expressly consider the far-reaching significance of marine areas to indigenous peoples, their profound relationship with the marine environment and resources, and their marine-related rights" (Dorough 1999, 408). Appreciably,

> If there had been broad, significant and meaningful indigenous involvement and participation, the final text of the LOS Convention would reflect a greater understanding of the inter-relatedness of the ocean environment to the rest of the human and natural environment. (Dorough 1999, 415)

I am in agreement with Dorough in that for all its achievements in ocean governance, the LOS Convention reinforces a narrowly defined conception of oceans in accordance with Western desires for ocean 'resources' and use-rights. As we will see in the following Chapter's case study, attempts to assert rights that are outside of the narrow scope of prescribed uses for the sea sanctioned in international law are contemplated only with great difficulty. But it is fair to say here that international law of the sea has effectively constrained the meaning of oceans and contributed to a loss of diversity in human-ocean relations.

The conceptions of oceans in international law of the sea—as a source of resources and a homogenised commons—contrast with those in Indigenous peoples' societies that are structured around customary marine tenure systems. The social construction of oceans under those regimes normatively involve not only greater levels of reciprocal obligations between people who share ocean 'resources', but the oceans themselves are active in maintaining the structure and content of the relationships through an identity that is made real and personable through stories and laws.

The link that this observation has to democratic processes and the benefits of this will be elaborated in Chapter 6.

Conclusion

Historical research demonstrates that the meaning of the ocean in international law of the sea has changed over time with regard to Western desire for ocean 'resources' and use-rights. And further, that contemporary research shows that legal conceptions of the oceans continue to be dominated by the interests of Western nations. That international law of the sea has changed in response to shifts in political and economic priorities is hardly surprising. An orthodox view encapsulated in notions

of 'positive law' is that the political arm of government, Parliament or the Sovereign, makes pronouncements of how the law 'ought to be' and the Judiciary applies it.[16] Hence, it is part of Western tradition for the law to respond to the political will of the sovereign. Be that as it may, the manner in which legal discourses have supported the will of the sovereign historically has, quite often, been through appeals to reason in relation to the laws of nature—a tradition to which legal positivism generally stands in opposition. Curiously, and to the benefit of creating a synthesis between natural law and positivist traditions, the laws of nature seem malleable to changes in the will of the sovereign. This insight into the close relationship between law and other discourses of power is familiar enough to us today (for example, in Critical Theory, structuralist and post structuralist writings). Nonetheless, this Chapter highlights the particular ways in which a disjuncture between the rationalist construction of law and the reality of law exists.

Law, and positivist law in particular, is posited as an objective, disinterested and universally applicable body of knowledge and practice. Yet, as I have highlighted in the above discussions of Grotius and the LOS Convention, international law of the sea is in fact a value-laden enterprise that interprets the ocean to reflect dominant Western rationalist ideologies. Reason is thereby harnessed to support prevailing power relations that work to ignore "struggle, loss, the pragmatic response to messiness, the violence of trying to impose one order over many interests" (Bottomley 1996, 123). We could say law of the sea is not a matter of reason or justice but a matter of domination.

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[16] The Stanford Encyclopaedia of Philosophy (2003) states about legal positivism that it is:

> the thesis that the existence and content of law depends on social facts and not on [law's] merits. The English jurist John Austin (1790-1859) formulated it thus: "The existence of law is one thing; its merit and demerit another. Whether it be or be not is one enquiry; whether it be or be not conformable to an assumed standard, is a different enquiry." (1832, 157) The positivist thesis does not say that law's merits are unintelligible, unimportant, or peripheral to the philosophy of law. It says that they do not determine whether laws or legal systems *exist*. … According to positivism, law is a matter of what has been posited (ordered, decided, practiced, tolerated, etc.); as we might say in a more modern idiom, positivism is the view that law is a social construction.

The most developed course of action we have for protecting ocean ecosystems from overexploitation and degradation is the LOS Convention. Yet the LOS Convention upholds the principle of the freedom of the seas that as we have seen gives little, if any, capacity to appreciate different conceptions of the oceans that imbue it with meaning other than global public rights. Accordingly, the monological character of the LOS Convention provides little scope for diversifying the legal foundations for Western human-ocean relations that improve the prospects for just existences of oceans based on a democratic process.

The capacity to acknowledge living oceans as agents in the democratic process relies, in my view, on debates that are inclusive of many perspectives about human-ocean relations. My key interest at this juncture in my dissertation is to demonstrate the following: the ocean as an agent in political process can come to the fore when revealed through an inclusive debate; inclusive debate will bring to the surface many perspectives on human-ocean relations. In so doing, debate will assist in freeing the oceans from particular constraints, say from a Western law view that only pays attention to the needs of humans—which ironically has the misnomer of freedom of the seas.

Chapter 3

Obliged to be Free: A Case Study of the *Croker* Native Title Determination

One effect of British colonisation of Australia was the absorption of customary marine rights of Aboriginal and Torres Strait Islander people into its common law traditions. The British effected this absorption by proclaiming the authority of the Crown over land, sea and peoples. The Australian nation has inherited the British common law traditions and has consistently reaffirmed validity of common law in regard to marine tenure.[1] In so doing, the British and Australian governments have been in a constant process of:

> reinscrib[ing] the land and sea … with their own names and memorials … generally unmindful of the inscriptions of the first peoples. … Traditional ways of owning the seas and beaches along the coasts were rarely acknowledged, even less were they the subject of negotiation. (Sharp 2002, 45)

The British colonisers did not, however, completely erase Australian Aboriginal and Torres Strait Islander peoples' systems of property rights in the oceans. Rather they

[1] The common law is judge made law. Australian common law has English roots but developed independently based on Australia's unique constitution (1901).

concealed them when they absorbed them into State law. Australian Aboriginal and Torres Strait Islander peoples' systems of property rights in the oceans continue to survive and evolve in their customs.

The capacity of Australian law to conceal and suppress Australian Aboriginal and Torres Strait Islander peoples' property rights has been significantly weakened since the High Court of Australia handed down its decision in *Mabo v Queensland [No 2]* (1992) 175 CLR 1 (hereinafter *Mabo* or *Mabo No.2*), which was the groundbreaking native title decision.[2] The native title law that has evolved since *Mabo* has provided a site for two types of legal framework to come together, both of which govern perceptions of, and relations with, land and waters. Those legal frameworks are the common law of Australia (including the manner in which it informs and is

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[2] The National Archives of Australia summarises the *Mabo* decision and some background to the decision as follows:

> On 20 May 1982, Eddie Koiki Mabo, Sam Passi, David Passi, Celuia Mapo Salee and James Rice began their legal claim for ownership of their lands on the island of Mer in the Torres Strait between Australia and Papua New Guinea. The High Court required the Supreme Court of Queensland to determine the facts on which the case was based but while the case was with the Queensland Court, the State Parliament passed the *Torres Strait Islands Coastal Islands Act* which stated 'Any rights that Torres Strait Islanders had to land after the claim of sovereignty in 1879 is hereby extinguished without compensation'.
>
> The challenge to this legislation was taken to the High Court and the decision in this case, known as Mabo No. 1, was that the Act was in conflict with the *Commonwealth Racial Discrimination Act* 1975 and was thus invalid.
>
> It was not until 3 June 1992 that *Mabo No. 2* was decided. By then, 10 years after the case opened, both Celuia Mapo Salee and Eddie Mabo had died.
>
> Six of the judges agreed that the Meriam people did have traditional ownership of their land, with Justice Dawson dissenting from the majority judgment. The judges held that British possession had not eliminated their title and that 'the Meriam people are entitled as against the whole world to possession, occupation, use and enjoyment of the lands of the Murray Islands'.
>
> The judgments of the High Court in the Mabo case inserted the legal doctrine of native title into Australian law. In recognising the traditional rights of the Meriam people to their islands in the eastern Torres Strait, the Court also held that native title existed for all Indigenous people in Australia prior to Cook's Instructions and the establishment of the British Colony of New South Wales in 1788. This decision altered the foundation of land law in Australia.
>
> The new doctrine of native title replaced a 17th century doctrine of *terra nullius* (no-one's land) on which British claims to possession of Australia were based. … In recognising that Indigenous people in Australia had a prior title to land taken by the Crown since Cook's declaration of possession in 1770, the Court held that this title exists today in any portion of land where it has not legally been extinguished.
>
> Following the High Court decision in *Mabo No. 2*, the Commonwealth Parliament passed the *Native Title Act* in 1993, enabling Indigenous people throughout Australia to claim traditional rights to unalienated land. (http://www.foundingdocs.gov.au)

influenced by municipal and international law) and traditional or customary law—which manifests in different ways in many different societies of Australian Aboriginal and Torres Strait Islander people around the country.

Subsequent to *Mabo*, the High Court of Australia has heard a number of native title cases, which have clarified questions about native title law. *Commonwealth of Australia v Yarmirr* (hereinafter *Croker)* is the High Court decision that deals with native title in the seas. The decision was handed down in October 2001. The effect of the decision in *Croker* was that certain native title rights and interests exist in the sea, but they do not, as the Aboriginal claim group asserted, amount to exclusive possession of the area.[3]

In *Croker* the High Court of Australia was presented with challenges not experienced in deciding native title claims over land and inland waters. Some of the reasons for these challenges will be outlined in this Chapter's case study of the *Croker* decision.

The case study discussion involves an analysis of the High Court's majority and minority (dissenting) judgments in *Croker*. I conclude from my analysis that there are strong indications that there is nothing inherent in the law of sea as it affects Australian common law that makes it inappropriate or impossible to apply concepts such as occupation or possession in ways that would allow for Aboriginal Australian and Torres Strait Islander people's laws and customs to have effect in various places and circumstances. Nonetheless, the critique I make includes the observation that the *Croker* majority proceeded in making their determination that the Croker Islanders do not have exclusive possession on the basis of attitudes to sea territories that are

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[3] In native title law in Australia it is confirmed that, through settlement, the British Crown acquired sovereignty over Australia but native title continued, and continues, to coexist with the Crown's sovereignty unless specifically extinguished by a valid grant or dealing with the land by the Crown that amounted to exclusive possession. Freehold land is, for example, a category of tenure that extinguishes native title, but Crown leasehold land and unalienated or unallocated Crown land are categories of tenure by which native title can continue to exist in certain circumstances. Specific questions about the extinguishing effects of specific historical dealings in land by the Crown continue to be answered by the courts.

With regard to the notion of exclusive possession, a claim of exclusive possession to an area of the sea is a claim to the right to possess, occupy and enjoy that area to the exclusion of all others.

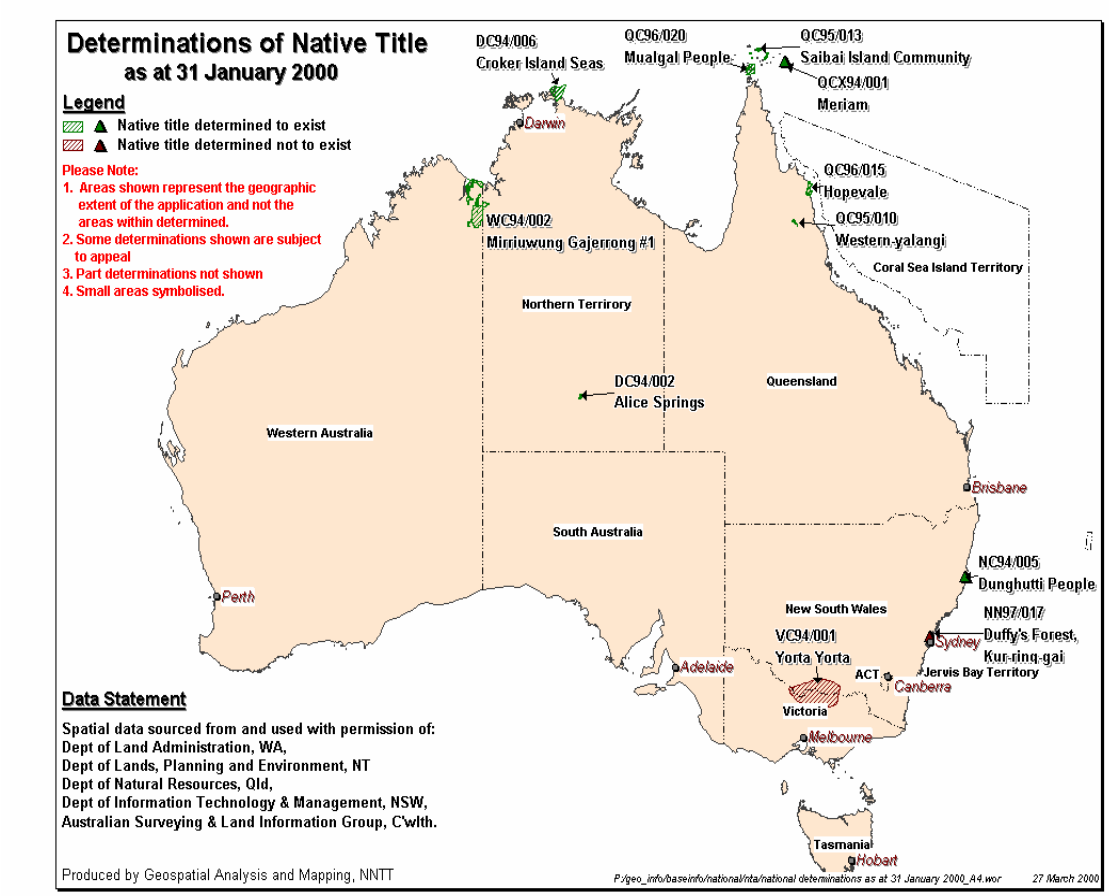
consistent with mainstream beliefs about the nature of the seas. The analysis thus adds depth to my argument in the previous Chapter that legal reasoning often serves particular cultural assumptions and interests about the character of the oceans. The case study highlights the difficulty Western law has in coming to terms with conceptions of the oceans other than its own (that is, as either closed or open access as discussed in Chapter 2). Moreover, the discussion in this Chapter, where it is shown that the Croker Islanders' conception of seas is not equally weighted with Western conceptions establishes important parameters for my thesis. Specifically, I will draw on this case study material to demonstrate that the injustice afforded the Croker Islanders unnecessarily constrains the possibilities for human-ocean relations and are a source of impoverishment of those relations.

In this case study I draw attention to the dissenting judgment of Justice Kirby as providing the grounds for how coexistence between Western and Australian Aboriginal and Torres Strait Islander forms of law in the sea is possible and the positive implications it has for widening the basis of Western considerations about the character of oceans and possibilities for human-ocean relations.

Background to *Croker*

Croker is a native title claim brought by Mary Yarmirr and Others (on behalf of a number of clan groups). The original application was lodged with the Commonwealth administrative body established to manage native title applications (the National Native Title Tribunal) in November 1994. A role of the National Native Title Tribunal is to assist parties to resolve applications by agreement, but in the case of *Croker* the issues were so novel the parties were unable to find the necessary common ground for an agreement to be reached. Consequently, the Federal Court started hearing evidence in April 1997.

The area of the claim was in the sea surrounding Croker Island. The area of the determined claim is approximately 3,300 square kilometres, and lies to the north of Cobourg Peninsula, which is a promontory of land at the north-western tip of Arnhem Land in the Northern Territory of Australia.



The claim excluded land that had been granted under the *Land Rights (Northern Territory) Act 1976*. The claim covers not only the water of the sea, but most of the subsoil below it and all its natural resources. The claimants asserted exclusive rights of ownership, occupancy, possession and use of the area.

Olney J made the primary Federal Court trial determination in July of 1998 (*Yarmirr v Northern Territory* (hereafter *Yarmirr*)), which was appealed to the Full Federal Court (three judges: Beaumont, Von Doussa and Merkel JJ). The Full Federal Court handed down its decision in December of 1999 (*Commonwealth of Australia v Yarmirr* (hereafter *Full Federal Court Yarmirr*)) and that was then taken on further appeal to the High Court (seven judges), which handed down its *Croker* decision in October of 2001.

The High Court appeal hearing resulted in four separate judgments—the majority decision of Gleeson CJ, Gaudron, Gummow and Haynes JJ, and three separate

judgments from McHugh, Kirby and Callinan JJ. As this discussion will outline, the four judgments intersect, complement and conflict in various ways.

The *Croker* majority decision summarised (at pars 2 and 3) the determination that was made by Olney J in *Yarmirr* in the following terms:

> The primary judge … determined that native title exists in relation to the sea and sea-bed within an area described in the determination. … It was determined that the native title rights and interests 'do not confer possession, occupation, use and enjoyment of the sea and sea-bed within the claimed area to the exclusion of all others'. The determination further provided that:
>
> '5. The native title rights and interests that the Court considers to be of importance are the rights and interests of the common law holders, in accordance with and subject to their traditional laws and customs to -
>
> (a) fish, hunt and gather within the claimed area for the purpose of satisfying their personal, domestic or non-commercial communal needs including for the purpose of observing traditional, cultural, ritual and spiritual laws and customs;
>
> (b) have access to the sea and sea-bed within the claimed area for all or any of the following purposes:
>
> (i) to exercise all or any of the rights and interests referred to in subparagraph 5(a);
>
> (ii) to travel through or within the claimed area;
>
> (iii) to visit and protect places within the claimed area which are of cultural or spiritual importance;
>
> (iv) to safeguard the cultural and spiritual knowledge of the common law holders.'
>
> […]

> The determination provided that the native title is held by the Aboriginal peoples who are the yuwurrumu members of the Mandilarri-Ildugij, the Mangalara, the Murran, the Gadura-Minaga and the Ngaynjaharr clans.[4]

The claimants and the Commonwealth appealed the determination to the Full Federal Court. The *Croker* majority summarised the bases of the appeals and the resulting decision in *Full Federal Court Yarmirr* as follows:

> The Commonwealth contended that, because the claimed area was the sea and the sea-bed, no native title exists within that claimed area. The claimants contended that the native title rights and interests they hold confer possession, occupation, use and enjoyment of the sea and sea-bed within the claimed area to the exclusion of all others. … By majority, the Full Court of the Federal Court (Beaumont and von Doussa JJ; Merkel J dissenting) dismissed both appeals. Merkel J was of the opinion that the Commonwealth's appeal failed but considered that the claimants' appeal should be allowed and the proceeding remitted for further hearing by the primary judge.

The bases of the appeals in *Full Federal Court Yarmirr* by the claimants and the Commonwealth were essentially elaborations on their earlier arguments. That is, the claimants continued to argue for exclusive possession (with some narrowing of the scope of what they were claiming exclusive possession of) while the Commonwealth continued to argue that native title could not be recognised by the common law of Australia in sea territories. The *Croker* majority dismissed both appeals. This meant that Olney J's original decision in *Yarmirr* stood; the group hold native title over the area but not to the exclusion of all others.

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[4] *Yuwurrumu* refers to a group of people who trace or claim descent through the male line.

Crown sovereignty and the common law's recognition of native title rights and interests in the sea

The common law and the sea

A theme in the *Mabo* decision was that native title is a 'burden' on the Crown's sovereignty, or its 'radical title'. That is to say, the Crown is obligated to recognise the rights and interests of Indigenous people that existed prior to the assertion of sovereignty (which the Court decided was 1824 in the Northern Territory). McHugh J sets out the basis for his reasoning in his *Croker* decision (at par 177) in a manner that is consistent with *Mabo* as follows:

> In *Mabo [No 2]*, Brennan J explained how recognition of the rights and interests of the indigenous inhabitants was consistent with the doctrine of tenure which is the basis of the land law of England and Australia. His Honour said:
>
> > By attributing to the Crown a radical title to all land within a territory over which the Crown has assumed sovereignty, the common law enabled the Crown, in exercise of its sovereign power, to grant an interest in land to be held of the Crown or to acquire land for the Crown's demesne. The notion of radical title enabled the Crown to become Paramount Lord of all who hold a tenure granted by the Crown and to become absolute beneficial owner of unalienated land required for the Crown's purposes. But it is not a corollary of the Crown's acquisition of a radical title to land in an occupied territory that the Crown acquired absolute beneficial ownership of that land to the exclusion of the indigenous inhabitants. If the land were desert and uninhabited, truly a terra nullius, the Crown would take an absolute beneficial title (an allodial title) to the land for the reason given by Stephen CJ in *Attorney-General (NSW) v Brown* there would be no *other* proprietor. But if the land were occupied by the indigenous inhabitants and their rights and interests in the land are recognized by the common law, the radical title which is acquired with the acquisition of sovereignty cannot itself be taken to confer an absolute beneficial title to the occupied land. Nor is it necessary to the structure of our legal system to refuse recognition to the rights and interests in land of the indigenous inhabitants. The doctrine of tenure applies to every

> Crown grant of an interest in land, but not to rights and interests which do not owe their existence to a Crown grant. (emphasis in original, footnotes within the quoted text are omitted)

McHugh J's use of Brennan J's reasoning in *Mabo* is not controversial and is included here because of its explanation of basic tenets of native title law. But McHugh J does set himself apart from the majority based on his observation that *Mabo* could only be applied to land and not the sea, which was a view he shared with Callinan J. That is, McHugh and Callinan JJ found in favour of the Commonwealth's appeal, which as McHugh J writes (at par 103), was principally based on:

> whether, under the *Native Title Act 1993* (Cth) ("the Act"), native title can be claimed in respect of the sea-bed and its superjacent waters below the low water mark. …
>
> The principal issue in the Commonwealth's appeal raises three sub-issues:
>
> (1) whether, independently of the common law, the Act recognises, as native title, rights and interests over the territorial sea and sea-bed possessed by indigenous people under their traditional laws and customs;
>
> (2) whether the Act recognises native title over the territorial sea and sea-bed only where the common law recognises it;
>
> (3) whether the common law recognises native title over the territorial sea, sea-bed and sub-soil.

In considering the Commonwealth's appeal McHugh J's judgment is (at pars 104 and 105) that:

> In my opinion, neither the Act nor the common law recognises native title rights in respect of land and waters below the low water mark of the Australian coast. The Act does not recognise native title unless the common law recognises it. New South Wales v The Commonwealth, applying R v Keyn, held that the common law of Australia has no operation below the low water mark. Unfortunate and unjust as it will seem to many, the common law does not, and never did, recognise native title rights and interests in respect of the territorial sea, sea-bed or sub-soil because those rights and interests do not fall within the common law's system of rules,

> principles and doctrines that it enforces by providing a remedy. It is not enough, as the majority judgment holds in this case, that the existence of rights and interests possessed under traditional laws and customs is not inconsistent with the common law. Recognition is a different concept from consistency or lack of inconsistency.
>
> It follows that the appeal by the Commonwealth must succeed, and the appeal by the claimants must be dismissed.

The implication that arises from McHugh and Callinan JJ's interpretation of the limited extent of the common law (whereby it is found by them that the jurisdiction of the common law stops at the shore) is that Aboriginal and Torres Strait Islander people would need to take their case for recognition of their traditional laws and customs in a forum that deals with international laws (such as forums of the United Nations).[5]

However, the majority in *Croker*, along with Kirby J, held that the common law does extend to sea territory, and thus native title can be recognised by the common law in those areas. Kirby J made the strongest argument in this regard; he writes (at pars 257 and 259) that:

> The common law of Australia may not defy, or conflict with, the Constitution. Neither may it be inconsistent with valid federal legislation. The common law adapts itself to the Constitution and to such legislation. The residue of the

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[5] It may at first seem incongruent that the Crown can claim sovereignty of an area (that is, the 12 Mile nautical limit) but also argue that the common law does not extend to those areas. McHugh J makes a distinction between sovereignty and the extent of recognition given by the common law; he writes at par 210 in *Croker* that:

> The acquisition of sovereignty does not bring the common law to the territorial sea. When international law finally recognised the three nautical mile territorial sea as within the sovereignty of the coastal state and consequently gave Great Britain sovereignty over its territorial sea, it had no effect on the common law. The early common lawyers accepted that the sovereign had proprietary rights in the sea-bed and superjacent waters, subject to public rights of fishing and navigation. They saw the Crown's title as derived from the prerogative and as being a full beneficial, and not merely a radical, title to the sea-bed. Support for the view that the Crown had a prerogative right to the sea-bed can even be found in some cases decided after Keyn. As late as 1975, Jacobs J thought the cases still justified this proposition. But in New South Wales v The Commonwealth, Barwick CJ, McTiernan and Mason JJ rejected it. As previously mentioned, Barwick CJ said that 'property in and power over the territorial seas could not have come by the common law.'

The distinction here relates largely to the observation that sovereignty does not necessarily equate to ownership. This is a point that will be elaborated upon further below.

> common law may be re-expressed, deleting any former parts that cannot stand with the constitutional or legislative provisions or the assumptions inherent in them. So much follows, if from nothing else, from the requirement of the Constitution that there is but one law applicable to, and binding upon, all the people of Australia.
>
> It follows that the recognition of native title 'by the common law' is shaped, and, if necessary, extended, by the [Native Title] Act's application to sea waters. … If the reach of the common law is so limited … it must nevertheless give way to the application of the Act to such areas of the seas. [6]

In this way, the majority, along with Kirby J, found that recognition of native title by the common law could be extended to sea territories. We might observe about this: so far so good for the claimants.

Inconsistency of sovereign rights and native title rights

While the *Croker* majority and Kirby J decided that the common law does extend to sea territory, there remained for the Court the important issue of the character of the Crown's sovereign rights in sea territory. All four *Croker* judgments agreed that the Crown does not have a type of sovereignty over sea territory that amounts to ownership. Rather, sovereignty entails certain rights to regulate the use of sea territory. As was illustrated above in Kirby J's statement, these rights are generated from municipal and international law, to which the common law adapts and even extends.

The majority then focused on the question of whether the particular rights of the sovereign in sea territory were 'inconsistent' with a claim of exclusive possession over sea territories by the native title claim group. Proceeding in this way, the claim failed in the terms that the claimants submitted to the Court (Kirby J dissenting). That is, exclusive possession was found to be inconsistent with the common law.

The majority arrived at its decision by way of the following reasoning: first, the Court considered the notion of inconsistency in light of a question about whether the

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[6] Section 10 of the *Native Title Act* explicitly deals with native title in the sea.

Crown's sovereign rights (and obligations) in sea territory were *necessarily* inconsistent with the claimed native title rights (that is, the considerations were about inconsistency 'in principle'). This process of reasoning is effectively established in section 223(1) of the *Native Title Act* 1993 (Cwlth) (hereinafter NTA), as is outlined below.

Native title law requires that if native title is to be recognised by the laws of Australia the first step is for the Court to inquire into the internal workings of laws and traditions of the native title claimants—this requirement is set out clearly in section 223(1)(a) and (b) of the NTA.[7] Section 223(1)(a) and (b) of the NTA states:

> (1) The expression native title or native title rights and interests means the communal, group or individual rights and interests of Aboriginal peoples or Torres Strait Islanders in relation to land or waters, where:
>
> (a) the rights and interests are possessed under the traditional laws acknowledged, and the traditional customs observed, by the Aboriginal peoples or Torres Strait Islanders; and
>
> (b) the Aboriginal peoples or Torres Strait Islanders, by those laws and customs, have a connection with the land or waters; …

It is important to also note that once the inquiry required under 223(1)(a) and (b) is made, then another related but analytically separate inquiry is made, wherein the laws and customs must be capable of being recognised by the common law of Australia. That is to say, section 223(1)(c) of the NTA states that recognition of native title rights and interests can only occur where:

> (c) the rights and interests are recognised by the common law of Australia.

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[7] Section 223 of the NTA sets out the definition of native title and in so doing provides a crucial focus for every native title determination (the criteria for a determination is itself set out in section 225 of the NTA) that is made by the Federal Court of Australia.

It should also be mentioned that in this Chapter I am only referring to litigated determinations of native title. The NTA also provides for determinations that are made by consent between the parties. The parties will then seek orders from the Federal Court in the terms that they have agreed. In this situation the Federal Court will make a determination in the terms that the parties submit, as long as the consent determination complies with the laws of Australia.

The effect of section 223(1)(c) of the NTA is that if any native title right or interest conflicts with any valid law of Australia or dealing in land or waters, then that law of Australia or dealing in land or waters will prevail.

The majority found in proceeding through this process of reasoning that there is no necessary inconsistency; thus, the claim remained alive in the terms submitted by the claimants. The reasoning for this finding by the Court is outlined in the sub-section below.

The next step in the Court's method, however, was to answer the question about whether rights and interests in terms of the two systems of law were *in fact* inconsistent—and so essentially reasoned section 223(1) of the NTA from a different angle. The majority decided that they were in fact inconsistent. This is the specific area of inconsistency that was, in the end, fatal to the claim for exclusive possession.

Inconsistency considered in principle

In establishing the inconsistency of the claimed native title rights with the particular rights of the sovereign in sea territory, the *Croker* majority began their deliberations (at par 52) by noting that the concept of sovereignty is "notoriously difficult … which is applied in many, very different contexts." In identifying the way the concept of sovereignty is applied the *Croker* majority began, as is usual in the legal method of reasoning, by outlining the relevant 'fact situation'. The majority explained (at pars 54 to 57) the process and effect of the Crown's acquisition of sovereignty over the relevant sea territory in the following manner:

> In 1824, Great Britain acquired sovereignty over the land mass which now constitutes the Northern Territory. When it did so, it acquired a territorial sea extending three nautical miles from the low-water mark. It may be accepted that, as the Commonwealth submitted, the assertion of sovereignty by Great Britain in 1824 over the part of the claimed area that then lay within the territorial sea did not amount to an assertion of ownership to or radical title in respect of the sea-bed or superjacent sea in that area, whether as a matter of international law or of municipal law.

The decision in *Keyn*, [*R v Keyn* (1876) 2 Ex D 63 at 174-176, 195-196, 211] that the sea within three nautical miles of the coast, although internationally recognised as territorial sea subject to British sovereignty, is not within the territory of England, denies that the sovereignty claimed amounted to a claim that the area was 'owned' by the Crown. As a matter of municipal law, there is no doubt that the Imperial authorities claimed the right to legislate in respect of the area of the territorial sea of both Britain and its colonies. The *Territorial Waters Jurisdiction Act* 1878 (Imp) exemplifies that claim. It may be accepted, therefore, that the claimed authority over the area extended, if thought appropriate, to a power to legislate for the grant of ownership or lesser rights in respect of the area, but no such legislation was enacted and no grants of ownership were made.

At one time, the Crown of Great Britain claimed very extensive rights in respect of wide areas of sea. Lord Cockburn CJ noted some of those claims in his judgment in *Keyn*. But his Lordship also noted that:

> [T]he claim to such sovereignty, *at all times unfounded*, has long since been abandoned. No one would now dream of asserting that the sovereign of these realms has any greater right over the surrounding seas [that is, the three mile territorial seas] than the sovereigns on the opposite shores. (emphasis added [by the High Court judges in *Croker*])

As a matter of international law, the right of innocent passage is inconsistent with any international recognition of a right of ownership by the coastal state of territorial waters. The nature and extent of the rights of the coastal state over its territorial sea was, as a matter of international law, regarded by Lord Cockburn CJ in *Keyn* to be still then a matter of controversy and it was thought in 1913 to remain so. Yet as early as 1801 Sir William Scott (later Lord Stowell) recognised in *The 'Twee Gebroeders'* that "the act of inoffensively passing over [territorial portions of the sea] … is not considered as any violation of territory belonging to a neutral state—permission is not usually required".

Thus, the majority found that Crown sovereignty in the sea never amounts to ownership. Nor can the Crown legislate to grant ownership to others (or, at least, the Crown has never done so). However, it is apparent from the majority judgment that sovereign rights in sea territory are constituted by the right to legislate on certain

issues in areas of sea territory—and this the Crown does routinely. In making this observation the majority made a distinction between sovereignty and ownership.

The High Court majority did not elaborate in any detail upon the character of Crown sovereignty in sea territory beyond the basic distinction between sovereignty and ownership. For example, the majority did not, in relation to the evidence, conduct a sustained examination of any specific instances that indicated the actual extent of the Crown's sovereign rights in Australian or Northern Territory seas. Instead, the majority noted in summary (at par 52) that: "[i]t is neither necessary nor appropriate to attempt some comprehensive description, or definition, of the powers, rights and interests which Australia claims, or the Imperial authorities claimed, in respect of the territorial sea."

The lack of elaboration of the character of Crown sovereignty in sea territory was validated on the basis that it was unnecessary to the crucial point of concern to the Court at this juncture, which was stated (at par 61) to be whether there exists a "necessary inconsistency between Crown sovereignty and native title rights and interests." The majority did not believe there was a necessary inconsistency because the Crown's sovereignty does not amount to ownership of sea territory. We might say that the logic here is: the Crown does not own the sea so, in principle, the sea could be owned by someone else. This is different to the situation in relation to land, where the Crown does claim ownership. Hence, the good news for the claimants continues. But, as we will see, the determined lack of interrogation of what sovereignty means, or can mean in specific circumstances by the *Croker* Court (Kirby J aside), provides a method of reasoning that is, in the end, detrimental to the claimants' case.

Inconsistency considered in fact

Having established that there was no necessary inconsistency between the common law and native title rights and interests in the sea, the Court moved to consider whether there was inconsistency in fact. The *Croker* majority found that this was indeed the case, upholding Olney J's original *Yarmirr* decision in the Federal Court.

The *Croker* majority dismissed the Croker Islanders' claim to exclusive possession on two accounts. First, the majority noted (at par 94) that the:

> fundamental difficulty standing in the way of the claimants' assertion of entitlement to exclusive rights of the kind claimed … stems from both the common law public rights to navigate and to fish and from the international right of innocent passage which is recognised by Australia. These are rights which cannot co-exist with rights to exclude from any part of the claimed area all others (even those who seek to exercise those public rights or the right of innocent passage).

Acknowledging that this aspect of the claim may have been problematic, the claimants amended their claim from *Yarmirr* and *Full Federal Court Yarmirr* for the High Court appeal to accommodate the existence of public rights to fish and navigate and the right of innocent passage.[8] The *Croker* majority noted (at pars 96 to 100) about the amended claim that:

> It may readily be accepted that neither the public right to navigate, nor the right of innocent passage, require free access to each and every part of the territorial sea. Neither right is infringed, for example, by erecting a pier from the shore to a point well out into the territorial sea even though that pier prevents vessels from using the part of the sea on which it stands. Nevertheless, the tension between, on the one hand, the rights to 'occupy, use and enjoy the waters of the determination area to the exclusion of all others' and 'to possess' those waters to the exclusion of all others (which the claimants sought in their amended notice of appeal to this Court) and, on the other, the rights of fishing, navigation and free passage is *self-evident* [my emphasis].
>
> [A]ttention must be directed to the nature and extent of the inconsistency between the asserted native title rights and interests and the relevant common law principles. … When that is done in the present case, it is seen that … [t]he two sets of rights cannot stand together and it is not sufficient to attempt to reconcile them by providing that exercise of the native title rights and interests is to be subject to the other public and international rights.

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[8] See *Croker* at par 95. The claimants' amendments are outlined specifically in Kirby J's judgment that I discuss later in this chapter.

> The successive assertions of sovereignty over what now are territorial waters, without any further or other act of the executive or legislature, brought with them, and gave to the public, the public rights that have been mentioned. The assertion of sovereignty in 1824, over part of those waters, may have conceded the right of innocent passage to all vessels over those waters, and later assertions of sovereignty over other parts of the waters certainly did. Assertion of sovereignty, on *those* terms, is not consistent with the continuation of a right in the holders of a native title to the area for those holders to say who may enter the area.

The second reason for dismissal of the claimants appeal by the *Croker* Court was its acceptance of Olney J's original judgment in *Yarmirr* that the evidence provided by the claimants did not support their claim to exclusive possession under traditional law and custom. Specifically, the *Croker* majority cite with approval (at par 90) Olney J's understanding of the evidence of the claimants in *Yarmirr* as "not revealing any assertion of a right, under the relevant traditional laws and customs, to exclude persons from the sea other than Aboriginals."

With regard to the evidence provided, the *Croker* majority further cited with approval (at pars 91 to 93) Olney J's reason for his *Yarmirr* determination in the following terms:

> The primary judge, having dealt with certain evidence that was given about the need to seek permission before entering the claimed area, concluded that '[i]t would seem however that the binding effect of the traditional requirement to seek permission to go on to another's country is one which applies *only* to Aboriginal people' (emphasis added [by the *Croker* majority]). His Honour referred in this respect to some oral evidence given by Ms Yarmirr about the seeking of permission to enter the area. In his reasons, he said:
>
> 'When asked by [trial counsel for the claimants] whether *yuwurrumu* members could be prevented from going on to the sea which is part of their own country, Mary Yarmirr said:
>
> "No. They won't be stopped because all Aboriginal people respect each other, and we do not trespass into another clan's estate without asking permission."
>
> The issue was pursued a little later in this manner:

Q. If there is someone on your country without permission, by your law do you have a right to ask them to go, or to leave?

A. I have a law for the other person also – holds the old culture, right. In my law it says that those people are seen to be breaking my law. They must understand my law as I understand their law and respect my law as I respect their law. By doing that I will then ask what is their purpose, why do they break my law, and if it's misunderstanding, they don't understand my law, then we can – I can actually talk to them and say, 'Well, this is my law here and it tells me that the sea country is my *yuwurrumu's* estate and I'm one of the *yuwurrumu* members'. If we come to an agreement I will then say, 'Yes, you can either stay here or you can move away', but I have the rights as a *yuwurrumu* member to speak on behalf of my people, tell them about what our rights are.

Q. If you do not reach an agreement do you have the right to tell them to go?

A. I have a rights under my – according to my traditional law I have the rights to ask them to leave, and if they refuse then I have no other way but to ask the *Balanda*[9] law to come in, because the Balanda law is their culture, and they will – you know, they will understand more of it; but if it's in regards to my own people, Aboriginal people, they respect who I am, respect my *yuwurrumu*; they will ask permission to enter onto my sea country estate.

[…]

Counsel for the claimants placed considerable emphasis on this part of the evidence of Ms Yarmirr and submitted that, properly understood, it supported the claim to rights to exclude *all* others (Aboriginal and non-Aboriginal) from the claimed area. Even if this evidence is capable of bearing the meaning for which counsel contended, it is not the only way in which it can be understood. It fell to be considered against the whole of the evidence which was led in relation to this subject. Pointing to another meaning which this particular part of the evidence

[9] The term *balanda* is commonly used to refer to 'white person'.

> *could* bear falls well short of demonstrating that the finding made by the primary judge was not open.
>
> We were taken to no other evidence that would suggest the primary judge was wrong in his understanding of the evidence. In those circumstances, it is not demonstrated that he should have been persuaded of the factual proposition that lay behind the claimants' contentions that they were entitled under traditional law and custom to exclude, as they chose, anyone and everyone from the claimed area. The Full Court was correct to conclude, as it did, that the claimants failed to demonstrate that the findings made on this subject should be set aside.

The *Croker* majority's decision is final with respect to the Croker Island case.

Kirby J's dissenting judgment

Kirby J's *Croker* judgment provides a counter-point to many of the assumptions that exist in the judgments of the majority, McHugh and Callinan JJ, and the Federal Court judgments.[10] Kirby J facilitates my observation that all those judgments proceed as if their standpoint is universally valid rather than as situated knowledge claims. That is to say, while the majority examines the claimants' evidence in fine detail they fail to examine the character and practical effects of Crown sovereignty in any sustained manner. In contrast, Kirby J proceeds by examining the effects of both sovereignty and the claimants' laws and traditions placing the two social orders in a conversation.

Kirby J's decision in *Croker* takes issue with Olney J's *Yarmirr* determination (which the *Croker* majority endorsed) that, on the evidence, the claimants do not prove that they have exclusive possession. Kirby J writes that the primary judge in *Yarmirr* made a mistake in finding that the claimants did not demonstrate a right to exclusive possession because it was measured against a Western legal criteria for 'possession'. Kirby J makes his point in drawing attention to a passage from Olney J's basis for his determination; Kirby J states (at pars 303 and 304):

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[10] The exception here is Merkel J, who was the dissenting judge in the *Full Federal Court Yarmirr* decision, and provides the judgment that Kirby J consistently approves of in his own judgment.

The first problem with the findings of the primary judge was an underlying assumption, evident in his reasons, that, without fulfilling conventional definitions of occupation and possession, which he saw as unachievable in relation to the sea, the claimants could have no exclusive proprietary rights to the sea. He said:

> The very nature of the sea renders it inappropriate to attempt to strictly apply concepts such as possession and occupation which are readily capable of being understood in relation to land. There is a clear distinction between possession and occupation on the one hand and use and enjoyment on the other. The claimed right of senior clan members to grant permission is limited to allowing non-members to use and enjoy the country, not to possess or occupy it.[11]

I agree that concepts of 'occupation' and 'possession' are, in some ways, ill-suited to a description of a relationship between persons and the sea. However, the claimants' argument that their traditional laws and customs do recognise a form of 'occupation' and 'possession' of the waters has obvious factual merit. The latter is demonstrated by their consistent reference to the determination area as 'my country' or 'Mandilarri-Ildugij country'. When questioned about ownership, Mary Yarmirr responded: 'It's always the *yuwurrumu*, *yuwurrumu* clan that owns that particular estate'. Unlike the primary judge and the majority in the Full Court, I would not regard such views of possession and ownership, although expressed from within a different legal culture from our own, as irrelevant. … His Honour's error was … to prefer an unduly narrow classification of 'use and enjoyment', distinguished from occupation and possession, to fit the demonstrated 'connection' that the claimants had with the waters of the determination area. In giving flesh to these concepts in this context, a more useful focus is on the rights that the native title claimants assert based on their own understandings of occupation, possession, use and enjoyment of their sea country. This is the approach envisaged by *Mabo [No 2]*. [footnotes in original omitted]

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[11] Gishubl further summarises the meaning attributed to the sea by Olney J; he writes that Olney J maintained,

> that our relationship with the sea is primarily limited to the taking of fish and other sea life from, and the traversing of, the sea. It is distinguishable from land in that land is capable of being fenced off, of being cultivated and improved and of being occupied and lived upon by people. Consequently, the physical nature of the sea makes it inappropriate to apply concepts such as possession and occupation to it. (1998, 316)

Kirby J's comments here disclose Olney J's assumption of the universal and authoritative validity of a conception of the oceans as the property of all. As the previous Chapter demonstrated, this conception of the oceans, expressed in the doctrine of freedom of the seas, is entrenched in Western societies through international law and in attitudes to the oceans more generally. Moreover, it was established that the doctrine of freedom of the seas is not 'natural' or self-justifying but a predominantly Western world-view that suits current prevailing power relations that are related to the interests of the free flow of capital.

In Kirby J's view, above, Olney J fails to come to terms with the very different way Croker Islanders understand sea territory. What is more Olney J's filtering of the claimants' evidence through a Western conception of possession is, according to section 223(1) of the NTA, invalid.[12] As Kirby J notes, the courts are obligated to look to what defines a notion of possession for the claimants. Kirby J observes that the NTA is clear (at section 223(1)) that the Court is obligated to make a native title determination based on what native title claimants traditional laws and customs are demonstrated to be—not on what the judge assumes to be 'self-evident'.

Kirby J is also critical of the bias present in Olney J's treatment of the claimant's evidence in *Yarmirr*. As noted above, Olney J finds that the evidence presented by counsel for the claimants can mean something other than their claim for exclusive possession. Indeed, Olney J finds (at par 90) that the evidence of the claimants does not reveal "any assertion of a right, under the relevant traditional laws and customs, to exclude" persons other than Aboriginal people.[13] As was noted above, the *Croker* majority approved of *Yarmirr* in this regard, by writing (at par 92) that: "[e]ven if this evidence is capable of bearing the meaning for which counsel contended, it is not the only way in which it can be understood. It fell to be considered against the *whole of the evidence* which was led in relation to this subject" (my emphasis). The

[12] For more detail, see text of section 223(1) of the NTA in the section 'Inconsistency of sovereign rights and native title rights', beginning on page 27, above.

[13] Olney J's judgment here was made specifically in relation to Macassan fishermen entering the waters in question to gather trepang (or sea cucumber).

way the *Croker* majority's observation is phrased here gives the impression that the evidence was considered broadly, and thereby in a fair and balanced manner. However, according to Kirby J a broad consideration of 'the whole' of the evidence was not undertaken. We can understand from Kirby J's comments below that this omission results from the failure by Olney J in *Yarmirr* to go beyond his own standpoint and grasp the power imbalances at play in this case; Kirby J writes (and importantly begins by emphasising the obligation on non-claimants to demonstrate certain things in native title cases):

> [i]n relation to the *balanda*, the evidence fell short of demonstrating that no attempt was made [by the claimants and their ancestors] to control … access to the area. In assessing such attempts, the trial judge was charged with the difficult task of giving recognition to 'highly fact specific' rights. A failure to appreciate the unique requirements of the determination of the nature and extent of native title and its relationship with the rights of others may lead to error. For example, the present content of native title, although substantially based on traditional connection with the land or waters, may incorporate activities and practices which are the modern form of exercise of traditional laws and customs. The primary judge's approach in the present case may be criticised in this regard. Limitations on how a right to exclude may be 'asserted effectively' by Aboriginal claimants must also be appreciated. Thus, for example, continual assertion of rights to be consulted in decisions concerning access to, and use of, the claimants' country may be the highest feasible level of assertion of control by a fishing-based society against Europeans where the latter were possessed of superior arms and legal power. In such circumstances, I agree with Merkel J that it would not be reasonable for a court to place undue weight on methods of *enforcement* of Aboriginal rights against non-Aboriginal persons. How, it might be asked, were the forebears of the claimants expected to assert and uphold their rights to their sea country when the *balanda* enjoyed indisputable superiority of weapons and, until *Mabo [No.2]*, incontestable superiority of legal rights? A proper approach is rather to ask whether native title rights and interests survived in fact, what their relationship was with other rights and interests and how such rights were 'asserted' in that context.
>
> In determining the relationship between the rights and interests of native title claimants and others in the determination area, a focus on the relative powers of having and controlling access is essential. (par 92, footnotes in original omitted)

For Olney J in *Yarmirr* and the judges of the *Full Federal Court Yarmirr* and *Croker* judgments (apart from Kirby and Merkel JJ), the consideration of 'the whole' meant an interrogation of the evidence of the claimants, with a tendency to overlook the effect of the *balanda*. Thus, apart from the findings of Kirby J in *Croker* and Merkel J in *Full Federal Court Yarmirr*, the power imbalances, which have often taken form in legally sanctioned and unsanctioned violence, would remain outside of the judiciary's idea of what constitutes 'the whole'. Kirby J's reasoning, in contrast, led him to the view that a proper consideration of the evidence needed to give weight to instances where exclusive ownership was asserted and less on whether the claimants were actually successful in enforcing any exclusions. In this way a different and more sophisticated interpretation of the 'facts' could be carried out. It re-orientates the idea of considering 'the whole' of the evidence. Kirby and Merkel JJ were prepared to bring a much wider set of considerations to the evidence.

In taking into account a wider set of considerations, Kirby J finds that there is consistency in practice, not merely in principle between the common law and native title rights and interests in the sea.[14] Kirby J sets out the parameters of the issue (at pars 267 to 271) in the following way:

> *Original claims*: The issues in the claimants' appeal related to their claims (subject to qualifications later to be mentioned):
>
> '(a) To occupy, use and enjoy the seas and seabed within the determination area *to the exclusion of all others*;
>
> (b) To possess the seabed and seas and airspace above the seas of the determination area *to the exclusion of all others*'.
>
> *Modified claims*: The claimants subsequently re-expressed their claims to allow for a lesser degree of exclusivity, or "qualified exclusivity", in the seas, sea-bed and airspace above the seas within the determination area. The modifications accepted that their rights could not be exercised so as to:

[14] Kirby J outlines early in his judgment that it is his understanding of his responsibilities as a judge in native title cases—according to the NTA—that determinations of native title should be made in the spirit of recognition, not a spirit of recognition-as-a-last-resort. See in particular *Croker* at pars 260 to 264.

(1) impede the right of innocent passage recognised by international law; or

(2) unreasonably interfere with, or restrict, the liberty of the public to navigate, as permitted by the laws of Australia, within the territorial sea; or

(3) conflict with the rights of holders of fishing licences granted under federal or Northern Territory law to enter the waters of the determination area for the purposes of exercising their rights under such licences.

These qualifications were, in turn, further modified by an assertion that the right of navigation was subject to the entitlement of the claimants:

> to close areas to access by any persons or class of persons in accordance with their traditional laws and customs so long as the effect of such closures does not at any particular time substantially impede or curtail the bona fide passage of vehicles through the waters of the determination area.

So far as the holders of fishing licences were concerned, the exercise of their rights was to be 'to the extent that that may validly occur without the prior consent of the [native title] holders'.

The foregoing qualifications on the claimants' asserted 'rights and interests' are consistent with the holding of the primary judge that the claimants' native title rights and interests did not 'confer possession, occupation, use and enjoyment of the sea and sea-bed within the claimed area *to the exclusion of all others'*, so far as his Honour rested his finding on the paramountcy of the rights of passage and navigation and of pre-existing statutory fishing licences. I will deal with each of these non-exclusive rights in turn.

The claimants go further than the primary judge in seeking 'qualified exclusive' native title rights and interests, which can be exercised to exclude persons from accessing the area for other purposes, including, relevantly, those seeking to exercise public fishing rights or other rights to extract resources from the determination area. The key issue presented by the claimants' appeal therefore concerns whether a qualified power of exclusion (that is, a power to exclude persons entering the determination area for some purposes but not for others) is recognised by the law. This question must be resolved in accordance with the [NTA] and the basis for recognition (and non-recognition) by the common law provided by the [NTA]. A necessary influence will be the acknowledgment that,

> where possible, the question must be resolved in favour of full recognition of an existing customary right. A further influence will be the consideration of any relevant international human rights norms which protect indigenous peoples against a discriminatory legal denial of their rights and interests. But recognition will not be accorded where to do so would be incompatible with a basic principle of the common law.

Kirby J proceeds by outlining the relevant areas of possible inconsistency where actual practices conflicted between indigenous law and common law principles. The first area of consideration relates to the 'international right of innocent passage.' It is summarised here as it relates directly to Australia. Kirby J noted (at par 309) that:

> The right of innocent passage through the territorial sea of Australia is recognised in conventional and customary international law. It has been incorporated in Australian legislation and preserved in Australia's decision to extend its territorial sea from three nautical miles to 12 nautical miles. That extension was expressly stated to be subject to the right of ships of all nations to innocent passage through the territorial sea. Thus, whilst there is potential for proprietary interests to be created by the Commonwealth in the sea-bed in its exercise of territorial sovereignty, these interests would appear to be subject to the right of innocent passage. The power of the common law to recognise such an interest is likewise so limited. The right of innocent passage allows ships of all states to navigate expeditiously and continuously in order to traverse the sea and to proceed in like manner to or from internal waters. [footnotes omitted]

Kirby notes, in concluding this passage that it "was … correct for the claimants to concede that any native title right to sea country must be subject to [that] … rule of international law." However, he immediately adds (at par 309) that: "it remains for this Court to ascertain what, if any, scope remains for the recognition of a 'qualified exclusive' native title right" in this area of intersection between the relevant legal regimes. Kirby J finds that the key considerations here are practical ones in which actual requirements of ships and boats when traversing certain areas of sea territory (for example, according to established 'sea lanes') were likely to be affected by the native title holders desire to close off certain (specified) areas, either permanently or temporarily. The claimants may desire to close areas of sea according to seasonal factors, or unpredictable events, such as deaths of certain people in the community.

Once again, this line of reasoning is premised on an approach that most judges did not undertake: an interrogation of both the claimants' traditional law and the common law system. For the most part Western systems of law such as the common law remain unquestioned at the highly specific level Kirby J is advocating and he himself undertook.

A further case in point for Kirby J is in relation to the 'common law right of navigation'. This right is different from the international right of innocent passage, although it is analogous, for as Kirby J states (at par 278) that:

> It is founded on the same principles of freedom of movement and access. The common law right includes a right to pass and repass over the water and includes a right of anchorage, mooring and grounding where necessary in the ordinary course of navigation. It prevails over exclusive fishing rights when the two conflict. It can be described as a foundational principle of the common law. It can only be modified by statute. No right of a private person, however long enjoyed, can extinguish it. [footnotes omitted]

Kirby J was of the view that this common law right was potentially consistent with the claimed native title rights; he writes (at pars 279 to 281) that:

> The claimants' concession of the public's right to navigate in areas of sea country respects this foundational principle of the common law. From the perspective of the claimants, it is clear that the elements of exclusivity within traditional laws and customs may continue, even when their exercise is restricted so as not unreasonably to interfere with the general right of the public to navigate. There was much evidence to support this proposition in the present case. The description of the claimants' originally asserted rights indicates that no claimed right is inconsistent with the public's right to navigate, save for the right "of the senior *yuwurrumu* member(s) to close off areas of the estate on the death of either *yuwurrumu* members or of individuals in important relationships with *yuwurrumu* members, and to decide when they shall be re-opened to use". The claimants now seek the right to close certain areas to access in accordance with traditional laws and customs, so long as bona fide sea traffic is not "at any particular time substantially impede[d]". Such a right is not unfamiliar to the common law.

> In their submissions, the claimants have identified ways in which exclusive rights of possession in the sea can coexist with the public right to navigate. For example, the creation of oyster beds or leases of the sea-bed permit exclusive possessory rights in the sea. Although in Australia such cases consist of statutory, rather than common law, rights, they demonstrate important, and practical, ways in which the right of navigation may coexist with underlying exclusive interests in the sea.
>
> A recognition of a public right of access would be unsurprising in relation to certain (exclusive) common law land tenures. It should not be prevented from operating in relation to the sea. If, as has been accepted by the majority of this Court, the [NTA] and the common law recognise native title rights and interests to the sea, it would be incongruous for the general right of navigation to operate as a blanket refutation of such recognition, where the incidents of traditional law and custom and connection to the sea otherwise demonstrate 'exclusive' elements in particular native title rights and interests. It is for the courts to recognise 'exclusive' rights if they are found to exist as a matter of fact. The common law public right to navigate does not, as a matter of law, extinguish all otherwise exclusive elements of native title, where as a matter of fact these continue to exist.

Kirby J goes beyond notions of 'consistency' here and discloses some of the specific ways that native title is an outright 'burden' on the Crown's radical title. His approach, in which he inquires into the specific characteristics of the Crown's sovereignty in sea territory in its relation to the rights of native title claimants, is a powerful and rigorous one that avoids what Haraway has termed the "god-trick" (1991a, 191). The god-trick refers to the disengaged construction of knowledge, the "view from nowhere," where the subject has the power to represent the object without itself being represented, and thus escapes accountability (1991a, 189-91). The method that Kirby J employs throughout his judgment does not pay any less attention to the evidence of the claimants than did the majority but was unique in his preparedness to scrutinise the practical forms of Western law and bring it into a dialogue with the claimants' traditional law.

Conclusion

The Croker Island claimants sought a native title determination that would bestow rights to the exclusive possession, occupation, use and enjoyment of the sea and

seabed surrounding Croker Island based on their connections to sea country. In 1998 Olney J of the Federal Court of Australia acknowledged in *Yarmirr* that the claimants' evidence verified adequate traditional connection to found a native title determination but that determination did not include an exclusive right of possession. This decision was appealed to the Full Federal Court, which upheld the original determination in a 2-1 decision. The case was then appealed to the High Court, which, in a majority decision, again upheld Olney J's original *Yarmirr* decision. Due to the institutional weight of the determination, the *Croker* decision has placed enormous limitations on the possibilities for realising exclusive native title in Australian territorial seas in the future.

This case study of *Croker* highlights the entrenched view that in Western legal traditions, such as the common law framework in Australia, the seas are the property of all. As I argued in the Chapter 2, this conception of the oceans is not self-justifying; there is nothing necessarily inherent to the oceans that make it inappropriate or impossible to apply concepts such as occupation or possession. The *Croker* decision inferences are clearly underscored by the attitudes to sea territories characteristic of the dominant culture upheld in Australian common law and international law of the sea. We can refer back to Olney J's view, for example, that 'it is the nature of the ocean that makes it incapable of being occupied and possessed'. This is a value statement, harking back to 'natural law', presented as fact.

Olney J and the High Court majority produced fixed, definitive statements, largely keeping from view the processes, instruments and theories by which they are made. In my view, Kirby J's judgment breaks with this mould by acknowledging and giving an indication of the contestable character of the subject matter. Kirby J finds in favour of a 'qualified power to exclude'. This is a practical outcome consistent, in Kirby J's view, of satisfying the traditional laws and customs of the Croker Islanders and the common law.

While this case study has established that the Croker Islanders' conception of seas are not equally weighted with Western conceptions, I would like to note that the *Croker* majority's finding that the common law does extend to the sea and the

recognition of an intersection between traditional law and common law, is of enormous significance. It is significant in that it recognises a wholly different system of law and thinking about human-oceans relations in Australia.

Nonetheless, a law akin to providing for the common property rights of the Croker Island native title claimants was first acknowledged only to be comprehensively dismissed by the majority of judges—based on a view that despite there being demonstrable native title rights that provide for ownership of the 'sea country' those rights were held to be in conflict with laws of the Commonwealth. In my view this chain of events demonstrates the enormity of the challenge that exists in seeking to utilise legal discourses to broaden the scope of debates about what is to be done to achieve just ocean existences.

The discussion in this Chapter has demonstrated a specific instance of the way that possibilities for imagining oceans differently has been passed over by Western law. The Chapter has focused on how the *Croker* decision keeps from view the Croker Islanders' law traditions and ocean relations. That the Croker Islanders' conceptions of oceans have been kept from view is, in my opinion, a lost opportunity in striving for just existences of oceans. As Sharp (2002, 266) comments: "[i]n an overexploited world, sea tenure—where each group of residents takes responsibility for its patch of foreshore, reef and home seas—may be a godsend." Potentially, connections exist between the common ownership of seas, intimate knowledge of particular areas and of other people who share it, and flourishing ocean environments (Sharp 2002).

Chapter 4

The sublime: a common feeling for the ocean?

In this chapter I argue that eighteenth century Western philosophical discourse of the sublime is influential in shaping contemporary conceptions and representations of the oceans. Eighteenth century aesthetic discourse has been important in determining Western orientation to the oceans, contributing substantially to the position that Western societies place humans in relation to oceans. In particular, the aesthetic theories of Edmund Burke (1729-1797) and Immanuel Kant (1724-1804) have been highly influential in shaping representations of the oceans as sublime in the literature and painting of the Romantic Movement (1800-1900) that continue to inform our present day conceptions of oceans. In short, whatever it is the Western subject feels toward the oceans, we can probably thank the sublime.[1]

[1] In starting out this discussion it should to be noted that in contemporary times aesthetic discourses are usually thought of in relation to art, but the case was quite different in the Enlightenment period. What that period thought about artwork was caught up with what was thought about the nature of human experience generally. Thus, aesthetic discourses were not primarily about art but about human experience and how, as subjects, we make sense of our experience. As Ashfield and de Bolla (1996, 2) state, the question, "What is it that moves me?" is central to human inquiry and it was one of the most problematical and central concerns of aesthetics during the Enlightenment. What it is that moves a subject is most fully explored under the rubric of the sublime.

The sublime is a discourse about human subjects' attempt to give expression to experiences of anything that is absolutely great, vast, overwhelming and incomprehensible. Historically, the ocean has evoked this sense of human experience. Reference to the ocean reverberates throughout eighteenth century debate on the sublime (Raban 1993). Indeed, the ocean has been celebrated as the sublime in nature or as giving rise to sublime experience on account of its capacity to act on a monumental scale that exceeds all human control and comprehension.

When appeals are made to a collective appreciation of oceans for the purpose of developing marine ethics and politics by promoting a sense of awe and wonder in relation to oceans and as a place of reverie, we are tapping into eighteenth century and Romantic traditions of the sublime. That may be quite the appropriate thing to do by virtue of the sublime as a repository for the collected wisdom in Western traditions of thinking, feeling and acting. Nonetheless, I argue that in developing ocean ethics and politics we need to examine closely the usefulness of appeals to traditional sublime aesthetics. Kant's concept of the sublime, for example, presents the following difficulties: first, it authorises a relation of human superiority to, and transcendence of, oceans; second, in drawing upon oceans as a trigger for sublime feelings, it makes universal prescriptions that effectively erase feelings toward oceans that are not expressed in terms of superiority and transcendence; and third, Kant's sublime facilitates a conception of oceans as a vast source of wilderness. Reflecting upon these three areas of concern, I argue that the traditional sublime as we find in Kant should be viewed as a unique Western cultural concept and that the cultural imperialism that it tends towards is a problematical reference point for the development of ethical, democratic, ocean politics in pursuing just existences for oceans.

This chapter begins with a review of conceptions of the sublime in the work of influential eighteenth century theorists, Joseph Addison (1672-1719), Edmund Burke and Immanuel Kant. I demonstrate how the oceans have been drawn upon and associated with sublime aesthetics historically, and the way the sublime conceptualises 'self' in relation to oceans. Kant's concept of the sublime receives particular attention in this Chapter on account of its substantial and enduring

influence. Following on from this review, Kant's concept of the sublime is critically examined with regard to the way the self is conceptualised in relation to oceans and the way the oceans are conceptualised as a phenomenon.

As with Chapters 2 and 3, Chapter 4 demonstrates, in the first instance, how the sublime is influential in providing structure to contemporary human-ocean relations and second, how that structure unnecessarily constrains possibilities for imagining different forms of human-ocean relations in Western societies. The sublime presents problems for an inclusive political epistemology because it obstinately denies some perspectives, including an active exclusion of the idea that oceans have agency.

In the final section of this Chapter I will discuss the possibility of reconfiguring the sublime to better assist in the development of ethical, democratic political processes.

All at sea with the sublime

The term sublime was made famous by Boileau's (1674) French translation of Longinus' first century treatise, *Peri Hupsous*, or *On the Sublime*, in which the rhetorical effects of the sublime are described in detail (Monk 1960). Longinus' interest in the sublime is with the inherent nobility of man that instinctively responds to greatness in the natural world. As Monk (1960) writes, because of its size, the ocean was a ready and apt symbol of the moral greatness to which Longinus attributed the sublime in the art of rhetoric. The link between the sublime and the ocean is thereby made by Longinus and built on centuries later by Enlightenment thinkers; Longinus writes:

> Let any one take an exact survey of life, which in its every scene, is conspicuous on account of excellence, grandeur, and beauty, and he will soon discern for what noble ends we were born. Thus the impulse of nature inclines us to admire, not a little clear transparent rivulet that ministers to our necessities, but the Nile, the Ister, the Rhine, or still much more, the ocean. … And from hence we may infer, that whatever is useful and necessary to man, lies level to his abilities, and is easily acquired; but whatever exceeds the common size, is always great and always amazing. (1996, 28)

Addison's essay, 'The Pleasures of the Imagination', from *The Spectator* papers (first published 1712), makes the first sustained contribution to writing on the sublime aesthetic in Britain (Monk 1960). For Addison, the feelings generated by art, such as the art of rhetoric, were no match for the feelings generated by the natural world. Addison sought to distinguish his theory of the pleasures of the imagination from theories of sublime rhetoric, hence Addison writes about greatness rather than sublimity (Monk 1960). However, the ideas are similar in that Addison's concept of greatness relates to those things that cannot be grasped or measured.

Addison ties together his concept of greatness with the natural world as follows:

> By greatness, I do not only mean the bulk of any single object, but the largeness of a whole view, considered as one entire piece. Such are the prospects of an open champian country, a vast uncultivated desert, of huge heaps of mountains, high rocks and precipices, or a wide expanse of waters, where we are not struck with the novelty or beauty of the sight, but with that rude kind of magnificence which appears in many of these stupendous works of Nature. Our imagination loves to be filled with an object or to grasp at anything that is too big for its capacity. We are flung into a pleasing astonishment at such unbounded views, and feel a delightful stillness and amazement in the soul at the apprehension of them. The mind of man naturally hates everything that looks like a restraint upon it, and is apt to fancy itself under a sort of confinement, when sight is pent up in a narrow compass, and shortened on every side by the neighbourhood of walls or mountains. On the contrary, a spacious horizon is an image of liberty, where the eye has room to expatiate at large on the immensity of its views. (1996, 62)

Addison's sense of the sublime is attributed to the qualities of vastness and wild magnificence found in certain aspects of the non-human natural world such as mountains, deserts and seas. He claims these aspects of nature are too vast for the mind to comprehend. The pleasure afforded by the sublime is the exhilarating experience of self-transcendence, "of being liberated from perceptual confinement" (Crowther 1989, 7).

In particular, it is a stormy ocean that Addison calls on as the sublime archetype. He writes:

> Of all the objects that I have ever seen, there is none which affects my imagination so much as the sea or ocean. I cannot see the heaving of this prodigious bulk of waters, even in a calm, without a very pleasing astonishment; but when it is worked up in a tempest, so that the Horizon on every side is nothing but foaming billows and floating mountains, it is impossible to describe the agreeable horrour that rises from such a prospect. A troubled ocean, to a man who sails upon it, is, I think, the biggest object that he can see in motion, and consequently gives his imagination one of the highest kinds of pleasure that can arise from greatness. (Addison 1996, 62)

Burke, the most influential eighteenth century British theorist of the sublime, also celebrates the ocean as the sublime in nature. Burke is celebrated for his deliberations not only on the literal causes of the sublime but also on the emotions and mental affects that accompany this aesthetic experience. In other words, the basis of Burke's analysis of sublime aesthetic experience is both psychological and physiological. In his treatise, *A Philosophical Enquiry into the Origin of our Ideas of the Sublime and Beautiful* (first published in 1757), Burke's concept of the sublime can be understood as a set of qualities internal to particular objects that evoke terror:

> Whatever is fitted in any sort to excite the ideas of pain, and danger, that is to say, whatever is in any sort terrible, or is conversant about terrible objects, or operates in a manner analogous to terror, is a source of the *sublime*; that is, it is productive of the strongest emotion which the mind is capable of feeling. (Burke 1958, 39)

For Burke, terror is the specific feeling produced by nature in its most threatening aspects—powerful, infinite, vast, difficult, and obscure—that which the ocean exemplifies. Discussion of the ocean appears under Burke's subheading of 'Terror' as follows:

> A level plain of a vast extent on land, is certainly no mean idea; the prospect of such a plain may be as extensive as a prospect of the ocean: but can it ever fill the mind with anything so great as the ocean itself? This is owing to several causes; but it is owing to none more than this, that the ocean is an object of no small terror. Indeed, terror is in all cases whatsoever, either more openly or latently, the ruling principle of the sublime. (1958, 57-8)

Burke claims the effect of the sublime is a state of astonishment whereby "the mind is so entirely filled with its object, that it cannot entertain any other, nor by consequence reason on that object which employs it" (1958, 57). The sensation of 'delightful horror' that subsequently arises is derived from the moderated state of terror or pain produced by contemplating terrifying phenomena (Burke 1958). The delightful horror is created through the subject maintaining distance from a phenomenon that otherwise might be experienced as pure terror. For example, experiencing a stormy sea from the deck of an ocean liner might provoke delightful horror but falling into the waves of that stormy sea will provoke pure terror. To enter into a state of delightful horror arouses one physically in such a way as to stimulate the mental powers to act (Burke 1958).

The Kantian sublime

Kant consolidates the eighteenth century tradition of the sublime by incorporating it into his much larger and stunningly influential philosophical project. The impact of this is that Kant's notion of the sublime becomes not only an orthodox approach in modern philosophy, but also continues to shape the way we communicate our feelings about oceans in the present.

In the Second Book of *The Critique of Judgement* (1952), Kant specifies the necessity of natural phenomenon to the sublime experience.[2] Kant, like Burke, envisions the sublime as an overwhelming encounter with the natural world that excites the inherent nobility and moral feelings in the human subject for that which is great. However, there is a vital philosophical difference between the theories of Burke and Kant. For Burke, the natural world would never cease to inspire the sublime. According to Burke, the sublime is an emotional response to the overwhelming effects of specific properties that are within certain objects of nature.

[2] Kant's earliest theory of the sublime is found in *Observations on the Feeling of the Beautiful and the Sublime* (1960, first published 1764). He developed the sublime further in the *Groundwork of the Metaphysics of Morals* (first published 1785) and the *Critique of Pure Reason* (1929, first published 1788), tying it together with morality. However, it is in *The Critique of Judgement* (1952, first published 1790) that Kant most fully articulates his theory.

For Kant, on the other hand, the sublime is located as a feeling wholly internal to the subject. He states, "the broad ocean agitated by storms cannot be called sublime" (Kant 1952, 92). Objects of nature only lend themselves "to the presentation of a sublimity discoverable in the mind" (Kant 1952, 92).

Kant's argument about the sublime is developed systematically in his 'Analytic of the Sublime' (1952 Sec. 23-54). His treatment of the sublime contrasts with another type of aesthetic experience—the beautiful in nature. In the eighteenth century the distinction between the sublime and the beautiful was a major concern of aesthetics. For Kant, the beautiful and the sublime differ in three major ways: first, in the form of objects they represent; second, the different effects on the mental faculties; and third, the different kinds of pleasure they evoke.

Form

With regard to the difference in the form of objects that the beautiful and sublime represent we can summarise by noting that the beautiful results from harmony between nature and the mind, whereas the feeling of the sublime is one of conflict between nature and the mind. Kant writes, "natural beauty conveys a finality in its form making the object appear, as it were, pre-adapted to our power of judgement" (1952, 91).[3] Examples of the beautiful in the natural world include flowers and babbling brooks. In contrast, the sublime is represented in objects of nature as "devoid of form" that "contravene the power of judgement" (Kant 1952, 91). Kant also writes that the ideas of the sublime are aroused foremost by "chaos" and "irregular disorder and desolation" in nature, provided there are also "signs of magnitude and power" (1952, 92). The stormy ocean—boundless, chaotic and powerful in appearance—is one of Kant's clearest examples of the sublime in the natural world.

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[3] Burnham usefully defines 'judgement' in the work of Kant as "any act of subsumption of a particular under a universal, or a decision concerning whether a particular is, or is not, something" (2000, 186). Thus, to be pre-adapted to the powers of judgement suggests that the beautiful in nature is ready-made to be taken in by one's imagination or intuition as a particular thing and ordered within certain pre-existing, or *a priori*, categories that are held in the mind.

Mental faculties

That the sublime 'contravenes the power of judgement' introduces the second major difference noted between the beautiful and the sublime, which is: the effect on the mental faculties. Kant provides a basic schema or, literally, a 'mind map' at the conclusion of his Introduction to his *Critique of Judgement*; that map is set out as follows:

List of Mental Faculties [Faculties of Mind]	**Cognitive Faculties [the legislating faculties]**
Cognitive faculties	Understanding
Feeling of pleasure and displeasure	Judgement
Faculty of desire	Reason

The mental faculty to which the beautiful and the sublime correlate is the feeling of pleasure or displeasure. 'Judgement' is Kant's particular concern in bringing his attention to bear on the phenomenon of feeling (of pleasure and displeasure), which he considers as the 'legislating faculty' for a proper consideration of 'feeling'. Judgement is, thereby, the faculty that provides a subject with the ability to legitimately communicate their particular feelings.

From the schema, above, it is, furthermore, apparent that Judgement is the cognitive faculty that stands as a middle term between Understanding and Reason (Kant 1952, 4).[4] Kant makes a distinction between the beautiful and the sublime when he writes:

[4] Burnham defines 'understanding' in the work of Kant as "The faculty of cognition which legislates for the cognition of nature by supplying *a priori* concepts (categories)" (2000, 187). While reason has:

> At least three 'employments': (1) merely logical, as that which forms or identifies logical connections between cognitive propositions—that is to say, forms proofs; (2) reason in its theoretical/speculative employment, which seeks to pursue these logical connections even beyond the proper founds of cognition, and thus forms ideas; (3) as practical, supplying the principle of the moral law for the free will. (Burnham 2000, 186)

The third employment is of concern in this Chapter's later discussion of reason.

"the beautiful seems to be regarded as a presentation of an indeterminate concept of the understanding, the sublime as a presentation of an indeterminate concept of reason" (Kant 1952, 90-91).

Judgements about the beautiful in nature tend toward supporting the understanding and cognition generally. In contrast, Kant writes that the sublime aspects of the natural world are "ill-adapted to our faculty of presentation, and to be, as it were, an outrage on the imagination" (1952, 91).[5] The problem that the sublime creates for the understanding here is that the cognitive faculty of judgement cannot grasp the particular that is presented to it—such as the particular vastness of the ocean—whether as sensation, intuition or in the imagination. The sublime is, however, as Kant writes, a presentation of an indeterminate concept of reason. This is a point that will be elaborated in the following sub-section's discussion.

[5] The "faculty of presentation"—or sensibility—is what Burnham describes as a "non-legislative faculty" (2000, 11). The table above links faculties of mind to 'legislating' cognitive faculties that set out Kant's ideas about the laws or principles that the mind follows in its proper capacity. Burnham writes that: "sensibility can be loosely defined as the source of *particular* presentations" (2000,11; emphasis in original). Sensibility operates as a servant; bringing the raw materials—some bits from experience and other bits independent of experience—to the legislating cognitive faculties. In summarising Burnham (2000, 13-14) we can say that sensibility has four components through which it brings material to the legislating faculties:

1. *Sensation* relates to colours, sounds, feelings of warmth, hardness and so on.
2. *Pure intuition* is Kant's name for the source of our *a priori* presentations of the *form* of space and time. Intuition provides an immediate presentation of the particular to the understanding.
3. *Reproductive imagination* is a term that describes our ability to see things, hear things, touch things and recall the experience when they are no longer there. Reproductive imagination allows a subject to form associations, such as: "this room is the same colour as the one I had as a child".
4. *Productive imagination* is an important term in the *Critique of Judgement* but as Burnham points out, it is not always clear what Kant means by it, except that it is not bound to previous sensations or intuitions, or the laws of association that govern the reproductive imagination.

Feelings of pleasure and displeasure

In outlining the impact of the beautiful on a subject's feelings I will here be brief: the beautiful provokes in its audience a "disinterested delight" (Kant 1952, 42-44). To be certain, the analysis Kant uses to reach his conclusion is complex. However, for our purposes it is sufficient to note that the beautiful has nothing to do with displeasure and certainly not 'delightful horror' as does the sublime. The sublime, in contrast, provokes both displeasure and pleasure.

Kant describes the subject's experience of the sublime as occurring in two phases. The first phase is marked by the experience of displeasure and the second by pleasure. The displeasure of the first phase is linked to the "counter purposiveness," of the immediate experience (Burnham 2000, 90-1). That is, displeasure arises because the experience of an overwhelming object or event in nature is at odds with the "fundamental purposes of … my cognitive faculties and my will" (Burnham 2000, 97).[6] In the second phase the sublime has a pleasing effect, as the failure to present the object in the first phase reveals an unanticipated and pleasurable effect, whereby the whole higher faculty of reason is made conscious to the experiencing subject.

In taking this outline of the sublime further we can note that Kant's concept utilises a distinction between what he terms the 'mathematical' and 'dynamic' sublime. These two types of sublime experience have slightly different orientations toward feelings of displeasure and pleasure and serve to elaborate on the overall effect of the sublime.

The mathematical sublime is concerned with vast, formless objects whose *magnitude* exceeds our attempts to comprehend them. The experience of attempting to comprehend such phenomena in the first—or immediate—phase is displeasurable.

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[6] In Kant, one's will refers to "[t]he determination to act, including the ability to choose an action from several possibilities, including non-action" (Burnham 2000, 187). See also the definition of practical reason in footnote 4.

The mathematical sublime "'outrages' our *imagination* because we cannot 'take it all in' at once" (Burnham 2000, 91, emphasis in original).[7]

The dynamic sublime, by contrast, is concerned with the *power* in natural forces. By example, the dynamic sublime is familiar enough to anyone who has experienced an ocean wave with the power to pick you up and dump you like a rag doll. Here, the ocean's vastness is the not the experience, but the oceans power most certainly is. Thus, the dynamic sublime "'outrages' our *will* because we know that, as sensibly conditioned beings, we are helpless before it" (Burnham 2000, 91, emphasis in original).

The second phase of the sublime experience concerns the feeling of pleasure that is generated in the face of nature's overwhelming magnitude and power. Klinger summarises Kant's explanation about the transition from displeasure to pleasure in writing that at the same time that "we painfully experience the incapacity of our imagination … we are reminded of our capacity of reason as independent from and superior to the senses and nature" (1997, 197). Kant writes of the mathematical sublime, for example, that:

> The inner perception of the inadequacy of every standard of sense to serve for the rational estimation of magnitude is a coming into accord with reason's laws, and a displeasure that makes us alive to the feeling of the supersensible side of our being, according to which it is final, and consequently a pleasure, to find every standard of sensibility falling short of the ideas of reason. (1952, 106)

In the moment of its experience, overwhelming nature defies our ability to estimate its size with any particular units of measurement. Pleasure arises, however, in the face of such experiences because of the awakening of the mind's faculty of desire, which, in the civilised man, is governed by reason. Reason, thereby, triumphs over our sensible being.

Burnham points out that "[The ideas of reason] include, above all, the concept of

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[7] Imagination is an important term in *Critique of Judgement*. It is described and contextualised in footnote 5, above.

freedom" (2000, 13). In relation to the sublime, freedom is freedom from natural laws. Important with regard to this idea of freedom is the role of 'practical reason', which as Burnham further writes:

> is the cognitive faculty that can determine the will to act. Practical reason is the legislative employment of reason in general. It is legislative for the faculty of desire, meaning it determines the free will according to the formal principle of the moral law. In this determination, the purpose of the faculty of desire is the 'final purpose' or simply 'the Good' ". (2000, 13)

There is a double edge in this conclusion to Kant's analysis of the sublime. Toward the end of this Chapter I will elaborate further on some of the positive elements in Kant's analysis of the sublime. The positive elements are related to Kant's prescription of a Law of Respect that applies to those things of nature we cannot comprehend, intuit or imagine. This Law of Respect is reflected in Kant's (1952) definition of the sublime as that which pleases immediately by reason of its opposition to the interest of sense. Moreover, our moral feeling for the natural world, because of the sublime, is that we are prepared to esteem something even in opposition to our (sensible) interest (Kant 1952).

But there is a tension in the work of Kant also; the Law of Respect sits uncomfortably with the attitude of superiority toward the natural world that is exhibited in Kant's sublime. We should remember that the natural world is regarded by Kant as a passive entity and is wholly defined according to the subject's desire. The subject, in his sublimity, rises above the natural world to deign that it is to be esteemed. Kant writes in this regard that:

> Sublimity, therefore, does not reside in any of the things of nature, but only in our own mind, in so far as we may become conscious of our superiority over nature within, and thus also over nature without us (as exerting influence upon us). Everything that provokes this feeling in us, including the *might* of nature which challenges our strength, is then, though improperly, called sublime, and it is only under presupposition of this idea within us, and in relation to it, that we are capable of attaining to the idea of the sublimity of that Being which inspires deep respect in us, not by the mere display of its might in nature, but more by the faculty which is

> planted in us of estimating that might without fear, and of regarding our estate as exalted above it. (1952, 114)

The ideas of reason Kant is referring to above, which altogether exceed the realm of nature, are "supersensible" (Kant 1952, 120). The supersensible is "that realm of 'objects', unexperiencable in principle, which is purported to be the ground of all objects of experience" (Burnham 2000, 187). According to Kant, in order to experience the sublime one must understand human existence as involving a supersensible aspect, where there is freedom from bodily senses and external nature.

Moreover, the subject who deigns the natural world to be esteemed is a subject of a narrowly defined group. This is despite Kant's claim that all human beings hold within them the potential for this transcendental sphere of sublime feeling. In order to experience the sublime one must be receptive to the ideas of reason. This requires training, which can only materialise in a culture that already understands morality as a function of freedom from bodily sense. Thus, the sublime is only possible for members of such a moral culture. Further to this, Kant stipulates in *Observations on the Feeling of the Beautiful and Sublime* (1960) that the sublime is a male preserve. Kant writes:

> The fair sex has just as much understanding as the male, but it is a beautiful understanding, whereas ours should be a deep understanding, an expression that signifies identity with the sublime.
>
> … strivings and surmounted difficulties arouse admiration and belong to the sublime. Deep meditation and a long-sustained reflection are noble but difficult, and do not well befit a person in whom unconstrained charms should show nothing else than beautiful nature. Laborious learning or painful pondering, even if a woman should greatly succeed in it, destroy the merits that are proper to her sex. (1960, 78)

The perils of Kant's sublime

To employ Kant's sublime aesthetic uncritically is to imperil the development of ethical, democratic ocean politics in several ways. Kant's view that the magnitude and might of the ocean is the very thing that reveals our command over it (through

the application of practical reason) is certainly at odds with an ocean politics that attempts to be inclusive of the agency of oceans. The reason/nature dualism that Kant sets up in the sublime categorically excludes the oceans from the realm of reason and conceives of them instrumentally—the ocean is merely the trigger for the sublime. Moreover, the oceans are envisaged as unable to reciprocate. As a passive entity, the oceans can be filled with the subject's purpose and will and is thereby made available for human exploitation.[8]

Universal prescription of feelings for the ocean

Kant does not provide his concept of the sublime with positive definitions about what constitutes the foundations for the subject's separation from nature and its moral superiority over nature. Rather, Kant asserts his particular paradigm to be the actual case.

We can recall from earlier discussion that practical reason and the supersensible are at the core of the subject's pleasure in the sublime experience. In order to experience the sublime one must understand and experience human existence as freedom from bodily senses and external nature. Critically, Kant does not elaborate on what the supersensible is constituted by or what the supersensible does to exceed the realm of nature in positive forms. He only defines the supersensible negatively by defining what the supersensible is not; Burnham points out, for instance, that in relation to the sublime, "absolute totality means totality without natural limits; freedom means activity without natural determination" (2000, 99). Thus, in Kant's argument about how the mind transcends nature, he determines that the mind is separate from, and superior to, nature without stipulating what the sphere of feeling is in itself that transcends nature. With the exception of the abstract theoretical requirement of the supersensible, Kant's concept of the sublime is unanchored and drifting.

[8] In the following Chapter I give details of the workings of reason/nature dualism, where reason is systematically construed as the dominant superior and nature the subjugated inferior.

The implication of Kant's sublime aesthetic is that the subject asserts superiority over nature by performing the "god-trick" (Haraway 1991a, 191). Kant never brings the partialness of the subject to the surface—as a particular and privileged perspective of the European, bourgeois, urban male. Rather, Kant presents his conception of the sublime as the absolute and universal understanding of the aesthetic experience (conditioned only by the correct moral culture). However, more contemporary philosophy (indeed since Hegel first made the subject a 'problem') makes it unconscionable that subjects could sustain unlocated, value-neutral and universalising theories of knowledge.

The sublime aesthetics of Kant and Burke, and the Romantic Movement they subsequently fed, did not come out of nowhere but are linked to specific developments of the age, in particular "scientific Enlightenment, the growth of industry and the increasing domestication of nature" and the "attitudes to nature engendered by those developments" (Soper 1995, 226-7). Certainly in England the Romantic oceanic sublime thrived in reaction to industrialisation. As access to English terrestrial spaces decreased, Romantic representations of oceans in literature and painting swelled.[9] Raban touches upon this trend in writing:

> As England developed the biggest cities and the most mechanized industries in the world, so its access to the sea—that alternative universe—became more and more precious. For the sea was the realm of man as solitary creature, the hero struggling with elemental forces, and to go to sea was to escape from the city and the machine, and from the regulated and repetitive patterns of life in a complex industrial society. (1993, 15)

[9] The Romantic Movement began in Western Europe then spread to England and America. It developed in reaction to the Enlightenment and its emphasis on the primacy of reason. Although Kant, in his idealism, was a major influence (Bullock, Stallybrass and Trombley 1988). Romantic literature and art call attention to the imagination and feeling as well as the awe of nature and the experience of sublimity.

In England, the oceanic sublime was developed in the Romantic literature of Byron, Coleridge and Shelley and the painting of J. M. W. Turner, among others.[10] The Romantics depicted the ocean as wild nature, untainted and untamed by the forces of modernity and a space to be treasured and revered—despite the sea becoming increasingly used and industrialised (Raban 1993; Steinberg 2001). Yet it is important to note that Romantic representations of the ocean had its basis in the industrial era's construction of the sea as the antithesis of civilised and developable terrestrial environments (Steinberg 2001). In the Classical and neoclassical economic discourses of industrial-capitalism, the ocean was conceptualised as beyond society, as a "great void" and "empty transportation surface" between civilized terrestrial places (Steinberg 2001, 113). The Romantic conception of the ocean as wilderness, which I discuss below, further complements "the rationalist idealization of the ocean as empty and featureless" (Steinberg 2001, 118).[11]

Soper proposes that we view:

> the cultivation of the sublime [as an] expression of anxiety [as well as] the aesthetic 'luxury', of a culture that has begun to experience its power over nature as a form of severance from it, while Romanticism only finds expression against the background of a certain mastery of its forces and a consequent concern for the alienation it entails. The romanticisation of nature in its sublimer reaches is in this sense a manifestation of those same human powers over nature whose destructive effects it laments. (1995, 227)

[10] See Raban (1993) for a discussion of the sublime and the sea in English literature and painting. Corbin (1994), Levine (1985) and Mollat du Jourdin (1993) discuss the sublime and the sea in the literature and painting of the French Romantics.

[11] Steinberg (2001) explains that the Classical and neoclassical economic discourses of the industrial capitalist era uphold that investing in resources for which a nation had a comparative advantage and trading these resources freely (rather than controlling trade) would result in the maximum level of wealth and happiness. The ocean was thus constructed "like money or markets, as without social 'roots'—beyond society, politics, or other 'artificial' social constructs that could interfere with the 'natural' free flow of capital" (Steinberg 2001, 114). Chapter 2 developed this theme in relation to law. It will be developed further in Chapter 5 in making a link between ocean-related science and the fishing industry and is a theme here in this Chapter also.

Kant does not take into account that freedom from nature "is the concrete social effect of Enlightenment as opposed to something achieved through an individual work of mastery upon the self" (Soper 1995, 230). What the discussion of this section points to then is that there are culturally specific factors involved in the development of sublime aesthetics and as such, we must view them as "the cultural product of an age" (Soper 1995, 230).

The sublime is overwhelmingly dictated by the experiences of a privileged minority within Western societies—male, white, Euro-American and from a particular economic class (Hitt 2000; Soper 1995). As I mentioned earlier, Kant stipulates that only males should attempt to engage with the sublime. What is more, representations of feelings for oceans as sublime do not commonly come from lived experiences. As Winder remarks about writing the sea, there is a "mismatch between literature and subject. The men and women who have used the sea are almost always a separate group from the men and women who write poems, novels and journals" (1998, x). Representations of oceans inspired by the notion of the sublime often have nothing to do with experiences of oceans themselves. Coleridge, for instance, had never been to sea when he wrote his famous poem, *The Rime of The Ancient Mariner* (first published 1798) (Raban 1993). Kant never saw the ocean in his lifetime (Gracewood 1998). In contrast, descriptions of oceans by eighteenth century writers who were familiar with them from their voyages abroad are "notably free of philosophical notions of the sublime" (Raban 1993, 11).[12]

One could also expect that feelings for the oceans experienced by whalers, fishers and sailors, their families and communities, for instance, would have been quite different from the experiences of a privileged elite merely courting the dangers of the oceans—as was necessary to Burke's sublime, for example. We could expect further that the feelings for oceans of whalers, fishers and sailors would have been caught up with the particular working conditions at sea that had to be endured such as the fact that people died at sea in large numbers. Bathurst's description of the shipping

[12] There are, of course, some important exceptions with respect to this observation such as Romantic literary mariners, Herman Melville (1819-1891) and Joseph Conrad (1857-1924).

industry in the late eighteenth and nineteenth centuries below helps to illustrate this point:

> as the sea cluttered up with shipping, so it accumulated shipwrecks. In the 1790s, an average of 550 ships were wrecked every year on British shores; by the 1830s, the numbers had risen to well over two a day. The vast increase in nautical traffic around Europe had not yet been matched by any improvement in safety. There was no regulated distress code and only the most clumsy and primitive of aids: heavy leather life jackets or inadequate row-boats. … [B]etween 1854 and 1879, almost 50,000 wrecks were registered. That figure is probably ludicrously low. … With the mortality rate so high and conditions so bad, the sailors themselves could only cultivate a brutal fatalism about their work. … [M]ost did not expect to live beyond the age of forty. … They were accustomed to shipwreck or injury, they accepted that the sea was unsafe, and they remained suspicious of men who promised salvation. (2000, 10-11)

In employing the concept of the sublime contemporarily, we need to be mindful that the wretchedness of life at sea has only receded to some degree in the twentieth and twenty-first centuries. Fishing is possibly the most dangerous occupation in the world, with occupational fatalities far exceeding national averages (FAO, 2000). Binkley's research into the Nova Scotian deep-sea fishery found, for example, that deep-sea fishers "recognize the sea as inherently dangerous and fishing as a perilous and stressful occupation. ... Most fishermen have seen a buddy maimed or killed; others have personally experienced serious accidents" (1994, 17-18). Thus, the sublime will not necessarily resonate with the feelings fishers have about oceans. Similarly, it is doubtful that the sublime will resonate with the feelings of refugees traversing oceans in intolerable circumstances and conditions (Capp 2003).

Of course, Kant does not claim that whalers, fishers and sailors, for example, are not capable of experiencing the transcendental sphere of sublime feeling. As I mentioned earlier, according to Kant all humans have the potential to experience the sublime given the correct training and moral culture. In this sense we cannot claim Kant's sublime is undemocratic. However, the practical effects of Kant's sublime are undemocratic: Kant claims that the 'correct' aesthetic response to an overwhelming and enigmatic ocean is to grasp the idea that the mind is greater than

the ocean, that, indeed, humans are not subject to the power and magnitude of such a natural event. In determining for all how to feel about the oceans, Kant effectively denies the diversity of feelings humans have for the oceans that are different to his own (the 'rational subject'). Herein lies another peril of the sublime for ethical, democratic ocean politics and just ocean existences.

Oceans as wilderness: historical and contemporary

In drawing on the ocean as a trigger for the sublime, Kant empties it of signs of marine life and human interaction to create a mental image of the oceans as an immense void. Kant writes:

> we are not to regard it as we, with our minds stored with knowledge on a variety of matters … are wont to represent it in *thought*, as, let us say, a spacious realm of aquatic creatures, or as the mighty reservoirs from which are drawn the vapours that fill the air with clouds of moisture for the good of the land, or yet as an element which no doubt divides continent from continent, but at the same time affords the means of the greatest commercial intercourse between them—for in this way we get nothing beyond teleological judgements. Instead of this we must be able to see sublimity in the ocean, regarding it as the poets do, according to what the impression upon the eye reveals, as, let us say, in its calm, a clear mirror of water bounded only by the heavens, or, be it disturbed, as threatening to overwhelm and engulf everything. (1952, 122, emphasis in original)

The Romantics reinforce Kant's void by elaborating imaginatively on the 'oceans-as-wilderness' theme. Raban remarks that in English Romantic literature especially, "the sea was hallowed as *the* province of Nature—it was the elemental reality, and the engine room, with its smells of Manchester and Birmingham and Sheffield, had no place in it" (1993, 18, emphasis in original). He comments further:

> Romanticism sanctified nature, solitude, wilderness at a time when … solitude and nature were both in increasingly short supply, and there was no real wilderness at all; England's only untamed wilderness, where man might still feel small and alone in the vastness of Creation, was the sea. … Uncontrolled, unravaged, unbuilt-over, the sea was the last refuge of the free spirit raised in the land of dark Satanic mills and the great wen of metropolitan London. (Raban 1993, 15)

The Romantics, inspired by the philosophical sublime of Burke and Kant, transformed Biblical representations of oceans as dark, evil, chaotic places with little to offer 'civilised' men and women into a sphere of spiritual reverie, uplift and salvation from the world (Corbin 1994).[13] Western understanding and sensibility in relation to oceans are still in thrall of the Romantic sublime sea and the nineteenth century masterpieces of Conrad and Melville, for example, that they inspired (Raban 1993).

The idea of oceans as wilderness continues to be consolidated in Western societies through its incorporation into marine policy. The Australian government, for example, has incorporated a notion of Ocean-as-Wilderness in a substantial way into marine policy (Department of the Environment and Heritage 2005). Visible and vocal elements of the contemporary environmental movement, such as Greenpeace and the Sierra Club, utilise the notion of 'ocean wilderness' in their marine conservation campaigns and policies, asserting human intervention poses the greatest threats to the integrity of awesome ocean wilderness frontiers (Greenpeace Australia Pacific 2006; Sierra Club 2006).

The United States has a long tradition of wilderness preservation of terrestrial environments.[14] The United States *Wilderness Act* of 1964 established the legal meaning of wilderness as "an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain" (cited in Curtin 2005, 1). The United States government founded a marine counterpart in 1972, with the provision of National Marine Sanctuaries to protect conservation,

[13] According to Corbin (1994) the story of the flood held great sway late into the eighteenth century: Christians popularly believed the sea would soon flood the earth again as set out in *Revelation*, returning the earth to chaos. Corbin writes of the association of the sea with the flood: "[I]ts roaring, its moaning, its sudden bursts of anger were perceived as so many reminders of the sins of the first humans, doomed to be engulfed by the waves" (1994, 3). One of the few reasons people would come to the seashore was to meditate upon the Flood and "experience signs of divine wrath" (Corbin 1994, 9).

[14] The tradition of wilderness preservation is generally attributed to the ideas of John Muir (1834-1914). For Muir, untamed and untouched wilderness is sacred (Curtin 2005). Muir established the San Francisco based Sierra Club in 1892. Preservationists successfully established the National Park Service in 1916 (Cahn and O'Brien 1996).

ecological, recreational, historical, research, educational or aesthetic qualities (Dallmeyer 2005).

In Australia, the Commonwealth government has adopted the World Conservation Union's (formerly the International Union for the Conservation of Nature (IUCN)) internationally recognised categories to delineate and manage marine protected areas (MPAs) in its 1998 National Oceans Policy (Department of the Environment and Heritage 2005). This includes the category, 'Wilderness Area', defined as an area of ocean that is "protected and managed to preserve its unmodified condition" (Department of the Environment and Heritage 2005, 4). Nonetheless, all MPAs are, as the National Oceans Policy recognises, commonly associated with the idea of "unaltered wilderness inaccessible to humans" (Department of the Environment and Heritage 2005, 3).

Wilderness is, however, an idea of nature that has been widely criticised by social theorists from a range of angles (see, for example, the work of Cronon 1996; Curtin 2005; Guha and Martinez 1997; Langton 1996; and Plumwood, 1993; 1998). Cronon, in his essay entitled, 'The Trouble with Wilderness; or, Getting Back to the Wrong Nature', is critical of the "dualistic vision" evoked by the concept of wilderness "in which the human is entirely outside the natural," and is concerned about the habits of thinking that flow from this conception (1996, 80-1). Cronon argues that if,

> The place where we are is the place where nature is not …, if by definition wilderness leaves no place for human beings, save perhaps as sojourners enjoying their leisurely reverie in God's natural cathedral—then … it can offer no solution to the environmental problems that confront us. To the extent that we celebrate wilderness as the measure with which we judge civilization, we reproduce the dualism that sets humanity and nature at opposite poles. We thereby leave ourselves little hope of discovering what an ethical, sustainable, honourable human place in nature might actually look like.
>
> Worse, … by imagining that our true home is in the wilderness, we forgive ourselves the homes we actually inhabit. (1996, 81)

Similarly, Plumwood argues that the nature/culture dualism at work in the concept of wilderness, wherein "nature must not be permitted to mingle with culture", may result in 'non-pristine' nature "seen as spoilt, inferior and unworthy of defence" (1993, 162-3). While the notion of wilderness highlights the radical otherness and autonomy of nature it does so at the expense of natures closer to home, such as urban coasts and seas.

The concept of ocean wilderness is particularly hazardous for those Indigenous societies who perceive themselves as part of ocean environments, not as selves set apart from oceans. Where the oceans that support and are supported in turn by Indigenous societies are seen as 'pure nature', they are not seen as the sea dwellings and territories of Indigenous societies, erasing Indigenous histories and specific human-ocean relations. As Langton comments, there is an urgent need for recognition that "many protected areas and many areas proposed for protection in Australia as elsewhere in the world" are not untouched wilderness but are inhabited and used by Indigenous societies (1996, 26, 30).

Ironically, those that benefit most from the conception of oceans as wilderness—those that have the resources and time to enjoy the 'ocean wilderness experience' such as the adventure tourist—are likely not to acknowledge their own interactions or the working of the ocean upon them. Magically, ocean wilderness is forever renewed.

What is more, in its hyperseparation of humans and nature, wilderness dualism conceives of Indigenous societies as a threat to the integrity of 'wilderness' areas because it,

> encourages its advocates to conceive of its protection as crude conflict between the 'human' and the 'non-human'—or, more often, between those who value the non-human and those who do not. This in turn tempts one to ignore crucial differences among humans and the complex cultural and historical reasons why different peoples may feel very differently about the meaning of wilderness. (Cronon 1996, 85)

This is not to deny that there are ocean environments where Indigenous connections to oceans do not exist, or for that matter, environments where there has been minimal

human interaction in general such as we find in the trenches and abyss of the deep oceans. Nonetheless, a great deal of the ocean environment designated 'wilderness' is the result of human intervention or modification in some way. With respect to existing and proposed MPAs, they fall overwhelmingly within coastal areas and the exclusive economic zones of nations (Dallmeyer 2005).

In summary, ocean wilderness should be viewed as a particularly Western cultural concept. Specifically, the understanding of oceans as wilderness is an artefact of the moral imagination of the European male urban elite, which developed in reaction to human encroachment on nature. By nominating areas of oceans as wilderness, Western discourses erase more discriminating deployments of the concept of oceans that are not reducible to either nature or culture, but rather acknowledge that oceans are distinct from culture yet indissolubly mixed-in with it.

To the extent that Western ethics and politics draw on the traditional sublime of Kant to inspire awe, wonder and respect in relation to oceans, we need to be aware of the perils involved: of the authorisation it provides for an attitude of human superiority to, and transcendence of, oceans; of the universal prescriptions for 'correct' feelings about the oceans; and of its conceptualisation of oceans as a vast source of wilderness. The traditional sublime as we find in Kant is a particularly Western cultural concept and the cultural imperialism that it tends towards is a problematical reference point for the development of ethical, democratic, ocean politics in pursuing just existences for oceans. The traditional sublime is problematic because it limits the possibilities for imagining human-ocean relations in Western societies.

Reconfiguring the sublime

Hitt (2000) proposes in his essay, 'Toward an Ecological Sublime' that a reconfigured notion of the traditional sublime provides the possibility of an environmental ethic. While critical of Kant's conceptual response to mooring the sublime in the notion of the superiority of reason over nature, Hitt argues the basis of an environmental ethic lies in the other important aspects of the sublime: humility and respect for the natural world. In setting up his argument, Hitt draws out these aspects of Kant's sublime as follows:

> Kant writes that in experiencing the sublime we perceive "our faculty of resistance as insignificantly small in comparison with [nature's] might," recalling Burke's statement that "we shrink into the minuteness of our own nature, and are, in a manner, annihilated." ... Kant adds that "the irresistibility of the might of nature forces upon us the recognition of our physical helplessness as beings of nature." ... Part of the sublime experience, in other words, is the realization that we are mortal creatures, "beings of nature" whose lives are entirely dependent on forces greater than we are. (2000, 606-7)

Hitt thus sets out his position as follows:

> The mere fact that humility—which Kant calls 'a sublime temper of the mind', and which we could justly call the cornerstone of any environmental ethic—is cited as a prerequisite to the sublime would, perhaps, by itself suffice to justify a revaluation of the current ecocritical stance. That wonder and awe are also part of the package, to say nothing of the consequent admiration and respect cited by both Burke and Kant, can only enhance the possibility that the sublime may, after all, be worth saving. … [F]or all its problems, [the sublime] involves what look to us like ecocentric principles. (2000, 607)

In reconfiguring the sublime for an environmental ethic, Hitt wants to "preserve the radical alterity of nature while resisting its objectification or reification" (2000, 613). Accordingly, he strives "to recognize our kinship with nature" while avoiding "neutralising completely nature's 'sublime' otherness" (Hitt 2000, 612). The importance of recognising and valuing similarities and differences between humans and non-humans, and the agency of oceans is a central theme in recent ecological ethics and politics, which I discuss further in Chapter 6.

It is conceivable that the first phase of Kant's sublime—the phase prior to transcendence—is an aspect of the traditional sublime that is worth saving. The importance of the traditional sublime for ocean ethics and politics lies in its power to bring to our attention ways in which the oceans can overwhelm our senses and physical being. It combines our initial astonishment and captivation in the face of an ocean with awareness of our limits in relation to it and our dependency upon it. According to Hitt, such an orientation of our being constitutes "a new way of imagining our relationship with the natural world" (2000, 613). Hitt's concept of the

sublime is different from Kant's approach in that for Hitt the notion of the 'wholly other' lies outside of the realm of conceptualisation. In such an encounter with nature:

> '*there is no room, no time, for reflection*. We are seized by the relationship; we cannot think about it as we would an object. It is here, now, and while it lasts, there is only now. Since we have no time to ourselves to think about the relationship, there is never any question of doubting its reality. … [It] is *outside* the thinker, not inside her or his own and consciousness'. (Reed 1989, cited in Hitt 2000, 614, emphasis in original)

Hitt's reconceptualised notion of the sublime highlights the *inability* of reason to 'master' the oceans; rather, in a sublime encounter, there will always be something of the oceans that is in excess of reason—that is, there will always be something of the oceans that reason will not be able to translate, represent or feel. "The symbolic order, after all, is a limited human construction that never fully accounted for the wholeness of reality in the first place" (Hitt 2000, 615).

Indeed, Kant draws on the ocean as a metaphor for that which cannot be understood in *Critique of Pure Reason*:

> We have now not merely explored the territory of pure understanding, and carefully surveyed every part of it, but have also measured its extent, and assigned to everything its rightful place. This domain is an island, enclosed by nature itself with unalterable limits. It is the land of truth—seductive name!—surrounded by a wide and stormy ocean the native home of illusion, where many a fog bank and many a swiftly melting iceberg give the deceptive appearance of farther shores, deluding the adventurous seafarer ever anew with empty hopes, and engaging him in enterprises which he can never abandon and yet is unable to carry to completion. (1929, 257)

Here Kant hints through metaphor what he felt, but could never fully admit, that the ocean is a realm much more than we can subjugate to the laws of reason.

A reconfigured sublime as developed by Hitt supports the idea that at the level of cognition the ocean remains enigmatic, distant, unfamiliar, unrestrained and terrifying. In stressing the limitations of human knowledge of and feeling for

oceans, the sublime forces us to recognise the ocean's autonomy and agency. A "sublime encounter with nature seems to have the power to jolt us momentarily out of a perspective constructed by reason and language, a perspective that, in modern Western culture, has rendered nature mute" (Hitt 2000, 617). The oceans, given their association with the sublime, are uniquely placed to assist in resisting the problems with Kant's legacy as it has been outlined in this Chapter. The sublime reconceptualised highlights the agency of the oceans as the way its representation, assimilation and domination can be resisted.

Conclusion

There is a long tradition of association between Western discourse of the sublime and the oceans. In this chapter I have established the importance of traditional sublime discourse in shaping the feelings of Western subjects for oceans. Kant's theory of the sublime plays a critical role in this.

Kant's notion of the sublime, taken as a whole, is a highly problematic way of conceptualising human feelings for oceans: that the subject transcends the oceans confirms a relation of human authority and autonomy from oceans. Kant's attribution of universal feelings for oceans works to erase feelings for oceans that are not expressed in terms of superiority and transcendence. Thus, Kant's sublime is unnecessarily constraining on our understandings and sense of possibilities for human-ocean relations in Western societies.

Further to this, Kant empties the ocean of all signs of ecological and social life so that the ocean "may serve as a manifestation of almighty nature against which the 'insignificantly small' (European) subject may measure his humanity" (Gracewood 1998, 3). Kant's vision is restated in the Romantic tradition of ocean wilderness—as oceans entirely free of culture, as the radical other, alien to humans. The idea of oceans as wilderness remains highly influential in the marine policies of Western societies such as the United States and Australia. While the notion of wilderness highlights the autonomy and agency of some ocean ecosystems and dwellers, it does so at the expense of others such as urbanised coastal waters. Moreover, it erases more discriminating deployments of the concept of oceans that are not reducible to

either nature or culture, but rather acknowledge that oceans are distinct from culture yet indissolubly mixed-in with it.

The relations of human superiority and transcendence of oceans that is necessary to Kant's concept of the sublime in addition to the universal prescription about 'proper' feelings for the oceans and the conception of oceans as wilderness, combine to make any discussion of the possibilities for ethical, democratic politics in framing human-ocean relations appear incongruous. The specific problems identified in Kant's sublime together with the firm hold on our feelings for the oceans means the sublime is an important area for re-dress through political action, policy-making and creative thinking.

For Kant's sublime to be of use in developing ethical ocean politics we need to acknowledge that the immediate response of awe can be followed by an impulse to respect rather than dominate. The importance of the sublime lies in the awe, wonder and terror experienced in the face of oceans that brings to our attention the humility and respect we feel in relation to the autonomy and agency of oceans. A reconceptualised sublime such as Hitt proposes confirms what Kant himself intuited: the oceans are unfathomable. That the oceans will always exceed the human mind is not solely on account of the limits to our present knowledge of them. They exceed the mind on account of the anthropomorphic character and boundaries of this knowledge, and by the recognition that the mind's relation with the oceans is not the exclusive relation or even the highest one we can achieve.[15]

[15] I have drawn on Berleant's (2004) discussion here in relation to a more general concept of the natural world.

Chapter 5

Ocean Science: Awash with Values

> Roll on, thou deep and dark blue Ocean—roll!
>
> Ten thousand fleets sweep over thee in vain;
>
> Man marks the earth with ruin—his control
>
> Stops with the shore.
>
> (Byron 1993, 179)

Byron's perception of the oceans as vast and resilient, as essentially immune from the impacts of humankind, is informed by the Romantic sublime; it is also a view that has until recently held great sway in some mainstream Western scientific discourses. But by the late twentieth and early twenty-first centuries, the view that oceans are resilient to human impacts is found to be spectacularly misguided.

Scientific evidence in support of finite numbers of ocean dwellers and the great extent to which humans have impacted upon ocean ecosystems has swelled in recent decades. For example, scientific research shows that many fish species are commercially exhausted and show no signs of recovery. Recent research suggests that 90 per cent of the large predatory fish found globally, including tuna, swordfish, sharks, snapper and grouper, have been removed from oceans by industrialised

fishing in the past 50 years (Meyers & Worm 2003). Fishers are in effect fishing down the food web—catching smaller, plankton-eating animals in place of dwindling numbers of large predatory fish—to such an extent that the structure of marine food webs are being dramatically altered and, in turn, affecting the potential for top predators to regenerate (Pauly *et al*. 1998). Conservation biology has also begun to appreciate the devastating effects fishing has on marine food webs from degradation of habitats and the capture of non-target species (Norse & Crowder 2005a). So the portrayal of the oceans as super-abundant and resilient is an influential but profound misconception.

Scientific understandings of oceans, like the oceans themselves, are multiple, diverse and dynamic and thereby provide a range of ways for mediating human relations with oceans. In this chapter I concentrate on two highly influential contemporary conceptions of oceans in scientific discourse: first, a production model view of oceans in conventional fisheries science and second, an enclosed reserve view developed in Marine Protected Area (MPA) science.

Conventional fisheries science receives considerable attention in this Chapter on account of the extent to which it has dominated the development of the ocean sciences and oceans management in the twentieth century (Norse & Crowder 2005a; Rozwadowski 2002; Preikshot & Pauly 2005).[1] Other branches of marine science such as hydrography and marine pollution have until recently evolved primarily in response to the needs of fisheries science (Rozwadowski 2002).

I begin this chapter by giving an account of the context for the development of conventional fisheries science. I demonstrate that the evolution of fisheries science is closely linked to developments in Western politics and economics, often informed by entrenched cultural beliefs and attitudes about the character of oceans as inexhaustible and resilient to the impacts of fishing, all of which takes comfort in the potential for ever-increasing fishing yields facilitated by the application of science and technology.

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[1] 'Conventional' fisheries science has largely developed in Western industrialised nations but has been applied more widely (Degnbol 1998).

I then turn to a discussion of the production model view of oceans in conventional fisheries science in which the values of industry are clearly discernable. I argue that conventional fisheries science pursues a narrowly defined and highly instrumental agenda of the development and production of fish for consumption in which fish are conceptualised as 'resources' to meet human ends without needs and agency of their own—all of which has devastating material consequences for fish and their ecosystems.

The socio-cultural assumption in conventional fisheries science—that fish are valuable only to the extent that they satisfy human ends—is examined in some depth. I draw on Plumwood's (1993) critique of the devaluing of non-human nature through dualistic conceptual frameworks utilised by science. Using Plumwood's analysis of rationality in ancient Greek, Enlightenment and contemporary times, I am able to make a link to some of the central structural features in the way that science engages with oceans today. Specifically, my analysis demonstrates that conventional fisheries science is predisposed to collaboration and capture by the fishing industry. I illustrate this point with a discussion of the types of research models used in conventional fisheries science.

Conventional fisheries science is, of course, contested from within and without the scientific community. Following on from my discussion of fisheries science, MPA science is contextualised as being, in part, a strategic response to the over-exploitation of oceans that the theories and practices of conventional fisheries science has legitimated throughout the twentieth century. MPA science is far more inclusive in the range of factors it utilises and takes into consideration in its approach to the production of knowledge than is fisheries science. MPA science is not delimited by such a close connection to industry and a resource management agenda; it is fashioned from a different set of concerns and values. However, I argue that we need to be wary of attempts to define oceans and MPAs through a protective and authoritarian approach that has been gathering momentum in some quarters of the scientific community in recent years. In particular, I am apprehensive of MPA science's advocacy for conceptions of oceans that focus primarily on the biological aspects of ocean environments and neglect proper consideration of cultural, social,

political and economic dimensions. MPA science's advocacy for enclosed sanctuaries or marine reserves resonate with wilderness conceptions of oceans (as was discussed in Chapter 4 on the sublime) as uninhabited regions, void of people and culture—that place humans outside of ocean environments.

This Chapter continues to focus on that part of my thesis concerned with the major Western discourses that structure contemporary human-ocean relations. Fisheries science and MPA science demonstrate how the most widely accepted variants of ocean-related science constrain our understandings of, and possibilities for, interacting with oceans in Western society.

The shortfalls of science point to the need to open up assessment, debate and discussion about oceans through processes that allow a broader range of communities, human and non-human, to contribute.

Fisheries science

Politics, economics and beliefs

Despite the many ways of doing science, science is generally taken to involve a systematic investigation into the natural or human world using techniques that produce accurate and reliable results (Stocker 1995). Science aims to describe patterns in the physical world of objects and their relationships to each other, to explain these patterns in terms of causative processes, and to make predictions about future events based on the knowledge of patterns and processes.

Science is the dominant Western discourse for expressing knowledge about the external and physical world or 'reality'. Indeed, in Western societies the understandings of scientists are regarded as the most legitimate form of knowledge for policy and management decisions about the natural world (Blount 2003; Braidotti *et al*. 1995; Simmons 1993). That the pronouncements of science are so extraordinarily powerful in Western societies in cultivating our understanding of 'reality' is largely to do with the perception that science provides the most rational methods we have for investigating the world and, practised properly, will yield

objective knowledge—an accurate and reliable account of the external and physical world, free of bias and able to predict future events.[2]

The last few decades have brought a surge of criticism against the idea of universal and value-free science in its pursuit of truth.[3] For all its achievements, scientific knowledge is always, in part, a product of social, political and cultural worldviews.[4] The worldviews that inform scientific knowledges underpin the biases that exist in scientific discourses and are made manifest through specific relationships with power. Bleier writes in this regard:

> while the work of discourse appears to be uncovering truth, it rests upon and conceals the struggle between those who have the power to discourse and those who do not. Both by their practices of exclusion and their definition of what is, what is to be discussed, and what is false or true, discourses produce rather than reveal truth. The conditions and circumstances under which the discourses take place reflect conditions of social power at the time and thus themselves define the theories and practices (such as scientific methodology) brought to bear in the discourse, consequently determining outcome. (1984, 194)

A broad expression of this insight is that specific developments in scientific knowledge can be interpreted in terms of the economic and social priorities of military agencies, corporations, governmental bodies and individuals who finance and profit from their creation and application (Hallen 1989; Taylor 2005). The link between science and vested interests undermines claims to objectivity.

Historical studies of the ebb and flow of the development of the ocean sciences in the twentieth century by and large reflects an alignment with powerful Western military

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[2] This view of science is what Latour (2004), Chalmers (1976) and Keller and Longino (1996), among others, critique as the 'ideology of science'.

[3] See, for example: Bleier (1984); Bocking (2004); Chalmers (1976); Keller (1985); Hallen (1989); Haraway (1991a); Harding (1986; 1991); and Latour (2004). See also the edited collections of essays by Bleier (1986) and Keller & Longino (1996).

[4] See, for example, a sample of feminist writers on the subject: Bleier (1984); Braidotti *et al*. (1995); Hallen (1989); Haraway (1991a) and Harding (1986, 1991).

and economic interests.[5] Certainly the two major peaks in research interest and funding that aided the proper establishment of the ocean sciences have been aligned with the economic and military interests of Western nations. The first peak transpired in response to a declining fish catch in the North Atlantic in the late nineteenth and early twentieth century. This first peak is my major concern in this Chapter, but it is noted that World War II sparked the second peak (Deacon 1978).[6]

Socio-economic imperatives are a key to understanding the close ties between the establishments of the ocean sciences and declining fish catches. Around the turn of the century, the governments of Northern European nations were willing to fund scientific research based on concerns about declining numbers of commercially exploited species of fish in the North Atlantic Ocean (Cushing 1988; Rozwadowski

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[5] Deacon (1978) and Prager (2000) provide useful historical overviews of ocean science in the twentieth century.

[6] A brief indication of the close ties between the marine sciences and military concerns in the period surrounding World War II can be provided as follows:

Scientists in the United States and the United Kingdom played an important role in many aspects of naval warfare, providing critical advice about the characteristics of oceans for naval operations. Scientists studied ocean thermal structure as it related to hiding and detecting submarines, the nature of waves and breakers at potential landing sites, the behaviour of sharks around stranded crew members, the development of underwater ordnance, among other factors that could interfere or aid military operations (Deacon 1978; Prager 2000; Williams 2004). The marine sciences were employed as a strategic and tactical tool to serve the main objectives of the Allies navy, which Steinberg describes as: "guarding troop and material transports and hunting down submarines" (2001, 156).

Deacon observes about the military funding of oceanographic endeavours:

> Increased funds were provided for existing institutes and for setting up of new laboratories. … There was a corresponding increase in the size and number of research vessels and the number of scientists, so that oceanography entered a period of unprecedented prosperity and activity. (1978, 11)

The Cold War continued to facilitate ocean research, the navy being the most reliable source of funding. The marine sciences also attracted military funding for the important role they played in evaluating the impact of radioactive fallout upon marine environments from nuclear weapons testing in the Pacific (Rainger 2004).

At the same time, marine scientists were willing to collaborate on military projects in the knowledge that this would secure future political and economic advantages for oceanographic endeavours (Weir 2004).

In short then, scientific research priorities were defence priorities funded with navy dollars. This meant the navy had a large element of control over the scientific process of inquiry. Indeed, "much of our present-day understanding of the ocean is built on a past in which the military invested heavily in marine science and technology" (Earle 2000, 288).

2002). At this time, the economies of northern European countries prospered and suffered in relation to the availability of herring and cod especially and thus counted studies of commercial fish stocks as their most important marine research (Rozwadowski 2002).

Smith (1994) identifies further the role of profit in the establishment of the study of fluctuations in the fish catch in Northern Europe. According to Smith, the profit to be made from fishing was recognised as early as the fourteenth century. By the nineteenth century, the development of steam power led to greater economic opportunities for both fishermen and fish processors. At this time,

> investors became interested in fishing fleets, banks were encouraged to lend money, and profits were expected. Because of this expectation of profits, the causes of fluctuations in the catches became of increasing interest, not only to the fishermen but also to the investors and bankers, and hence to the politicians. (Smith 1994, 10)

In response to growing concern about falling catches of commercially exploited fish species, the International Council for Exploration of the Sea (ICES) was founded in 1902 by eight northern European nations—Britain, Belgium, Denmark, France, Germany, The Netherlands, Norway and Sweden (Rozwadowski 2002). While I focus on the links between politics and the development of fisheries science as it transpired in ICES because of its great influence in the field, it can be noted that the study of fluctuations in fish catches was already underway by the late nineteenth century in the United States, Norway, Russia, Denmark, Scotland, England, Germany and the Netherlands (Smith 1994).

ICES is the world's first collaborative peak body for the theory and practice of the marine sciences. It remained in the vanguard of scientific development throughout the twentieth century, particularly in the fields of fisheries biology and oceanography (Schwach 2004). At the time of creation, Council collaborators were of the view that science should provide the basis for the exploitation of fish stocks in line with turn-

of-the-century internationalist ideals that science had the potential to improve society (Rozwadowski 2002).[7]

In *The Sea Knows No Boundaries: A Century of Marine Science Under ICES*, Rozwadowski (2002) narrates a comprehensive history of the development of fisheries science as it transpired under the direction of the Council. Rozwadowski's research, from archival material and interviews with many of the Council's present and former participants, depicts the close association of science, government institutions and industry. She notes that from its inception the Council was largely funded not in pursuit of scientific knowledge for itself but on the basis that it would help obtain larger catches and regulate fish stocks. Rozwadowski writes:

> While the original scientific program for the International Council included plenty of work that looked like 'pure science' delegates also included government officials concerned with equitable management and promotion of national fisheries. … Virtually all of the Council's early investigations were animated at some level by an underlying confidence that learning about the oceanic environment would shed light on fish distribution, migration, and availability for capture.
>
> Governments joined these international collaborations only in part because of the enhanced potential to produce more or better knowledge by pooling national resources. It was, instead, the uses intended for this knowledge that prompted nations to commit resources for the proposed International Council. If its founders had not envisioned intervention in addition to so-called 'pure science,' their international investigations might have remained on the drawing board, a noble and scientifically interesting but politically untenable idea. (2002, 10-11)

Council scientists embraced the mission of promoting fisheries (Rozwadowski (2002). Details of the close links between science and politics of ICES member nations can be found throughout Rozwadowski's (2002) text forming a complex account. It is also important to note here that the links between science and politics

[7] Internationalism "is a broad social movement that aimed to erase national barriers to transportation and communication in order to promote wealth, useful knowledge, and peace" (Rozwadowski 2002, 2).

have historically existed in a tension for many scientists working for the Council. As an indication of this point, Rozwadowski's (2002) discussion of the Council's expanding advisory role in the northwest Atlantic in the 1970s and 1980s and the workings of the Advisory Committee on Fisheries Management (ACFM) established in 1977 reveal the apprehension with which some scientists viewed the Council's evolving responsibility and practices. The creation of ACFM, for example, was controversial because European coastal states with significant interests in expanding fisheries were given a voice in this ICES forum that formulated scientific advice. Some dedicated Council participants observed about ICES that by the end of the 1980's control was largely in the hands of national fishing commissions and the European Community (Rozwadowski 2002).

Another important feature of the development of fisheries science—indeed, from its inception at the turn of the twentieth century—was the conviction that science and technology would make possible greater understanding and control of the marine environment. It was expected that science and technology would find the tools to address declining fish stocks, increase others and discover new ones (Rozwadowski 2002). This conviction became most intense in the period following World War II. Rozwadowski describes the prevailing confidence of the era:

> Post-World War II Europe held a newly abiding faith modern science and technology would solve the western world's practical problems. Fisheries scientists shared this optimism for the prospect of effective conservation of fish stocks enlarged by the wartime fishery closures. The failure to take advantage of the post-World War I opportunity to protect stocks heightened their resolve. In 1947 one scientist stated with confidence, 'It is now possible to formulate measures of control which, when aided by continuous scientific supervision, will permit a rational exploitation of fishing grounds.' This conservation ethos did not by any means imply serious concern about general declines of oceanic resources, as would emerge in the 1970's. Indeed, post-war scientists thought themselves well placed to promote dramatic expansion of the amount of fish harvested from the sea. (2002, 146)

The technological innovations of echo sounding, more efficient fishing gear and long-range fleets, together with biological investigations into new species for

commercial exploitation and new theoretical tools to predict and advise on yields, supported the deeply held faith in the potential of science and technology to advance scientific knowledge of fisheries and directly facilitate the fishing industry to expand and profit to an extent previously unimagined (Rozwadowski 2002).

Underpinning these aspirations is a long-standing and widely held belief in Western societies that oceans are safe from overfishing and other forms of human induced degradation because of its size and depth and the abundance of ocean dwellers. We can recall an early expression of this view in Grotius' assumption in *Mare Liberum* that the ocean would "remain in the same condition in perpetuity as when it was first created by nature" (Grotius 1916, 27). Professor Thomas Henry Huxley (1825-1895), esteemed nineteenth-century evolutionary biologist and President of London's Royal Society (1883-1885), is another influential progenitor of this view. In addressing concerns about falling numbers of fish catches in the late nineteenth century, Huxley (1883) maintained the view that fish could not in fact be exhausted in the open oceans because of their abundance.[8]

There were at the same time far less optimistic views about the effect of fishing on fisheries. Ray Lankester (1847-1929), another of Britain's most prominent scientists, noted both sides of the debate at London's International Fishery Exhibition in 1883. Lankester observed that some participants took the position that protective measures and regulations were necessary to avoid disaster for salt-water fisheries (as was the case for fresh-water fisheries), while others argued for the removal of all restrictions to "quench the spirit of enterprise" (cited in Smith 1994, 38). However Lankester himself argued that, "[i]t is a mistake to suppose that the whole ocean is practically one vast store-house" (cited in Smith 1994, 39).

[8] From 1880 Huxley served as the English government's inspector of fisheries, presiding over all four Royal Commissions into the state of the fishing industry (Rozwadowski 2002). The Royal Commissions addressed concerns about evidence of overfishing in the North Sea in the second half of the nineteenth century after a surge in the mechanisation and industrialisation of the fishing industry (Cushing 1988). As more fish were caught fishers began to report a general decline in the availability of fish (Cushing 1988). It should be noted, however, that Huxley's view here was limited to pelagic sea fisheries and with respect to existing modes of fishing.

Some prominent scientists continued to express their belief in the bounteousness of the oceans well into the twentieth century. For example, British biologist Michael Graham states:

> It seems that the effects of man on the ocean has been small, that there remain relatively untouched sources of wealth, and that, even if these are greatly exploited in the future, the ocean will remain much as it is and has been during the human epoch. It may be rash to put any limit on the mischief of which man is capable, but it would seem that those hundred and more million cubic miles of water, containing every natural chemical element and probably every group of bacteria, supporting every phylum of animals, moving on the surface from the equator toward the poles, and returning below, stirred to many fathoms depth by the wind—it would, indeed, seem here at the beginning and the end is the great matrix that man can hardly sully and cannot appreciably despoil. (1956, 501) [9]

In summary, scientific research of fisheries in the twentieth century has been directed by political forces toward the critical problem of the day as defined by social and economic concerns. The development of fisheries science has, furthermore, been informed by entrenched cultural beliefs and attitudes about the character of oceans. Those beliefs hold the oceans and ocean dwellers to be inexhaustible and resilient to the impacts of fishing and that there is the potential for ever-increasing fishing yields facilitated by the application of science and technologies. Scientific enquiry into concerns about falling fish numbers of fish is not an objective enterprise. Cultural assumptions and beliefs, political and socio-economic interests, technological and scientific developments have all worked to direct scientific lines of enquiry and shape the theories and practices of fisheries science. To better understand why the knowledge and practices of fisheries science have taken the form they have, we must think about them in the context in which they develop.

[9] See Rozwadowski (2002) and Cushing (1988) for a discussion of the importance of Graham's work in the development of fisheries science in the twentieth century.

A dualistic conceptual framework and the production model view of oceans

Conventional fisheries science originated at the turn of the twentieth century when marine biology came together with the mechanisation and industrialisation of fisheries and significant concern about declining catches of herring and cod in the North Atlantic Ocean (Rozwadowski 2002). In addressing the concerns of governments and fishers about falling fish catches, the thinking and practices of marine scientists altered in significant ways. Prior to the turn of the twentieth century, marine biologists had mainly been concerned with the discovery, exploration, and collection and systematising of ocean plants and animals (Cushing 1988; Deacon 1978). Many famous ocean voyages in the nineteenth century are associated with the scientific exploration and discovery of marine life such as Charles Darwin's expedition aboard the *Beagle* (1831-1836) and Edward Forbes' aboard H.M.S *Beacon* (1841-1842). By the time ICES was inaugurated in 1902, however, many marine scientists "understood themselves to be studying fish and their fluid environment firmly in the context of human use of marine resources" (Rozwadowski 2002, 2). Marine biologists from the ICES member countries have largely defined the practices and ethos of fisheries science (Preikshot & Pauly 2005).

Preikshot and Pauly (2005) note that contemporarily fisheries scientists generally work in government laboratories and see themselves in the service of meeting the short-term economic objectives of industry. Rogers (1995, 102) also likens the role of fisheries science to a 'service' for industry, whereby science "provides information about the availability of raw material to industry." Fisheries biologists are trained to emphasise economic uses of fish and employ rationalist tenets of capitalist economics, such as productivity and efficiency, as measures of success (Scarce 2000).[10] The focus of fisheries biology has been almost exclusively on assessing 'stock' levels (rather than individuals or communities) of commercially

[10] In extensive interviews with salmon biologists, Scarce (2000) documents the economic orientation of fisheries biology in some detail.

'harvested' species in order to preserve 'biomass' production (Norse & Crowder 2005a; Rogers 1995). Oceans are conceptualised as a "factory which produces an annual surplus for exploitation which can be skimmed off" (Rogers 1995, 18). In short, the agenda in fisheries science is the development and production of fish for consumption; fish are the raw material awaiting conversion into products by scientific and managerial expertise and industry. In this manner, scientists are vital cogs in a process that relentlessly commodifies ocean-dwelling life (Scarce 2000).

Humans are, of course, dependent on certain ocean dwellers and their ecosystems and other physical functions of oceans and thus need to think instrumentally about oceans. Some amount of human use of oceans must take place. However, as Rogers argues, to describe ocean dwellers as 'resources', 'biomass' or 'fish stocks' and to conceptualise oceans as 'factories' is indicative of an impoverished perspective (and I would add imagination), based on a production model world view, about the possibilities for relationship between humans and the rest of nature (1995, 18, 99). I concur with Rogers view and note that there is a crucial judgement implicit in this relationship that fish are valuable only to the extent that they satisfy human ends.

It is worth examining in some depth the apparent legitimacy of the value judgement embedded in fisheries science about fish and the relations between humans and fish because it justifies human insensitivity to ecological limits, dependencies and connections to ocean dwellers and ecosystems. In this regard, Plumwood (1993; 2002) offers a cogent critique of the devaluing of non-human nature in Western societies and the narrowly defined and highly instrumental conception of ocean dwellers at work here—fish as "tools for economic gain", as Scarce (2000, 86) states.

Plumwood argues that dualistic conceptual frameworks provide the structure for thinking and relations with non-human nature in Western societies and that this explains many of the life threatening features that underlie discourses such as conventional fisheries science.[11] Plumwood argues that there are deeply ingrained,

[11] While I suggest that Plumwood's analysis here is helpful for understanding instrumental relations with nature, I also agree with Cuomo's observation that, "no narrative fully represents the whole truth" (1998, 28). At the same time, Cuomo makes the important point that:

historically traceable distortions of the concepts of nature, human, mind, reason and culture that have resulted in narrowly defined, highly instrumental relations with the non-human natural world that are tied to a deceptive sense of human independence from non-human nature (1993; 2002). An outline of the distortions in the concepts to which Plumwood refers to is given below as they are found in the ideas of Plato, Descartes and Locke.

Plumwood's (1993) concern is with the domination and oppression of nature (human and non-human) in Western culture and the inability to acknowledge human dependency upon non-human nature. Plumwood focuses on the hierarchical dualisms of human/nature, mind/nature and reason/nature, where the sphere of human, mind and reason are all systematically construed as the dominant superior side of the dualism and nature as the inferior and subjugated side. Dualisms are more than distinctions or dichotomies; dualisms are "a way of constructing difference in terms of the logic of hierarchy" that establishes the supremacy of a superior over an inferior (Plumwood 1993, 32). That is to say, one side of the dualism is valued more highly than the other.

Plumwood (1993, 48-55) describes the logical structure of dualism according to five stages. First, the master construes the reality of the subordinate subject as the *background* to his foreground. "The masters' view is set up as universal, and it is part of the mechanism of backgrounding that it never occurs to him that there might be other perspectives from which he is background" (Plumwood 1993, 48). Second, the subordinate subject is *hyperseparated* from the master, not merely made distinct. The master hyperseparates by maximising differences between him and the subordinate as well as reducing or eliminating any shared qualities. Third, the

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> it is possible to trace the ways in which some ideas or ontologies have reached prominence, and it is worthwhile to consider how the powerful tend to maintain their power. … Even if there is no essential 'Western worldview,' it is clear that a group of ideas, values and methodologies has been more influential than others in shaping the history of culture and science in the West. Although the precise causal relationships between hierarchical philosophical and theoretical views that encourage and justify domination, on the one hand, and practices, moral systems, and institutions, on the other are opaque and controversial, correlation is less difficult to ascertain. … [We] cannot ignore critical assessments of discursive and material correlations and coincidences which point to hot spots in the history of human interactions, even if the causal story of how associations developed is murky. (1998, 28)

master *incorporates* the subordinate subject by negatively defining the subordinate in relation to himself. Fourth, now that the subordinate subject only has meaning in relation to the master, the master makes the subordinate subject *instrumental* to his interests (those of the cultural centre). Fifth, the subordinated are *homogenised*. In overlooking the great diversity among subordinated subjects, binarism is achieved whereby the world is polarised into two radically different orders, for example, master and inferior other.

The basis for Plumwood's insights into human/nature, mind/body and reason/nature dualisms can be summarised by drawing attention to three stages in an historical process: two stages in Plato's transcendentalism and one in Descartes' rationalism. Plato centred human identity in the mind and its capacity to reason. He devalued nature in nearly all of its forms and set it up as the dualised contrast to the valued and virtuous realm of reason. Furthermore, Plato constructed the relationship between reason and nature as one of control and mastery. Nonetheless, Plato limited himself to seeking control over one's internal nature—disciplining the body, emotions and senses—all of which he perceived as uninteresting and part of an inferior realm. (Plumwood 1993)

Descartes (1596-1650) goes a step further than Plato, wherein (external) nature is rendered mindless and as having meaning and value only through human interpretation and re-creation. Descartes' additional step initiates a major intensification of the human/nature and mind/body dualisms. Plumwood explains this as follows:

> Descartes obtains radical exclusion between mind and body through an account of perception which distinguishes between sensations construed as modes of thought, and sensations construed as modes of matter or body. ... The effect is to enforce a strict and total division not only between mental and bodily activity, but between mind and nature and between human and animal. As mind becomes pure thought—pure *res cogitans* or thinking substance, mental, incorporeal, without location, bodiless—body as its dualised other becomes pure matter, pure *res extensa*, materiality as lack. ... The body and nature become the dualised other of the mind. (1993, 114-115)

The dualism set in place by Descartes conceives of mind and nature as entirely different substances from one another, eliminating any shared qualities. As Plumwood observes about this: "[m]ind is defining of and confined to human knowers, and nature is merely alien" (1993, 116). Mind-like qualities such as intentionality and agency are stripped from nature, construing nature by analogy as a machine. Mechanistic accounts of nature are a legacy of Descartes for us today whereby nature is passive, empty and without agency or autonomy. In construing nature as empty of mind Cartesian thought has effectively made it available for annexation, "a sphere easily moulded to the ends of reason conceived as without limits" (Plumwood 1993, 116).

A mechanistic perspective is intensified in later developments of the concept of reason. In this regard, John Locke's (1632-1704) empiricism, an influential post-Cartesian philosophy of knowledge, makes an important contribution to the dualistic structures in Western thinking. Locke (1969) rejects Descartes rationalist philosophy of innate ideas (in which true foundations for knowledge are made accessible by correct reasoning and contemplation) and reinstates the senses and experience in the formation of human knowledge. For Locke nothing is knowable prior to experience. It is this idea that marks him out as an empiricist rather than a rationalist. However, "Lockean empiricism strengthens the Cartesian view of mechanistic nature in arguing that sensory qualities are not really 'in' objects, and through its reduction of relations and other 'soft' qualities to a privileged group of 'hard' qualities" (Plumwood 1993, 117). [12]

Plumwood draws attention to these features as they emerge in Locke's treatment of the distinction between primary and secondary qualities of physical objects. According to Locke, primary qualities of objects, such as solidity and mobility, are inseparable from them and independent of us. Secondary qualities are "nothing in the objects themselves" but are "powers in bodies" (such as particular perceptual

[12] We can note that this insight resonates with Kant's assertion, discussed in Chapter 4, that sublimity is discoverable wholly within the mind and not at all in nature.

apparatuses) to produce ideas in us, such as colour and smell, that depend on primary qualities of the object (Locke 1969, 69).

Locke makes a further distinction between primary and secondary qualities, noting that primary qualities are real, in that "[t]he particular bulk, number, figure, and motion of the parts of fire or snow are really in them, whether any one's senses perceive them or no" (1969, 69). Secondary qualities, however, are not real:

> Light, heat, whiteness or coldness, are no more really in them than sickness or pain is in manna. Take away the sensation of them; let not the eyes see light or colours, nor the ears hear sounds; let the palate not taste, nor the nose smell; and all colours, tastes, odours, and sounds, as they are such particular ideas, vanish and cease, and are reduced to their causes, i.e., bulk, figure, and motion of parts. (Locke 1969, 69)

But as Plumwood observes, Locke's explanation of primary and secondary qualities entails:

> more than a distinction: it involves a reduction, for he does not merely mark a difference between qualities which involve a relation to an observer and those which do not, but insists that only one area is real, the other epistemologically reducible and inferior.
>
> […]
>
> All Locke is entitled to claim about secondary qualities on the basis of his arguments is that they are relational, and his denial of reality to them both establishes a paradigm in which relations and dispositions are treated as suspect, as somehow 'not real', and privileges an extraordinarily impoverished 'hard', 'scientific' discourse in which only the attributes of 'solidity, extension, figure and mobility' are countenanced. (1993, 117-18)

Locke believed he could extend, by analogy, the application of this reduction to other spheres of activity in Western societies. The inspiration for his analogy is corpuscular theory.

A corpuscle is defined in the Oxford Concise dictionary as "a minute particle regarded as the basic constituent of matter, light etc." The corpuscular hypothesis is that "all matter is composed of particles and in the material world, all that exists are

particles and the void or empty space in which particles move" (Uzgalis 2000, sec. 2.2, par. 3). In corpuscular theory the world is reducible to matter in motion, in which the matter itself is passive (matter is the uncomplaining 'stuff' of the world that is acted upon).

Plumwood explains the effects of the extension of corpuscularism to the political, social and economic spheres of activity as follows:

> The Lockean division between the 'hard', rational sphere of scientific corpuscularism and the 'soft' sphere of relationship, feeling and dependency … replaces the older Platonic division between the shining realm of eternal forms and the corrupt 'realm of changes' as the site of philosophical privilege. … In the 'primary' public masculinist world of corpuscular contract, of hard nosed reason, hard science, hard politics and hard currency, instrumental efficiency reigns and particles must fend for themselves to survive hard evolutionary and social competition. The contrasting 'soft' exclusions include ethics (flabby sentimentality), beauty and meaningfulness (speculation), as well as the ideals of the private sphere, the home and the feminine, of altruism, values, emotionality, relationship and care. The private sphere receives legitimacy to the extent that it can be contained and instrumentalised, made to serve the primary 'public' and rational order. As secondary to the primary sphere of rational order, the domain of the private and the feminine has no political status in its own right, but can be thought only by being reduced, subsumed under the headship of the primary particle. (1993, 118)

According to a Lockean vision, both scientific knowledge and society develops by limiting the possibilities for connection and relationships between the observer and observed conforming to the analogical dictates of a corpuscular hypothesis and mechanical philosophy.

The instrumentalist and reductionist lens through which Locke was interpreting the social, political and economic order of his time corresponds with the rise of liberalism. Indeed, Locke is considered the progenitor of the political perspective of liberalism (O'Brien 1996). Liberalism "springs from a vision of society as crucially composed of individuals (rather than, for instance, classes), and of their liberty as the primary social goal" (Bullock, Stallybrass & Trombley 1988, 475). Liberal theory

contends that the individual competes with other individuals to satisfy various interests (or may co-operate to satisfy their individual interests).

In liberalism, the individual self is conceived as that which "stands apart from an alien other and denies his own relationship to and dependency on this other" (Plumwood 1993, 142). Prior to Locke, rationality was applied to mind and internal nature (Plato) and mind and external nature (Descartes). Locke introduced a dualistic structure to mind and the social world —perhaps reaching its zenith in British Prime Minister Thatcher's famous remark in 1987 that "there is no such thing as society" (cited in Keays, 1987).[13] This further expansion of the scope of rationality is important because the subject is now an alienated individual as a matter of principle. Plumwood terms this take on the social world as 'egoism', and she sees it as a crucial foil in rationality's instrumentalist intensification.

In egoism there is no real cause for any individual to demonstrate their separateness from particular objects, such as specified natural or social phenomena. It is more the case that a connection and relationship must be demonstrated to a sceptical world, and to make things more difficult, that relationship is only readily demonstrated if it is an instrumental one. Thus if we return to Locke's analogy in Plumwood's analysis, we see that:

> If we divide a person's goals into primary, non-interchangeable ones pursued for their own sake, and secondary ones pursued as contingent and intersubstitutable means to the primary ones, then the thesis of philosophical egoism is that even in the case of enlightened self-interest the welfare of others can figure only in the secondary set, never the first, primary set of ends. The resulting agents are conceived as hyperseparated and self-contained because no internal relations of

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[13] The larger statement that Thatcher made was:

> I think we've been through a period where too many people have been given to understand that if they have a problem, it's the government's job to cope with it. 'I have a problem, I'll get a grant.' 'I'm homeless, the government must house me.' They're casting their problem on society. And, you know, there is no such thing as society. There are individual men and women, and there are families. And no government can do anything except through people, and people must look to themselves first. It's our duty to look after ourselves and then, also to look after our neighbour. People have got the entitlements too much in mind, without the obligations. There's no such thing as entitlement, unless someone has first met an obligation.

> interest or desire bind people to one another, and primary goal sets are exclusive, without overlap. The primary interest set of such a rational agent is assumed to concern only himself. The welfare of others may be considered, but only in ways which treat it as secondary to primary goals. (1993, 144)

Thus, Locke increases the scope of reason beyond that which Descartes imagined. Descartes advocated that the scientist has a professional role in standing apart from nature as the object of his study, but with Locke it becomes possible for individuals to take an alienated attitude to just about any relation they may come to have with things in the world. Hence, as Plumwood further observes:

> In the egoist-instrumentalist model (the master model of self), the self erases the other as part of the ethical domain. The other appears only as a hindrance to or as a resource for the self's own needs, and is defined entirely in relation to its own ends. Thus such a self does not recognise the other as another self, a distinct centre of agency and resistance, whose needs, goals and intrinsic value place ethical limits on the self and must be considered and respected. (1993, 145)

Plumwood's historical analysis of the notion of rationality in Enlightenment thinking demonstrates a crucial shift to the meaning and effects of rationality—to the point where rationality is reconceived as egoism and nature in instrumental terms as a resource for the master.

With Locke's reductivist world-view it is unsurprising that science should align itself with commerce, to the extent that they co-habit the terrain of the public sphere and share in the privileges of assumed primary qualities and rationality. In practical terms relevant to this dissertation, it is to be expected that fisheries science collaborates with industry and the rationalist economy because the conceptual framework of subject/object dualism is normative in the practices of both spheres.

Many scientists portray themselves as engaged in objective, disinterested enquiry where the self is conceived as 'hyperseparated' from the subject. That is, where "sharing and connection [are construed] as a hindrance to knowledge, the object known as alien to the knower, and the knowledge relation as power" (Plumwood 1993, 117). In this construction of subject and object, the scientist is the knowing agent and has the power to attribute meaning to the object. By construing the object

as only having meaning to the extent that science attributes it, the object appears available for annexation, moulded to the ends of reason, and treated as if it has no needs or agency of its own (Plumwood 1993). Plumwood's argument here is also, then, that the subject/object dualism is basic to the commodification of nature.

Practices of fisheries science and management

The separation of the subject from object (or hyperseparation in Plumwood's logic of dualism) is a structure that underpins the models used in conventional fisheries science.

Historically, scientific models of fisheries biology have taken a data-intensive, single-species approach that treats each species of fish as if they exist independently of other communities of fish, invertebrates and an ever-changing physical and chemical environment (Preikshot & Pauly 2005). They do not take into account the complexity of interactions between species and predator-prey relationships or other natural or human-induced factors that may impact upon fish and their habitats such as storms, disease, pollution and climate change (Earle 1995).

These characteristics of single species modelling are displayed in the concept of maximum sustainable yield (MSY) that has been at the core of fisheries science and management for decades. MSY is defined as the greatest tonnage of stock that could be removed from a population annually while still maintaining a constant average size of the population (Rozwadowski 2002). MSY provides fisheries managers with a single-species yield curve from which to predict the total allowable catch for a targeted stock (Wilder 1998). In its practical essence, MSY provides a number located at the apex of the curve to which managers aspire in calculating and regulating catch quotas and maintaining optimum fish production. It is taken in a general sense to mean, "that there is a greatest catch that can be safely taken for a long time" (Cushing 1988, 214).

Earle, a marine biologist and former chief scientist of the National Oceanographic and Atmospheric Association of the United States, describes the underlying rationale for the MSY concept as follows:

> In theory, a related group of animals … normally increases in size to a point where the rate of growth slows through natural limits of food, space, or other factors, eventually reaching a 'final size' that reflects the so-called carrying capacity of the habitat for that particular population. Supposedly, at this stage, a 'steady state' is reached where births are balanced by death. … [T]his hypothetical steady state is referred to as the 'initial' or pre-exploitation stock. When fishing begins, this initial stock is reduced, but if the take is not too great, the population will continue to reproduce, allowing for repeated takes. (1995, 189)

Earle outlines the key assumptions upon which the MSY concept is built as follows:

> That the population of individual species under consideration are of known size and do not mix with other populations of the same species (i.e., are 'self-contained'), that the carrying capacity of the habitat remains stable, that the population when first exploited is, in fact, the peak 'final size,' that natural fluctuations in the population are not large, and that an 'initial stock' has the potential to recover from reduction by fishing. Most important and overlooked is the assumption that the populations being exploited somehow live in isolation, not linked in complex systems that are modified when changes are brought about in *any* species, not just the 'target' species. (1995, 189-90, emphasis in original)

Earle then outlines the serious flaws that exist in relation to the model's assumptions, stating that:

> Never has reliable information on which the above assumptions are based been available prior to exploitation of a population. Nor has adequate knowledge of the life history of any species ever been worked out beforehand to determine whether or not timing, fishing methodology, or other special finesse might be applied to ensure continued health of the fishery. (1995, 189-90)

Given these limitations, Earle notes that MSY fails to account for:

> Mathematically untidy factors such as competition among species for food, disruption of the 'target species' close interaction with other organisms, variables in times of maturation, variable social structures that influence reproductive rates, changes in the habitat because of pollution, climate shifts, shoreline modification, and natural or human-induced stress. (1995, 193)

Earle's analysis of MSY—the way ocean dwellers are studied as if separate from food webs, ecosystems and many other factors that constitute complex ocean systems—highlights how this simplistic concept has been applied to a complex situation. It is consistent with the shift in fisheries science away from ocean based research and biology to mathematical models devised in the laboratory that had few empirical points of contact with the oceans, a trend that intensified in the post-World War II period.[14]

Fisheries scientists celebrated the concept of MSY when it emerged in the post-World War II period because they believed fishing restrictions would now be based "on clear and definite scientific evidence in contrast to the former pattern of regulating in response to pressure groups" (Rozwadowski 2002, 190). MSY quickly became entrenched in most international fisheries agreements on the basis that it can be reliably and accurately predicted. Significantly, it has been adopted as part of the United Nations Convention on the Law of the Sea (UNCLOS) for the management of fisheries—and therefore much of fisheries management worldwide.[15]

But as Earle's analysis demonstrates, in practice fishing quotas based on MSY are not reliable or precise assessments for guiding sustainable levels of fishing. MSY provides for educated guesses at best. The great difficulty associated with predicting maximum sustainable yields due to uncertainty and lack of data has been widely commented upon (see, for example: Fujita, Foran & Zevos 1998; Pitcher 2001; Safina *et al.* 2005; and Wilder 1998).

The overexploitation of fish is a complex issue. The precise causal relationship between fisheries science and its failures to produce reliable knowledge of ocean dwellers does not exist. It must also be stressed that the overexploitation of ocean

[14] Rozwadowski (2002) notes the increased use of mathematical modelling in fisheries science in the post-World War II period. Rogers (1995) notes further that the mathematical approach really came into its own in the 1960s, captured by large-scale industry assumptions. Numerical understanding was critical to setting harvest quotas (Pauley, cited in Fluharty 2000).

[15] Another significant application of MSY is the United States *Sustainable Fisheries Act* of 1996 (Safina *et al.* 2005).

dwellers lies with a complex array of factors—certainly not just those within the control of science. The commercial fishing industry and global demand play major roles. Nevertheless, despite a 50-year history of quantitative predictive theory, fisheries biology is associated with a very poor track record of many and repeated fishery collapses (Pitcher 2001). "Every year" Pitcher further observes, "fishery collapses continue to take fishery scientists by surprise" (2001, 602). Most commercially exploited fish species within the ICES area (the northeast Atlantic and Baltic Sea) are overexploited or exhausted notwithstanding the considerable scientific contribution ICES has made to fisheries management (Bocking 2004).

Yet despite the enormous shortcomings of concepts such as MSY, "science has a reputation for producing knowledge of an altogether different quality from any other methodology; indeed it has been elevated by some of its practitioners to the heights of being the only knowledge worth having" (Simmons 1993, 18). Consequently, Western societies continue to trust—albeit with increasing scepticism—that the empirical bases of fisheries science is a reliable way of producing the 'objective reality' or 'facts' about sustainable levels of fishing.

Conventional fisheries science has been the subject of substantial scientific and environmental debate and criticism. According to Roughgarden (1998), the failures of fisheries science are the result of poor science; fisheries science operates below the technical standards of academic ecology. Moreover, "[t]he classic recipe of good science with good economics has yet to be tested" (Roughgarden 1998, 164).

However, there are a growing number of scientists and others who are questioning the potential of conventional fisheries science to ever predict sustainable levels of fishing with certainty in spite of the increasing complexity of the models, moving from single-species and multi-species models to full-ecosystem models, and the incorporation of the principle of precaution.

For example, while it can be accepted that the concept of MSY has been significantly improved it may be irreparably flawed. Fujita, Foran & Zevos note that the concept of MSY has improved:

> by aiming to maximise average yields over a number of years and by taking natural variation and scientific uncertainty into account. Some attempt is also being made to understand the role of ecological factors such as ocean productivity and predation, so that more accurate assessments of sustainable yield can be made. … [Nonetheless] in most cases … the various factors that control the abundance and distribution of fish populations are not well understood or even studied. (1998, 140)

Lauck *et al.* (1998) support this perspective and argue that increased funding to support further scientific research into the functioning of ecosystems will not provide certainty because the data required validating any such model is unattainable at this point in history. What is more, "[f]ull understanding and predictability of anything as complex (and, we should add, as unobservable) as a marine ecosystem will forever remain a chimera" (Lauck *et al.* 1998, 74). Degnbol (1998, 5) observes that attempts to internalise uncertainties and risk assessment is reaching its limits. Degnbol doubts that the reductivist models of conventional fisheries can deliver adequate results; he writes:

> the assumption that uncertainty can be overcome through refinement of measurement, expansion of models to include even more processes and collection of even more data [is] …, considering the complexity of marine systems, … approaching its limits for both principal and cost reasons. (Degnbol, 1998, 5)

Some scientists are working to sink the fundamental assumption of conventional fisheries science that marine species and ecosystems can be understood with enough accuracy to predict the future of commercially exploited species.

The reflections of scientists such as Degnbol (1998) and Lauck *et al.* (1998) are critical in the task of opening up discussion and contesting the assumptions, practices and objectives of conventional fisheries science. While the assumptions, practices and objectives of conventional fisheries science remain geared toward the ends of industry and global market forces, the science will continue to apply "specialised and highly-instrumentally-directed forms of knowledge whose aim is to maximise outputs, often with devastating results" (Plumwood 2002, 38). Such science will not

account for the "effects on larger self-regulating systems containing many unknowns" (Plumwood 2002, 38).

Marine Protected Area Science

In recent decades the dramatic failures of fisheries science and management have highlighted what an uncertain enterprise it is (Bocking 2004; Lauck *et al*. 1998; Pitcher 2001). The failures have undermined the authority of fisheries science (Bocking 2004). In some quarters, fisheries science is responding to scientific criticism, public attitudes and values, by acknowledging the practical and theoretical limitations to what science can accomplish and focusing on ways of reducing uncertainty (see, for example, Fujita, Foran & Zevos, 1998; Lauck *et al.* 1998; Pitcher 2001). There are many scientific efforts underway to deal with uncertainty. One approach that is now gaining broad acceptance is to set aside MPAs (Agardy *et al*. 2003; Lauck *et al.* 1998; Pitcher 2001).

MPA science provides a contrasting conception of ocean dwellers and their ecosystems to that of conventional fisheries science. MPA science understands oceans as a vast source of biodiversity and containing critical ecological processes that should be protected from human forms of exploitation and degradation. MPA science advocates for the sustainable use of ocean life.[16] MPAs are protected by spatially explicit restrictions and protection and have emerged as a concept that implies conservation of species and communities (Allison, Lubchenco & Carr 1998). The World Conservation Union developed the most commonly used definition of MPAs as "any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment" (Kelleher and Kenchington 1992). The main purposes of MPAs have been described as the maintenance of essential ecological processes and life support systems; to

[16] Although the idea of sustainable use of fish is fundamental to conventional fisheries science, it is undermined by the conceptions of knowledge its draws on (as I have described according to Plumwood's (1993) insights) and through its alignment with industry.

ensure the sustainable utilisation of species and ecosystems; to preserve biotic diversity (Kelleher and Kenchington 1992).

MPAs vary: some are designed as strictly protected areas while others are designed as multiple use areas.[17] Strictly protected areas are generally referred to as marine reserves. Marine reserves are the most protected form of MPAs and are equivalent to the World Conservation Union's management categories 1 (Strict nature reserve) and 2 (Wilderness area). The idea behind marine reserves is to protect ecosystems from all preventable anthropogenic threats and impacts, although clearly some pollutants, pathogens, species and the effects of global warming do not respect boundaries (Norse & Crowder 2005b). Multiple use MPAs allow for a range of activities within the area such as fishing, mining and tourism in conjunction with biological conservation objectives (Stocker & Moore 1999). MPAs often consist of a range of zones including no-take or sanctuary zones.

The concept of protecting marine areas from activities such as fishing has been used by some traditional societies, such as the island nations of Polynesia, Melanesia and Micronesia, for centuries (Committee on the Evaluation, Design, and Monitoring of Marine Reserves and Protected Areas in the United States 2001). The protection of marine areas by traditional communities is often in relation to religious taboos or for conservation purposes if an area is judged to have been overfished or serves as a breeding ground (Colding & Folke 2001; Johannes 1978). With respect to conventional fisheries management:

> Beverton and Holt (1957) provided the first formal description of the use of closed areas in fisheries management. This work was in part inspired by the increase in fish stocks observed in the North Sea after World War II when the fishing grounds were inaccessible because of the presence of mine fields. Since then, fishery managers have used closed areas to allow recovery of overfished stocks, to shelter

[17] The World Conservation Union lists seven categories of MPAs: 1. Strict nature reserve; 2. Wilderness area; 3. National park; 4. Natural monument; 5. Habitat/species management area; 6. Protected Landscape/seascape; 7. Managed resource protected area. These categories are indicative of the reasons for establishing protection of the area and stipulate the actions permitted within the area. (Department of the Environment and Heritage 2005)

> young fish in nursery grounds, to protect spawning and migrating fish in vulnerable habitats, and to deny access to areas where fish or shellfish are contaminated by pollutants or toxins. (Committee on the Evaluation, Design, and Monitoring of Marine Reserves and Protected Areas in the United States 2001, 145)

The main impetus for the formal development MPAs did not come until well into the second half of the twentieth century. By mid-century it was becoming apparent that methods of protecting marine environments from the heavy exploitation of fishing and other human activities were required (Committee on the Evaluation, Design, and Monitoring of Marine Reserves and Protected Areas in the United States 2001). The concept of MPAs has since been developed formally through a range of international conferences. That work has supplied the legal basis for the 1982 LOS Convention to establish MPAs beyond territorial seas in (Committee on the Evaluation, Design, and Monitoring of Marine Reserves and Protected Areas in the United States 2001). A variety of MPAs have been established around the globe in diverse biological, physical, cultural, political and institutional settings (Christie *et al*. 2003). [18]

[18] A brief overview of some of the key developments of the concept of MPAs is given here:

In 1962, the First World Conference on National Parks specifically addressed the idea of MPAs for conservation purposes. Between 1973-1977, the Third United Nations Conference of the Law of the Sea (UNCLOS III) supplied the legal basis for the establishment of MPAs beyond territorial seas (Committee on the Evaluation, Design, and Monitoring of Marine Reserves and Protected Areas in the United States 2001). In 1975, the IUCN held a conference in Tokyo on MPAs and called for the establishment of MPAs representative of the world's marine ecosystems.

A follow up meeting to the World Conference on National Parks was held in 1982, which sought inclusion of marine, coastal and freshwater sites into the worldwide network of protected areas (Gubbay 1995). A significant outcome of this meeting was the publication by IUCN (1984), *Marine and Coastal Protected Areas: A Guide for Planners and Managers*. The Fourth World Wilderness Congress (1987-1988) developed a policy framework for marine conservation and defined 'marine protected area'. In 1994 the implementation of the United Nations Convention on the Law of the Sea (UNCLOS) significantly increased the obligations of nations to conserve and produce biodiversity (an UNCLOS objective) through MPAs. (Committee on the Evaluation, Design, and Monitoring of Marine Reserves and Protected Areas in the United States 2001)

In 1995 the Great Barrier Reef Marine Park Authority, the World Bank and the IUCN published *A Global Representative System of Marine Protected Areas*, which listed existing MPAs and located the priority areas for new ones. In 1999, the IUCN published *Guidelines for Marine Protected Areas* documenting the successful approaches to establishing and

Marine reserves

The concept of oceans in MPA science, as a vast source of biodiversity and vital ecological processes that should be protected from human forms of exploitation and degradation to be used sustainably, is far more conducive to the concerns of this dissertation with just existences for oceans than conventional fisheries science. MPA science is not delimited by a close connection to industry and a resource management agenda but fashioned from a different set of concerns and values—primarily the conservation of ocean dwellers and ecosystems and their sustainable use. As there are many complex social, political and economic issues involved in the design, site selection, implementation and management of MPAs, it can also be argued that MPA science employs a more inclusive approach to the production of knowledge than fisheries science. MPAs have a range of objectives and different meanings in different contexts that require much flexibility in the application of objectives and size targets for MPAs (Agardy *et al.* 2003). Political, economic and social acceptance of MPAs is fundamental to their success, requiring the negotiation of a range of interests within local communities, user groups and management authorities.

There is, however, a protective and authoritarian approach afoot to defining oceans and MPAs (Agardy *et al.* 2003; Brechin *et al.* 2002). There is a growing scientific consensus in the United States and other developed nations that only the full protection offered by marine reserves, as opposed to multiple use MPAs, will meet conservation goals.[19] Proponents of marine reserves that prioritise marine biodiversity objectives tend to favour 'top-down' decision making and

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managing MPAs. (Committee on the Evaluation, Design, and Monitoring of Marine Reserves and Protected Areas in the United States 2001)

In 2003, at the Fifth World Parks Congress sponsored by the IUCN, delegates recommended the establishment of national networks of marine no-take areas with a target of 20-30 per cent of habitats by 2012 and called for the establishment of five high seas MPAs by 2008. (IUCN 2003)

[19] This is not to say that there is in fact consensus. Indeed, as Jones (2006) points out, there are many scientists who challenge the case for NTZs on a range of grounds.

implementation of marine reserves rather than 'bottom-up', local decision making processes (Jones 2006). There is also growing scientific consensus that a standard target for marine reserves—a minimum of 20 per cent of an ecosystem—must be met to effectively protect ecosystems and natural resources. The 20 per cent target has been adopted by the United States Coral Reef Task Force and in other countries including Australia, Canada, Bahamas, Philippines and Galapagos Islands (Agardy *et al.* 2003).

Prominent conservation institutions support this trajectory toward marine reserves. In 2003 delegates to the Fifth World Parks Congress, sponsored by the World Conservation Union, recommended the establishment of national networks of marine NTZs with a target of 20-30 per cent of habitats by 2012 (IUCN 2003). Greenpeace International (2006) calls for a target area of 40 per cent.

Marine reserves and networks of marine reserves that prohibit fishing are often portrayed from within the scientific community as the saviour of marine biodiversity and ecosystems because of the perceived conservation benefits. Preikshot & Pauly, for example, suggest marine reserves offer "revolutionary" conservation benefits to fisheries and biodiversity (2005, 306). Pauly & Maclean describe marine reserves as an "ecosystem tool par excellence" by providing conservation benefits such as "ecosystem restoration" beyond easing fishing pressure (2003, 99). As a further indication of the growing consensus among scientists about the need for marine reserves, scientists have published consensus statements in support of the use of marine reserves and MPAs for the conservation of marine environments. In 2001, for example, the American Association for the Advancement of Science (AAAS) published a consensus statement signed by 161 marine scientists about the importance of marine reserves as a management tool to conserve marine biodiversity and fisheries in a wide variety of settings (AAAS 2001).

Agardy *et al.* state that, "[b]ecause specific circumstances vary widely around the world, no model for MPA management objectives will be universally applicable" (2003, 357). Agardy *et al.* maintain that data used to make the 20 per cent target recommendation for marine reserves is "extrapolated from very specific localized studies of particular fisheries within particular habitats—not from representative

community ecology data from a wide range of habitat types" (2003, 359). The ability to predict the usefulness and effects of NTZs in general is uncertain "as controlled and replicated experiments are impossible to perform in such large scale systems" (Ludwig *et al*. 1993, cited in Jones 2006, 146). Jones (2006) elaborates upon a critique of MPA science that attempts to reach certainty and consensus about the effects of NTZs arguing they will fail because of the many unknowns and variability in complex marine ecosystems. Jones writes:

> The quest for such certainty and consensus in complex marine ecosystems is inappropriate, as it assumes that we are dealing with a simple Newtoninan system in which species dynamics and cause-effect relationships can be determined. It could therefore be argued that attempts to predict and monitor the effects of NTZs are falling into the same 'reductive trap' as fisheries models, in that they are based on the same Newtonian rationale. … The application of this rationale to NTZs is thus arguably perpetuating the reductive approach that led to the fish stock and marine ecosystem declines, which are a key basis for calls for NTZs. (2006, 146)

Agardy *et al.* maintain that "a single rule-of-thumb figure for all situations run the risk of selecting meaningless spatial threshold targets" that are independent of the ecological and biological factors and circumstances particular to habitats and ecosystems (2003, 360-1).

Of course, cultural and socio-economic factors specific to each MPA also need to be taken into account. Christie *et al*. (2003) point out that while strict controls such as those found in marine reserves may be defined as a success because of improving biological criteria, they are often failures socially. Agardy *et al.* (2003) observe that nature reserves (marine and terrestrial) are perceived in much of the developing world as elitist. The MPA strategy for protecting certain marine areas to create safe havens for nature benefit tourists who can purchase access but provide little or no benefits for local residents. Trist's (1999) research findings about the commodification of the Caribbean marine environment and the Soufriere Marine Management Area (SMMA) is a case in point. The establishment of the SMMA has been steeped in conflict between local residents, the tourism industry and conservationists. Local fishermen perceive the marine reserves within the SMMA, where scuba diving can take place but fishing cannot, as "tourist reserves" (Trist

1999, 385). Christie *et al*. (2003) argue further that in the long term, social failures will lead to the unravelling of biological benefits. Indeed, it is this dynamic that contributes to MPA failure, which is approaching 90 per cent in some countries (Christie *et al*. 2003).

Agardy *et al.* (2003) are concerned that MPAs should preserve both biodiversity and the social character of marine environments. They write:

> [f]irst and foremost, MPA practitioners must recognize that the systems they are managing and studying include people and occasionally unique cultures. … Cultural parameters are especially important to consider, and can be protected through MPAs, in areas having significant populations of indigenous peoples with traditional connections to the marine environment. (2003, 357)

Social oceans

Jones (2006) suggests the debate about the usefulness of marine reserves in protecting marine biodiversity, ecosystems and reviving depleted commercially exploited fish species can be thought of as a reflection of different underlying ethical perspectives. Jones writes that "NTZ proponents [are arguably] more influenced by preservationist and ecocentric perspectives, and multiple-use MPA proponents [are] more influenced by the utilitarian resource conservation perspective" (2006, 146). Even if we accept that to some extent this is a generalisation made for the purpose of drawing a broad distinction between NTZ and multiple use MPA proponents, I am critical of the narrow characterisation of the values of multiple use MPA proponents in terms of utilitarianism. While it may be the case that a utilitarian resource conservation perspective influences some interest groups (the fishing industry for instance) we should be careful not to *limit* the support for multiple use MPAs to advocates of a narrow utilitarian ethic. Some indigenous societies, for example, may favour multiple use MPAs over NTZs because they value oceans, in part at least, for utilitarian purposes. But in making this observation about the 'utilitarian' aspect of indigenous peoples' relationship to oceans, we should be careful to make an important distinction. That is to say, for certain Australian Aboriginal and Torres Strait Islander people material dependence upon oceans is entwined with a complex

set of cultural and spiritual values and responsibilities in relation to oceans (as I have described in Chapter 2). However, a Western utilitarian resource conservation perspective, which has a strong basis in the work of American forester, Gifford Pinchot (1865-1946), has a specific cultural context and mode of application.

Pinchot claims, "there are just two things on this material earth—people and natural resources" (1947, cited in Callicott 1992, 300). In his conservation ethic, Pinchot tied together:

> the nineteenth century scientific worldview in which nature is portrayed as "collections of bits of matter, assembled into a hierarchy of externally related chemical and organismic aggregates" with the "efficient use of natural resources." (Callicott 1992, 300)

Pinchot's resource conservation ethic upholds that non-human nature is only valuable to the extent that it is useful to human interests of survival and well being (Bocking 2001). According to Callicott (1992) and Bohnsack (2002), the resource conservation ethic dominates most government and academic institutions contemporarily and is characterised by the belief that the environment is foremost a commodity for human uses.

Pinchot's perspective resonates with the earlier discussion of the human/nature dualism where the connections between humans and nature are systematically severed and human relations to nature reduced to instrumentalism. The fundamental understanding of human dependence on oceans, indeed, that the needs and interests of humans are completely caught up with the needs and interests of the oceans, is denied. In this way, humans fail to see themselves as part of oceans.

This view contrasts markedly with the connections to oceans of Australian indigenous coastal groups. The Yolngu people of northeast Arnhem Land, for example, see their seas as imbued with spiritual power: "[t]heir creator beings gave Yolngu people rights and responsibilities for the beaches, reefs, seabed, sea life and waters adjoining their lands" (Sharp 2002, 11). As Sharp elaborates:

> [The Yolngu's] entitlement to this saltwater finds expression in a profound and detailed knowledge of its geography: the reefs, the channels, the currents. Yolngu

> know the habits of the sea turtle and fish, their life cycles and, importantly for Yolngu, the cycles of seasons and tides. This knowledge is stored in memory, in images, in performance, in song, in sacred regalia, in objects they make. It is also 'written' on the salt waters themselves, so that for the Yolngu the reefs and waters, the channels and passages, the rocks and beaches, are like vast tapestries or atlases.
>
> Here lies the heart of Yolngu 'belonging': a two-way interchange between the Yolngu and their seas, where the people become part of the sea world and the elements of the sea world become part of them. This two-sided belonging is a domain of intense feeling and emotion. (2002, 11-12)

For Australian saltwater people:

> [m]arine parks are an additional layer of legislation and bureaucracy imposed upon the sea country. … With appropriate legislation, policy and programs, MPAs have the potential to recognise and protect indigenous peoples' maritime interests. In the absence of such recognition, MPAs have the potential to adversely affect indigenous communities. (Smyth 1996, 2)

Certainly MPAs are sites that could serve the idea that social and ecological justice is intimately connected, where human and ecological flourishing is tied up together—as discussed by ecological feminist, Cuomo (1998). NTZs are not conducive to such flourishing where they impact upon the traditional rights of Indigenous communities.

A final point to note is that in pursuing the goal of marine reserves over other forms of MPAs the effect is to narrowly reduce oceans to their biological dimensions and exclude people and the unique cultures that are sometimes connected to marine reserves. In linking back to the discussion of conceptions of oceans as sublime wilderness in Chapter 4, I suggest we must give careful consideration to conceiving ocean environments exclusively or even primarily on the basis of biological criteria because of the habits that flow from such thinking. Conceptualising marine environments as uninhabited and entirely 'natural' reinforces a dualistic relation between humans and the natural world, where humans are perceived as separate from the pristine natural world. It also "forgives ourselves the homes we actually inhabit" (Cronon 1996, 81). It is worth contemplating the question: will marine reserves be

perceived in some quarters as a license to exploit and degrade ocean ecosystems outside of marine reserves more intensively?

Conclusion

Scientific theories and practices, like other aspects of human interaction with ocean environments, have a relationship with particular cultural beliefs and values. I have given sustained attention to the relationship expressed in conventional fisheries science because of its power and propensity for the over-exploitation of fisheries and their ecosystems. I have argued that the dominance of short-term economic goals of industry in conjunction with fisheries science imposes a view of oceans as factories. The dominance of fishing industry goals in relation to the oceans reduces the possibilities that other visions for the oceans (environmental, social and cultural) can be adequately expressed. Moreover, the relationship expressed in conventional fisheries science between science and its objects of study is monological in character, in the sense that it only pays attention to the agents of so-called rationality (humans), based on a dualistic understanding that humans are separate from and independent of the oceans.

That fisheries science is tied up with certain values and beliefs is an important matter to address because there is great store attached to the idea that science produces objective knowledge. Ocean matters are widely perceived as scientific concerns: Government institutions, industry, environmentalists and other interest groups, the media and the public draw heavily on scientific advice to interpret marine environmental issues. Scientific assessments are used in shaping regulatory decisions and other protection initiatives. Thus, science has a profound effect on the way we think of, and interact with, oceans in Western societies.

In recent decades, the failures of fisheries science have undermined claims to its authority to guide the sustainable human exploitation of oceans. Rather, uncertainty in the capacity of science to develop theories and make accurate predictions about

complex and dynamic ocean environments has come to the fore.[20] I have contextualised MPA science as a response to this uncertainty.

MPA science employs a more inclusive approach to the production of knowledge than fisheries science because it must account for political, economic and social factors. However, in discussing MPA science, I draw attention to the current trajectory toward marine reserves and the perpetual propensity to define oceans in scientific terms. This makes oceans susceptible to conceptions and relations that place humans outside of them.

This chapter has, then, continued the focus on that part of my thesis concerned with the major Western discourses that structure contemporary human-ocean relations. Fisheries science and MPA science demonstrate how the most widely accepted variants of ocean-related science constrain our understandings of, and possibilities for, interacting with oceans in Western culture.

The shortfalls of science point to the need to open up assessment, debate and discussion about oceans through processes that allow a broader range of communities, human and non-human, to contribute. Hence, my dissertation continues to sail onward guided by the thesis that improved knowledge about oceans will be generated, and subsequently successfully applied, if greater inclusivity of perspectives about the oceans are structured into policy debates.

Moreover, a space must be made for oceans themselves. We need a democratic process that provides for the agency of oceans, so that oceans are not defined by science from the outset. Rather, questions about what oceans are—resources, for example—can be contested. In this way, knowledge can better be connected to actions that advance social and natural well being.

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[20] I wish to note here as a case in point that the research I referred to in the Introduction to this chapter by Worm & Meyers (2003)—that 90 per cent of the large predatory fish found globally, including tuna, swordfish, sharks, snapper and grouper, have been removed from oceans by industrialised fishing in the past fifty years—is contested. For example, Sibert *et al*. (2006) found that the drastic decline in large predatory fish estimated by Worm & Meyers (2003) to be based on incomplete and improperly lumped data. Sibert *et al*. (2006) conclude there is substantial but not catastrophic impacts on these top-level predators.

The critique of ocean science presented in this Chapter is not intended to argue against all scientific understandings of the oceans or scientific solutions to the vast problems it faces. I suggest science as it is actually practised, not in its idealised form, is critical to developing less exploitative human-ocean relations, and this idea is a major part of the discussion of the final Chapter of this dissertation.

Chapter 6

Political Ecology and Oceans

This dissertation is concerned with problems caused by the hegemonic authority of Western rationalist representations of oceans in law, science and the philosophy of the sublime, which has the effect of crowding-out different ocean views and human-ocean relations. This Chapter is intended as a further intervention to this hegemony. I delineate an ethical political approach for negotiating human-ocean relations that allows for a diversity of views (human and non-human) first through a critique of forms of ocean ethics and politics that separate nature from culture, and second through a discussion of what some theorists have termed 'a performative' notion of nature.

The approach for which I advocate in this Chapter is an inclusive democratic process that seeks cooperative solutions to shared problems. At the heart of my idea about an inclusive democratic process is the recognition that non-humans "possess an interest in their own survival" (Eckersley 2002, 64) and that there are ways to be inclusive of non-humans. Latour (2004) provides a useful theoretical procedure in this regard that moves us toward consensus and cooperation in the pursuit of marine environmental policy through multifaceted human and non-human engagement. Latour's procedure allows for what Eckersley (2002) would see as a healthy constitutive tension between those focused on mediating a plurality of moral values for practical democratic outcomes as well as critical enquiry into, and reconfiguring of, prevailing Western human-ocean relations. My conception of political ecology

fits with this essentially democratic process for resolving ecological questions about what is to be done.

I begin this chapter by outlining the problems with essentialist and constructionist notions of nature, arguing that we need to develop a more discerning concept of oceans that is not reducible to human objectivity or human subjectivity, nature or culture. I argue we need a theory that imagines oceans as a co-construction between humans and non-humans. In this task, I draw on particular ecological feminist and performative theories of nature that acknowledge the instability of the categories of 'nature' and 'society' and 'human' and stress the independence and agency of non-human nature.

This Chapter includes a review of a range of approaches to ocean ethics and politics. These approaches all have their strengths. However, my basic criticism of these approaches is that the meaning, value and ideas are interpreted through a lens that focuses on what it means for humans. They do not consider the moral worth of the self-directedness of non-human oceanic life (Cuomo 1998) or how democratic representation might be widened to acknowledge non-humans as agents.

In the final section of this Chapter I present Latour's (2004) collective procedure for facilitating political epistemology. Political epistemology is a term I use to conceptualise a process characterised by "reciprocal knowledge making" (Fawcett 2000, 1367) where all assertions of knowledge about the oceans are assessed openly and transparently. I concur with Fawcett when she writes that "[t]he choices we make and the actions we take on any environmental problem depend on the quality and reflexivity of our knowledge making in that area" (2000, 1367). In the course of this Chapter I will explain how knowledge can be generated democratically and rigorously, yet constantly open to challenge and change.

Oceans are political (how should we speak about oceans?)

Environmental and social theorists discuss at length the ways that discourses about nature have conceptual and material consequences. A good deal of feminist and

ecological feminist philosophy argues that Western culture has treated the relations between culture and nature as a dualism and in so doing defined nature as the subordinate other (see, for example: Cuomo 1998; Haraway 1991a; Plumwood 1993, 2002; Warren 1994). Plumwood (1993) provides a detailed analysis of dualism as structuring a range of oppressive relations between humans and nature, male and female, subject and object, master and slave. With respect to the nature/culture dualism Plumwood writes:

> the category of nature is a field of multiple exclusion and control, not only of non-humans but of various groups of humans and aspects of human life which are cast as nature. … To be defined as 'nature' … is to be defined as passive, non-agent and non-subject, as the 'environment' or invisible back-ground conditions against which the 'foreground' achievements of reason or culture … take place. (1993, 4) [1]

Social and philosophical inquiry into the hierarchical relations of dualism have alerted us to the dangers of essentialist conceptions of nature and of 'de-naturalising' discourse in their propensity to reinforce rather than destabilise the nature/culture dualism (see for example: Cuomo 1998; Davion 1994; Hallen 2000; Plumwood 1993, 2001; Soper 1995). Essentialist conceptions of nature tend to reinforce the dualistic conception of nature and culture by legitimating the "apparent self-evidence of nature and the physical environment as pregiven things with certain fixed properties that exist independently of and apart from social practices" (Demerit 2001, 24). Essentialist conceptions of nature risk ruling out "any social focus, any questioning or resistance" (Plumwood 2001, 6). Plumwood (2001, 15-16) points out that in the discourse of 'conservative naturalism', for example, universal nature can be invoked to characterise oppressive relations as natural and inevitable rather contingent and changeable. Describing something as 'nature' deceptively under-acknowledges "the human activities and social relations involved and the extent of prior ownership or human construction" (Plumwood 2001, 16). [2]

[1] We can recall the discussion of Plumwood's analysis of dualism in Chapter 5.

[2] It can be argued, nonetheless, that 'nature essentialism' is useful strategically as a form of resistance (Carlassare 1994; Fuss 1994; Sandoval 1995; Sturgeon 1997). According to

Alternatively, 'de-naturalising' discourse that proposes humans construct nature carries a risk of hiding or denying the agency of non-human nature and the ecological dependence of humans upon nature (Plumwood 2001). A great deal of social constructivist theorising does not, of course, dispense with the independence of nature but, importantly, reminds us of the social character of nature—an understanding Plumwood is attuned to. Nonetheless, what Plumwood wants to promote is a more concise, careful, politically strategic approach in developing theories about the social character of nature. Thus, she elaborates on her critique of the construction of nature as follows:

> Philosophical concepts and terminology need to be sensitive to our present problems and context, and in this context it seems misleading at best to talk about humans 'constructing nature' in any general way. To talk of 'construction' is in many contexts to imply that what is often mere influence or impact is actually control, to suggest that because we humans have an (often blind) impact or effect on the biosphere we can produce the outcomes we want. It is also to suggest that we can reconstruct it, when we cannot even reconstruct a bird's feather. [The term constructivism] can involve serious overestimations of human contributions in a range of cases, and invite slippery slides into implications of control that are very dangerous in the present circumstances. (Plumwood 2001, 19)

Plumwood (2001) is similarly critical of images of the 'production of nature' that attempt to supplant the construction of nature. This criticism extends to theorists such as Smith, for example, who theorises that to view nature as a 'product' will defy, "the conventional, sacrosanct separation of nature and society" (1984, xiv). Smith is "inspired by anti-essentialist feminist critiques of the ideological equation of women and nature" (1996, 50), and argues from within this frame that the 'production of nature' idea:

> gets beyond the powerful fetishism of a 'nature-in-itself' to focus on the social relationship with nature. It takes seriously the constructedness of nature at the turn of the twenty-first century, but it does so in such a way that it incorporates material

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Carlassare (1994), examining the specific ways and places nature essentialism is used and for what purposes is a necessary political and epistemological task.

> with conceptual construction. The production of nature is as much a cultural as it is an economic process and should be understood in the broadest sense of transforming received natures. (1996, 50)

According to Smith, the image of 'the production of nature' is justified under capitalism because "human society has put itself at the centre of nature" (1984, xiv), so much so that "nature bears the indelible trace of labor" (1996, 52).

For Plumwood, however, the image of the production of nature is "overgeneralised, one-sided and monolithic in its recognition of agency" (2001, 19). Humans are placed on the active side of the dualism and the non-human on the passive side, rather than allowing for the possibility of equal and mutual distribution of activity and passivity (Plumwood 2001). For Plumwood (2001), one-sided narratives of humans producing nature do not allow for the possibility of humans and nature co-producing. Plumwood (2001, 20) maintains:

> The productivist's hyperbolized concept that humans produce alternative natures could be restated in more modest and less misleading terms as the idea that our actions can contribute (often unwittingly) to bringing about alternative forms or states of nature. … As a general model for human relations to nature, the production metaphor vastly overstates human causal contributions.

In re-thinking nature in non-dualist terms, Plumwood's critique of boundary breakdown between the social and natural is instructive. She points out that boundary breakdowns that subsume nature into the social "imply lack of respect, and are implicated in projects of colonising and erasing the other" (Plumwood 2001, 22).

Plumwood calls for sensitivity to context, which requires us to critically examine situations and instances on a case-by-case basis. In some instances we will need to highlight the social character of nature while in others nature's independence and agency. We need not employ images of construction or production of nature but can develop "pluralistic, context-sensitive concepts of influence, interaction and mutuality" (2001, 19). In this way, human actions will be more compatible with a project that seeks to recognise nature as a sphere of agency and co-agency.

Many post-positivist thinkers call for more discriminating deployments of the concept of nature.[3] Haraway (1985) proposed over twenty years ago a fundamentally unstable concept of nature, in which the boundaries between nature and culture, human and non-human, subject and object are disrupted and the relations between them surprising and unpredictable. Haraway utilised the image of a cyborg (cybernetic organism), a hybrid of machine and organism. In later work, Haraway (1991a; 1991b; in Penley and Ross 1991) develops an image of nature as agent with the metaphor of Coyote Trickster as embodied in South West Native American accounts. Haraway's project was to develop "a concept of agency that opens up possibilities for figuring relationality within social worlds where actors fit oddly, at best, into previous *taxa* of the human, the natural, or the constructed" (1991b, 3). The Coyote Trickster—a part of nature but also an active influence on its environment—defies the active/passive split, where activity or agency is traditionally associated with human culture and nature perceived as passive. By imagining nature as "made, but not entirely by humans" we can conceive of it as "a co-construction among humans and non-humans" (Haraway 1992, 313). In this vision, nature resists human representation that is absolute, total or comprehensive (Sandilands 1999). "The non-humans have their own way of participating in this 'co-construction.' " (Alaimo 1994, 146). Indeed, "for our unlike partners, well, the action is 'different,' perhaps 'negative' from our linguistic point of view, but crucial to the generativity of the collective. It is the empty space, the undecidability, the wiliness of other actors, the 'negativity' " (Haraway 1992, 313).

Recently, the task of envisaging nature as distinct from culture yet indissolubly mixed-in with it has been taken up in social theories of performance. The notion of nature performed is drawn from non-representational theories such as actor-network theory (Szerszynski, Heim & Waterton 2003; Lorimer 2005). Nature as performance is useful for thinking about humans and non-humans as actors and agents, and "nature-human relations in terms not of static structures and rules but *activity*"

[3] See for example: Alaimo 1994; Cheney 1994; Cuomo 1998; Haraway in Penley & Ross 1991, Haraway 1991b, 1997; Latour 2004; Sandilands 1999; Sturgeon 1997; Whatmore 2001.

(Szerszynski, Heim & Waterton 2003, 1, emphasis in original). Of particular relevance to this dissertation is the idea of performance of nature through public participation supported by Latour's (2004) model of the collective process. Latour's ideas about collective processes facilitate practices that bring a range of knowledges to bear upon specified problems in place of processes that are constrained by rational decision-making primarily informed by scientific conceptions of knowledge.

Latour's ideas are discussed in more detail below but at the present juncture I wish to highlight, in concluding this section of discussion, that the performance of nature can make "many things we think of as human activities … begin to look more like mutual improvisations that highlight the agency of the non-human" (Szerszynski, Heim & Waterton 2003, 4). As noted, this dimension of the relationship between humans and nature has long been highlighted in feminist and ecological feminist thinking and is a theme more recently being developed in performance theories. In performance theories, we can see that with mutual improvisations of human and non-human actors, "one loses a sense of nature as pre-figured and merely being 'played out'; instead, the performance of nature appears as a process open to improvisation, creativity and emergence" (Szerszynski, Heim & Waterton 2003, 4). Through our engagement with oceans, oceans and cultures are simultaneously revealed and co-created.

An overview of approaches to ocean ethics and politics

A Wondering Self

Highly influential marine biologist, Rachel Carson, was one of the first people to communicate to a wide audience the ocean environment's complexity in a sustained and impassioned manner. In her classic texts, *The Sea Around Us* **(**first published in 1950) and *The Edge of the Sea* (first published in 1955), Carson conveys a love and sense of wonder for the marine environment (Carson, 1989; 1999). In *The Sea Around Us*, as Zwinger writes, Carson charms us into "learning about the wonders of the ocean, then into a deep awareness of not only their health but how it affects the whole natural world. Through sharing Carson's research, we become acutely

sensitive to the interdependence of life" (1989, xxvi). Carson's concerns about the way oceans are used, particularly as a dumping ground for radioactive waste, was a motivating factor for her sharing of knowledge about the oceans.

Carson did not outline an ethical system for human-ocean relations beyond encouraging wonder and appreciation of oceans through scientific discovery, observation and understanding. Carson did, however, make an important contribution from another perspective. Moore argues that Carson's sense of wonder is a moral virtue and possibly "the keystone virtue of an environmental ethic" (2005, 267). I suggest that some aspects of Carson's 'sense of wonder' share similarities with Hitt's (2000) reconfigured sublime (discussed in Chapter 4). For instance, Moore suggests that Carson's writing invites the reader to focus on a feeling for the oceans and ocean dwelling life that is defined by "overpowering attraction", "honest awe", "delight", "profound otherness beyond the boundaries of human experience" and "ultimate mystery" (2005, 267-68). Furthermore, according to Moore "a sense of wonder impels us to act respectfully in the world" and "shows us our responsibilities to care for the objects of wonder" (2005, 271).

For Carson it is feeling that is most important in fostering wonder and appreciation. In *The Sense of Wonder* (1965) Carson explains that knowing the names of plants and animals is only half as important as feeling in nurturing a sense of wonder in children. It is the combined effects of scientific facts and feeling that will translate into the types of wisdom and knowledges that we need in these times (Moore 2005).

Subsequent to Carson's efforts, a number of approaches have been put forward as starting points for ethical relations with oceans.[4]

[4] Although ethical and political approaches to the ocean environment are limited in number and scope, the approaches I examine here are by no means all of them. See, for example, Dallmeyer (2005) and Wilder (1998).

An Expanded Self

Callicott (1991; 1992) sets out an ethical position to guide the management of fisheries and oceans drawing on Aldo Leopold's (1968) 'Land Ethic'. Scientists, Safina (1997; 2003; 2005) and Bohnsack (2002), have subsequently followed suit. Leopold's (1968) Land Ethic calls for expanding the scope of moral concern and responsibility beyond human communities to the natural world. As Leopold explains: "[t]he land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land" (1968, 203). According to Leopold, "[a] land ethic changes the role of Homo sapiens from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow-members, and also respect for the community as such" (1968, 203).

In putting the Land Ethic into practice, Leopold's fundamental rule is that an action "is right when it tends to preserve the integrity, the stability, and beauty of the biotic community. It is wrong when it tends otherwise" (Leopold 1968, 225). Knowledge of what are both ethically and aesthetically right has its basis in laws derived from scientific ecology (that is, the study of nature, and specifically the interaction of organisms with their living and non-living environment). Merchant (1992) has observed about the Land Ethic that the survival of all living things, as components of healthy ecosystems, is of primary importance.

Although Leopold called his environmental ethic the Land Ethic, Callicott argues it is really about "global ecology" and involves "the planet's oceans no less than its land masses—the more so because the oceans cover some seven-tenths of the Earth's surface" (1992, 306). Extending the Land Ethic to the ocean environment or as Safina suggests, complementing the Land Ethic with a Sea Ethic, acknowledges that humans are "within the ocean's life-sustaining envelope" (Safina 2003, 3).

Safina develops his sense of connection between humans and oceans with a notion of kinship and attempts to overcome the problem of human alienation from ocean environments by emphasising "a new self-concept" based on extending to "sea creatures membership in *our own* extended family of life" (2005, 4, my emphasis).

In so doing, important questions arise about the character of 'self', 'kinship', 'extended family' and 'community', and who has the power within these particular conceptions. Safina (1997; 2003; 2005) does not elaborate on the issues that form around his account of a Sea Ethic.

An appropriate account of self in its relation with non-humans is central to environmental ethics, particularly from ecological feminist and deep ecology perspectives. With respect to Safina's project of extending to sea creatures membership in our family of life, philosophers such as Plumwood have warned of the potential dangers in widening the scope of moral considerability through an "expanded Self strategy" (1993, 180). An expanded Self strategy is where we expand our concept of self to include all those that we empathise with, stressing commonalities between humans and non-humans and minimising differences (Plumwood 1993). Such approaches in environmental ethics "might initially seem to be just a dramatic but harmless way of saying that humans empathise with nature" (Plumwood 1993, 180). It may also present our relationships with non-humans as egalitarian (Weston 2004). However, as Weston observes:

> the underlying dynamic … is profoundly human-centred. … Since 'the expanding circle' expands by finding commonalities with what lies within the already-accepted circle, the self and its essential character—and, a little farther out, the *human* and *its* essential character—still sit as ultimate arbiter. The suffering of others, human and non-human, for example, comes to count in the utilitarian argument because I can connect it to my own, because I recognize that suffering is bad for me and therefore, unable to draw any morally relevant distinction between me and a wider range of others, I must conclude that it is equally bad for them. All commonality refers back to the already-given center, and in fact it is guaranteed that whatever commonality drives any given 'expanded' ethics, I have got to have it—indeed *par excellence*. (Weston 2004, 3, emphasis in original)

Widening the scope of moral considerability to include sea creatures through an extension of our own concepts of self, family or community, as Safina suggests, could amount to an extension of egoism or self-interest that erases the differences between sea creatures and ourselves and the independence of sea creatures from ourselves (which, of course, has implications for attending appropriately to the needs

of sea creatures). In any ethical and political relations with oceans we devise, I concur with Eckersley when she writes that we must "find ways of acknowledging otherness without distorting or assimilating that otherness in the process" (2002, 65).

Another difficulty with developing a sea ethic based on the Land Ethic is the reliance upon the laws of ecology for its practical application as if ecological science provides objective criteria for such decision-making. Callicott writes, for instance, that to maintain and restore ecological integrity:

> The scientific challenge is to specify clear, objective criteria of ecological integrity. As in medicine, so in ecology, clear, objective criteria of biotic health should be specifiable in principle. The ethical challenge is to dispel all doubt that ecological integrity, no less than organic health, is a normative ideal—that it is a matter of value as well as fact, of goodness as well as truth. (1991, 306)

Callicott has subsequently revised and clarified his view of science acknowledging that science itself is not objective and that the scientific cornerstones of Leopold's Land Ethic are conceptual foundations of a particular worldview rather than assertions of scientific objectivity (Callicott 1996, 2002a, 2002b; Mumford and Callicott 2003).

Bohnsack (2002), however, endorses the Land Ethic on account of its scientific basis in the laws of ecology. We can recall the critique of the ideology of science—the view that scientific method is disinterested, objective, and value free—from Chapter 5. Suffice to say here that the last few decades have brought a surge of criticism against the idea of universal and value free science in its pursuit of truth. Ecological science is shaped by the value assumptions ecologists make about environments (Sandilands 1999; Zabinski 1997) and can only confer "approximate provisional understandings of so-called real Nature" (Eckersley 2002, 64). This is reason enough to proceed with caution and humility, and provides support for a risk-averse posture in environmental policy (Eckersley 2002).

What is more, if we depend upon science for the practical application of an environmental ethic for the oceans, ecological scientists become the spokespersons for the oceans and wider society is only given access to the oceans once science has

made them incontestable.[5] Hence, we rule out, or at least severely restrict, the possibility for an inclusive democratic approach to knowledge.

Stewardship

Environmental stewardship models for human-nature relations have been readily identified with, and embraced by, mainstream Western environmental movements. What is more, models of stewardship have been adopted in some major marine policy documents such as Australia's 1998 Oceans Policy (Brown & Spink 1997) and supported in the public realm of Western societies. In Australian society, for instance, coastal community stewardship has become a prominent feature (Carter, Davis & Stocker, 2004).

Models of environmental stewardship establish some critical checks and restraints on permissible behaviour in relation to ocean dwelling life. Environmental stewardship models also have wide appeal, in both secular and religious Western communities, and across some cultures—although importantly, the meaning and function of environmental stewardship in indigenous societies differs from Western conceptions in some crucial ways (Roach 2000).[6]

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[5] Bohnsack (2003) does not argue that Leopold's Land Ethic is the only model for guiding human interactions with ocean environments. He writes that: "Many indigenous cultures have", for example, "developed traditions and relationships with their local environment that may provide similar benefits" to the Land Ethic (Bohnsack 2003, 6).

[6] On these differences, see, for example, Jones and Williams-Davidson's (2000) essay about Haida ethics relating to the seas around the Northwest coast of Alaska. One critical difference between a Haida notion of stewardship to Western religious or secular notions of stewardship is the worldview that guides their respective relationships with the non-human world. Jones and Williams-Davidson explain that:

> Haida beliefs about their origin and relationship to the natural world give an intrinsic spiritual value to the natural world and all its elements including fishing, sea mammals, birds, land mammals, creeks and places. (2000, 102)

In the Haida worldview, the belief exists

> that all animate and inanimate beings have a spirit, which translates into a holisitic ethical approach to utilization of the 'resources' of the land and sea. … Each creature was thought to play an important role in keeping the rest of nature alive. … All sustenance activities acknowledged the important sacrifice that other beings make to keep us alive. (Jones and Williams-Davidson 2000, 103)

In Western societies, stewardship is a traditional way of understanding human relations with the natural world with a history strongly rooted in particular cultural and religious traditions. Roach observes that the contemporary meaning of steward refers to "one who is entrusted with the care of something" and can relate to a variety of contexts, such as caretaker, keeper, or manager (2000, 69). Environmental stewardship involves a model of relations whereby humanity entrusts itself with the care of the non-human world to ensure its continued flourishing. Australia's Oceans Policy defines stewardship as the "long-term care for a given resource for the benefit of both oneself and others including the resource itself" (Brown & Spink 1997, 16).

In 'Human Values, Ethics, and the Marine Environment', Kellert (2003) discusses an ethic of stewardship for the marine environment that goes beyond a narrow material and economic focus to include an enlightened and expanded understanding of human self-interest. Kellert argues that an ethic for preserving and protecting the marine environment requires an acknowledgement that the physical and mental well being of humans depends not only the health of the marine realm but on "a deep and diverse array of affiliations with the sea, especially its living creatures" (2003, 1). Besides the ocean's utilitarian and scientific significance to humans, Kellert (2003, 10-16) argues that we must appreciate a range of values including: the aesthetic values of the marine environment; humanistic values (as a source of bonding, companionship and emotional attachment); dominionistic (which are a source of opportunities for challenging oneself in the face of adversity); moralistic (which are "a source of moral and spiritual inspiration" (Kellert 2003, 12)); naturalistic (the ocean nurtures curiosity, imagination and discovery); negativistic (whereby responding negatively to the sea helps to conjure respect and deference toward it, which brings to mind the sublime); and symbolic values (which are a source for developing human capacity for communication and thought).

Models of environmental stewardship acknowledge human dependence and deep relationships with oceans, particularly in an approach such as Kellert's. The main

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This contrasts markedly with Western religious and secular notions of stewardship as I discuss in this section.

problem I perceive with the concept of stewardship as it is most commonly conceptualised in Western societies lies with the hierarchical relationship it sets up between appointer, steward (who are humans) and ward (which is nature) through a "chain of power and command that stretches down from the appointer to the steward to the ward" (Roach 2000, 69). The appointer has the power to designate the steward; the human steward manages nature for its own best interests. In this set of relations the oceans are treated as if they are dependent upon humans for their management, without necessarily having agency of their own. What is more, as Roach (2000) observes, the steward is in a privileged position of power with rights of access to and control over the non-human natural world. Consequently, the ward is potentially exposed to abuse.

Some theorists working within the stewardship tradition, such as Barry (2002), argue that stewardship can and does utilise democratic process to arrive at a decision about what constitutes good care in the use and management of the environment. However, Western notions of stewardship do not ask questions about how to include the non-human world as an agent in a democratic political process. The democratic processes only involve debates between people about how best to care for and/or manage the non-human natural world. Therefore, Western versions of stewardship fall short of my concern in this dissertation with the involvement of non-human agency in democratic political debate and the co-creation of oceans.[7]

[7] Some Indigenous notions of stewardship specify democratic human/non-human relationships, that provide for the agency of non-humans. For example, Australian Aboriginal (Nyoongar) elder, Noel Nannup, describes just such a relationship in the Nyoongar story about the creation of Country, *Carers of Everything* (Nannup 2003). This traditional Nyoongar story (of the south west of Western Australia) articulates a democratic process whereby people are chosen as the caretaker species after a politically-charged dialogue with other species at a time when all life still existed in spirit form (such as trees and other plant spirits, bird spirits, animal spirits and people spirits). In the story the spirits make a case for how the creation is to be cared for and what roles individual species are to have. It may be of no surprise to find that people end up with the 'top job' (of ultimate carers for Country). However, we may wish to compare the democratic political process that describes an aspect of this Nyoongar creation story to that told in the Bible wherein stewardship is underpinned by an authority that comes from 'above'. Genesis 1:26 (New International Version) says: "[t]hen God said, 'Let us make man in our image, in our likeness, and let him rule over the fish of the sea and the birds of the air, over the livestock, over all the earth, and over all the creatures that move along the ground.' " The crucial point here is

Environmental pragmatism

In 'Marine Environmental Ethics: Where Might We Start', Norton (2003) provides a pragmatic approach to environmental ethics that adds a dimension to bring us closer toward my preferred position of performative politics, locating environmental concerns in a strong democratic process. Norton establishes his argument on the observation that ontological theories (such as the Land Ethic) that make pronouncements about environmental values in order to justify environmental policies have not proved to be very successful in deciding what to do in environmental disputes. Norton claims that this is largely because ontological theories "are developed without any attention to context or to real-world users of those theories" (2003, 43). He points out that:

> Individuals and groups with very different ultimate values and very different ways of articulating those values can often agree on a particular policy direction, even when they cannot agree on how to justify the policy and when they cite very different and even conflicting values that they believe those policies serve. (Norton 2003, 42)

Norton illustrates his observation with the example of Ducks Unlimited and the Audubon Society in the United States where "groups with diverse values backed similar policies because habitat protection for waterfowl was essential to the enjoyment of the very different values placed on waterfowl by the different organizations" (2003, 44).

Norton (2003) does not dismiss the importance of discussing and understanding environmental moral values altogether, but rather prioritises robust democratic engagements in diverse forums. Indeed, he argues that,

> environmentalists must eventually decide whether they are environmentalists first and democrats second—whether democracy is only to be supported when the majority chooses according to the 'correct' moral values—or whether they are

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not the objective 'truth' of how creation came to be but the cultural and social capacities and norms that are embedded in societies by certain stories.

> democrats first and are willing to argue their ideas, concepts, principles, and policy proposals in an open process of debate and accept failures. (Norton 2003, 43)

For Norton, environmental policy must emerge from an inclusive democratic political process. He argues for a strategy of "experimental pluralism" that shifts the focus from environmental values to environmental objectives (specific goals and policies), seeking policies that support multiple values and playing down the rhetoric of conflicting values (Norton 2003, 44). Norton's strategy begins with "the goal of representing the diverse values of many interest groups and stakeholders" in 'real' situations and, therefore, "avoids a priori pronouncements that 'ultimately' there are *n* types of value" (2003, 44). He explains further that:

> The approach to environmental values proposed here looks at the problem of policy evaluation from the viewpoint of individual cases—one might say from the bottom up. … I propose that we study many local processes of environmental policy formation. As we study them, we should seek empirical generalizations about the processes by which people form and re-form environmental goals and values and how values, science, and politics effectively interact in an open process in which all stakeholders and citizens are heard. While it is pluralistic, this strategy is not a counsel of confusion; we simply assume that diverse values will be advocated, and we put our initial energies into a gradual and empirically based attempt at clarification and integration of multiple values and devote less effort to attempts to systematize and simplify value discourse by abstract analysis or linguistic fiat. (Norton 2003, 45)

What I find useful in Norton's pragmatic approach is his commitment to practical democratic engagement and moral pluralism. As Eckersley notes, such pragmatic approaches concentrate,

> the discussion on what it is we all have in common. That is, whatever else we may value or desire, we are all instrumentally dependent on ecosystems for our survival and well-being and this is indeed a point of convergence among all humans, whether environmentalist or not. (2002, 61)

Part of the appeal of Norton's approach is, in Eckersley's words, reliance upon "reflexive, collective scrutiny and evaluation of practical consequences within a deliberative setting in a way that is able to facilitate societal learning" (2002, 61).

These are benefits of an inclusive democratic approach to resolving environmental disputes.

In addition to this—although this is a point that Norton does not address in his essay because he is concerned to keep the focus on policy outcomes—I value in this democratic process the opportunities for contesting accounts of the oceans and reconfiguring knowledge about the oceans by many more actors. In such a vision of democracy, as Haraway writes,

> what counts as too many of the wrong kind of participants and interlocutors has to be established through multifaceted engagement where the sites of action, power, interpretation, reason, and authority are at stake. The fantastic and the ordinary commingle promiscuously. … The relations of democracy and knowledge are up for materialized refiguring at every level of the onion. (1997, 67-8)

Sandilands theorises specifically about the "intrinsic value of political practice as a mode of knowing nature in which environmental opinions might take prominence over scientific or philosophic truths" (2002, 123). This requires us to shift our focus away from what is to be done to "the generative qualities of the doing" (Sandilands 2002, 123). The emphasis in Norton's (2003) approach on practical problem solving with respect to moral pluralism restricts it to respecting and mediating diverse values—fishers, coastal developers, oil companies, environmentalists, etc. alike.

An obvious shortcoming of a pragmatic approach to environmental decision making such as Norton's, with its focus on policy and practical outcomes, is that the potential remains for the loud voices of the majority or powerful elite to be reinforced. Representation in real-world liberal democracies is affected by social and economic inequalities. Differences in income, wealth, status, knowledge, and communicative power between actors create distortions to democratic process. Hence, we must ask, as Eckersley (2002) does, how we can account for the disparities between those with communicative and others forms of power and those without? Where are the safeguards for a just and informed hearing? Examined from the perspective of non-humans and other marginalised and oppressed classes and groups, there may be little or nothing to gain in such a process.

Eckersley (2002) suggests that strategies of empowerment and special forms of representation for those who are under-represented in debates and policy discussions can help ensure better levels of communicative equality in democratic processes. I describe Latour's (2004) model of the collective process, below, as one way of providing or, at least, improving communicative equality among actors.

A further limitation of Norton's pragmatic approach resonates with a point I made earlier in relation to stewardship: while environmental pragmatism may be able to account for non-humans in the democratic process indirectly by being inclusive of some ocean views that advocate for the value and/or agency of non-humans, it falls short of guaranteeing specific representational rights to non-humans as a matter of procedure in the democratic process.

A final point to note in this discussion of approaches to ocean ethics and politics is that each of the approaches outlined are founded on pre-given categories of 'human' and 'ocean'. To argue, for example, "that environmental disputes merely reflect competing 'interests' assumes that what is perceived as natural is self-evident, and exists *external* to the domain of power and politics" (Braun & Wainwright 2001, 42, emphasis in original). Similarly, "to assert that environmental issues are primarily about 'ethics' (how to act *toward* nature) is to assume that it is only our attitudes and values that are at stake, not the 'thing' to which the ethical relation is to be fostered" (Braun & Wainwright 2001, 42, emphasis in original). While I have attempted to demonstrate in the preceding chapters of this dissertation how particular Western understandings of oceans have been normalised (as if conceptions of oceans are not political), the remaining discussion in this chapter about political epistemology focuses upon "the fundamental openness, or undecidability, of what counts as nature in environmental conflicts" (Braun & Wainwright 2001, 42).

Latour's Collective Process

Interest in the potential opportunities for public contribution to enhance marine environmental decision-making is growing. For instance, the input of stakeholders—individuals, groups and organisations—has been highly valued and extensively

sought after in the development of Australia's Oceans Policy (National Oceans Office 2003; Stocker & Moore 1999). Indeed,

> As collaborative policy development goes, the Oceans Policy process is certainly one of the more comprehensive we have seen from the Commonwealth. … In line with contemporary practice, the oceans policy process aimed to … be consultative: people were consulted and agencies listened to their views. The consultation process was certainly multi-staged with many points of entry for public participation. (Stocker & Moore 1999, 146)

Public participation in environmental decision-making is seen to be:

> a way of bringing to bear a broader, more representative range of knowledge and values to help manage the complexity and uncertainty of these problems, as well as reinforcing the legitimacy of, and therefore sustaining, the decisions arrived at. Ensuring that public concerns and insights are considered and deployed not only makes successful outcomes more likely but also encourages consensus and trust, helping to ensure the viability of future problem solving efforts. (Healy 2003, 96)

Nonetheless, high levels of endorsement of public participation have not prevented public contributions from being regularly marginalised (Healy 2003). With respect to marine environmental decision-making, institutional and cultural inertia exist along with various forms of resistance (for example, inflexibility and scepticism) to the inclusion of the practical experience and knowledge of fishers, and indigenous ecological knowledge of marine ecosystems (Daigle 2003; Huntington 2000; Turner, Ignace & Ignace 2000). In the development of Australia's Oceans Policy, it has been noted that indigenous Australians were not sufficiently consulted (Gillies 1998, cited in Stocker & Moore 1999). What is more, the process of consultation itself was considered by some as too short for the public to adequately digest and respond to policy concepts (Australian Marine Conservation Society 1998, cited in Stocker & Moore 1999).

In more general terms, Healy has observed that:

> [w]hile the devaluation of lay involvement has been widely discussed, if not effectively addressed, broader, particularly epistemological, dimensions of public participation have gained far less attention effective engagement with public

> concerns on environmental matters is significantly inhibited by the hegemony of representational conceptions of knowledge and the ways in which these tend to configure participation in terms of information flow. (2003, 96)

Healy supports his observations by reference to Habermas in writing that:

> rational scientific, *instrumental-technical reasoning* has been allowed to crowd out *moral* and *emotive-aesthetic reasoning* that more typically characterize the lifeworld of personal existence, impoverishing both our lifeworld and economic and political life. (2003, 96, emphasis in original)

In particular, so called 'cooperative discourse', "informed and structured by representational scientific rationality, controls and circumscribes public involvement, ultimately reflecting rather than transcending *instrumental-technical reasoning*" (Healy 2003, 97, emphasis in original).

Political epistemology, as an alternative approach to scientific rationality in the production of knowledge, is developed in the work of Latour (2004). Latour is an important thinker in developing the ideas of political epistemology into a practical form. Latour decentres the role of experts, especially scientists, in defining the natural world. Latour's collective procedure revises and elaborates upon his earlier idea of the "Parliament of Things" described in his text, *We Have Never Been Modern* (1994). According to Latour, the Parliament of Things (1994) and the Collective (2004) simply describe phenomena we are currently facing in environmental policy making.

There are two observations to be made here about Latour's view of the effects of present phenomena: the first relates to the 'very substance' of the world (Latour 1994, 4). Latour (1994; 2004) is concerned with hybrids—the not-quite-natural, not-quite social—that have become ubiquitous in the world such as genetically modified organisms and climate change and Latour (1994) employs a network metaphor for thinking about such socio-natural imbroglios. Castree and Macmillan explain about these networks that they "are multiple and 'relentlessly heterogenous' typically involving the unique alignment of humans, machines, animals, inscription devices, and other materials in relations which vary in stability, time-space extension and time-space form" (2001, 211).

Networks would, for example, "link in one continuous chain the chemistry of the upper atmosphere, scientific and industrial strategies, the preoccupations of heads of state, the anxieties of ecologists" (Latour 1994, 11). Socio-natural imbroglios cast in terms of networks signal the inter-connectedness between actors and "affective relations" between actors that are made up of "all manner of energetic exchanges within and between them" (Whatmore 2006, 160-61).

It is worth noting at this juncture that this way of conceptualising human-nature relations is developed in Actor Network Theory (ANT), of which Latour is a major proponent. In elaborating here upon this conception of the network image, ANT can be thought of as "a set of overlapping propositions intended to guide thinking and research about human-nature relations" (Castree & Macmillan 2001, 211). In describing events, ANT does not distinguish between natural and social actors in contrast to representational perspectives; rather, "[o]bjects or subjects, which are categorised as natural or social under modern ontology, are described in the same terms" (Bell 2003, 56). In ANT, it is the relations between actors and the relations that comprise actors that are of interest (Bell 2003; Healy 2003). The social and natural are imagined as co-constitutive within a multitude of networks (Castree & Macmillan 2001).

ANT's hybridity and networks "makes for the re-ordering of ethical community beyond the 'human' " (Whatmore 2006, 161). As Castree and Macmillan note:

> [as] ANT dissolves any a priori division of society from nature it requires a politics attuned to all the actors in given socionatural networks. Because the fate of any one actant in a particular network is so intimately bound up with that of others, ANT suggests the necessity for hybrid politics in which the fate of humans, machines, organisms, plants, and animals, and so on are considered simultaneously—and on a case by case basis. Moreover, since human and non-human actants are considered ontologically equivalent here, a hybrid politics of nature should be neither anthropocentric or ecocentric; it would refuse to serve the interests of one or other actor in a network. (2001, 220)

Furthermore, networks provide "the condition of immanent potentiality that harbours the very possibility of their coming into being" (Whatmore 2006, 161). Whatmore elaborates by writing that:

> Articulated through the cartography of networks … hybridity disturbs the habits that reiterate the cumulative fault-lines between human/subjects and non-human/objects prescribed by an ethical reasoning abstracted from the particularity of embodiment and territorialized as the exclusive preserve of a 'Society' from which everything but the universal human has been expunged. Instead a multitude of affective actants-in-relation take and hold their shape performatively, as precarious achievements whose durability and reach is spun between the potencies and frailties of more than human kinds. (2006, 161)

The just existences of oceans, as they may be perceived through networks, are states of being in which the ocean is able to play a part in 'taking and holding its own shape'—fluid as that may be.

The second observation to be made here about Latour's view of phenomena we currently face in environmental policy making is that political ecology has been ineffective in producing positive environmental outcomes because scientists have defined environmental issues and agendas from the outset. However, defining the common world and making decisions about environmental problems is beginning to reflect a greater collaboration of ethicists, economists, politicians and other communities (Latour 2004). The idea that scientists in particular need to be brought together with ethicists, economists, politicians and other communities to debate and decide upon environmental, public health and scientific and technological agendas has been identified in recent policy forums and literature (see, for example, Leshner 2005; Levidow & Marris 2001; Nowotny 2005). Inclusive approaches are being employed in some programs such as the United States National Human Genome Research Institute's Ethical, Legal and Social Implications program and the American Association for the Advancement of Science's Dialogue on Science, Ethics, and Religion (Leshner 2005).

Latour (2004) cites the 1997 Kyoto Conference of the parties to the 1992 Framework Convention on Climate Change as an example of this shift to collaborative policy-

making. Latour notes that Kyoto is considered by some as a milestone toward minimising climate change through internationally negotiated agreements. Latour argues the Kyoto Agreement transpired via an assembly of "the great figures of the world, princes, lobbyists, heads of state, captains of industry, scientists and researchers from every discipline … [who decided] in common how the planet was faring and how we should all behave toward it from now on" (2004, 56). Latour (2004) suggests this is the model of political ecology we must embrace.

Latour sets out the problem

Latour's procedure for a political process that allows for a diversity of environmental values and interests in making decisions about ocean existences is inclusive of specific representational rights for non-humans. Latour does not claim that non-humans contribute to debates through the use of language, but that they do contribute in other ways to debates about what is to be done. Latour argues for taking non-humans seriously and for the important role scientists have to play in this but at the same time, the mediation of knowledge about non-humans should not be left entirely to scientists. Latour's collective process facilitates critical enquiry into, and reconfiguring of, prevailing Western knowledge and understandings of oceans.

Latour argues the problem with the model we are currently working with for determining the common world or reality is that it is split into two houses: Nature and Society. The construction of these two houses has effectively worked to prevent political epistemology—which is for Latour a superior form of epistemology to the myth of objectively determined epistemological models championed by some. Latour explains that the 'old Constitution' is founded upon,

> two equally illicit assemblies: the first, brought together under the auspices of Science, was illegal, because it defined the common world without recourse to due process; the second was illegitimate by birth, since it lacked the reality of the things that had been given over to the other house and had to settle for 'power relations', for Machiavellian cleverness alone. The first had reality but no politics: the second had politics and mere 'social construction'. Both had in reserve a quick

> shortcut that could bring discussion to an end: irrefutable reason, indisputable force, right and might, knowledge and power. (2004, 54)

With respect to the first house, Latour argues Science has posited itself as the spokesperson for Nature.[8] The method that Science uses in maintaining its role as spokesperson includes routinely withholding its debates and perplexities about Nature from wider society. Society is only given access to Nature once it has been established by Science as a 'matter of fact'—that is, once Science has made Nature incontestable—thus ruling out, or at least severely constricting, the space for politics and democratic processes. Sandilands makes a similar argument: that if scientific understandings are established as "nature's commonality" before the event or conversation, "the essence of nature—and environmental issues—[are put] beyond constitutive public discussion" (2002, 121). Sandilands makes this criticism in relation to environmentalisms that rely on scientific truth for validation on account of its effect, which is to close the public spaces for a plurality of opinions to form a common understanding of nature.

For Latour, the isolation of Science from politics is a shortcut and a deficient approach to the production of soundly constituted knowledge. He argues that Nature conceived by Science makes "it possible to subject the human assembly to a permanent threat of salvation by Science that paralysed it in advance" (Latour 2004, 57). For Latour, an inclusive democratic process precedes—not follows—the pronouncements of science. Indeed, good process constitutes good epistemology. Latour argues for a process that, first of all, insists the scientific mediation of nature is visible to society, and second the objectified, universal conception of non-human nature is replaced with 'natures' where they are given a voice in the collective.

With respect to the second house, Society—located in the province of the social sciences where the work is done of describing and theorising about society-nature

[8] Latour utilises the capitalised 'S' for 'Science' to indicate a notion of 'science as ideology' rather than 'science as actually practised' (which he writes as 'science'). For Latour science is useful in the production of knowledge when it is tested through democratic processes (rather than limited to the laboratory). It follows that Science corresponds to an ideologised notion of 'Nature' (rather than 'nature')

relations—Latour observes that the postmodern turn in the social sciences has done away with the reality of nature, privileging the social construction of nature. With only a social construction of nature in place, the politics of nature becomes impossible: if nature does not exist apart from human constructions, humans can only ever speak for nature.[9]

Latour elaborates on the problem of the separation of the two houses and their communicative impasse with a critique of fact and value. He writes that:

> The old form of organization considers that reason can unfurl its effects only on condition that facts be absolutely distinguished from values. … If we start to confuse the two, the old form asserts, we are defenseless in the face of the irrational, since we can no longer put an end to the indefinite multiplicity of opinions through an indisputable point of view that would be exempt from any point of view. (2004, 94)

Indeed, the old form of organisation "needs to set up an opposition between the rational and the irrational in order to make reason triumph" (Latour 2004, 94).

The main problem with the notion of value according to Latour is that it depends on the "prior definition of 'facts' to mark its territory" (2004, 97). He uses cloning as an example: "Once the cloning of sheep and mice has become a fact of nature, one can, for example, raise the 'grave ethical question' whether or not mammals, including humans, should be cloned" (Latour 2004, 97). In this way,

> The scales are … not weighted evenly between someone who can define the ineluctable and indisputable reality of what simply 'is' (the common world) and someone who has to maintain the indisputable and ineluctable necessity of what must be (the common good), come hell or high water. (Latour 2004, 97)

The moralists are therefore largely neutralised in this model. We can see how it may be that science has come to pre-eminence in debates about nature. As Latour points out:

[9] This critique was made in similar terms in the Introduction to this dissertation.

> by limiting themselves to the facts, the scientists keep on their side of the border the very multiplicity of states of the world that makes it possible to form an opinion and to make judgments at the same time about necessity and possibility, about what is and what ought to be. What is left to the moralists? The appeal to universal and general values, the search for a foundation, ethical principles, the respect for procedures—estimable means, to be sure, but without a direct, detailed grasp of facts, which remain stubbornly subject to those who speak 'only' of facts. … By accepting the value-fact distinction, moralists agree to seek their own legitimacy very far from the scene of the facts, in another land, that of the universal or formal foundations of ethics. (2004, 98)

Towards a solution: engineering uncertainty on the way to consensus

Latour argues that for any scientific and political problem, 'the Collective' is the model for determining the common world in a democratic fashion that cuts across science and politics, facts and values. Latour loosely defines the Collective as "a procedure for collecting associations of humans and non-humans" (2004, 238). But it is not a matter of bringing the two houses of Nature and Society together, as if we can simply reunify them. Rather, "[t]he procedure for convoking them has first to be redefined from top to bottom" (Latour 2004, 57). The Collective "designates a set of procedures for exploring and gradually collecting this potential unification" of human and non-human actors (Latour 2004, 94).

There will be the new voices of non-humans engaging in the debate. Latour allows for them by specifying a conception of subjects and objects, nature and society. When introducing the idea that non-humans are active participants in processes of knowledge production, Latour does not claim that non-humans speak on their own. Indeed, he makes the more radical observation that "no beings, not even humans, speak on their own, but always *through something or someone else*" (Latour 2004,

68, emphasis in original).[10] What Latour means by non-human speech is that through the perplexity and controversies they provoke, speech comes from those "gathered around them" and "arguing over them" (2004, 66). However, Latour argues that all spokespersons for humans and non-humans must be treated with scepticism because their partial perspectives limit their ability to represent them.

Non-humans act further through their associations with other actors. Latour challenges the often accepted wisdom that "a thing cannot be said to be an actor, in any case not a social actor, since it does not act, in the proper sense of the verb; it only behaves" (2004, 73). For Latour, non-humans are social actors because they modify other actors through their associations with them. This is how they participate in the constitution of their collective existence. Moreover, the idea of recalcitrance,

> offers the most appropriate approach to defining their action. … Actors are defined above all else as obstacles, scandals, as what suspends mastery, as what gets in the way of domination, as what interrupts the closure and the composition of the collective. To put it crudely, human and non-human actors appear first of all as troublemakers. (Latour 2004, 79)[11]

What constitutes the common world is to be debated collectively and this debate characterised by uncertainty rather than a given conception of Nature defined by Science as a matter of fact from the outset. A multitude of "propositions" will be brought together in the debate (Latour 2004, 63). The term proposition "indicates uncertainty and not arrogance", and replaces the "old system of statement" (Latour 2004, 83). Proper articulation of a proposition is more challenging than making statements of fact. Propositions are contestable and must pay more respect to the intelligence and dignity of potential interlocutors, and are communicated through the transparency of processes, instruments, theories and debates. Propositions are

[10] This point can be linked to Foucault's (1981) ideas that individuals can only be heard if they speak through a discourse. To fall outside an acceptable discourse is to fall silent, or else worse, where all words uttered are those of the insane or the criminal.

[11] Latour's actors resemble Haraway's Coyote Tricksters (as was discussed in the section 'Oceans are political (how should we speak about oceans?)' above).

human and non-human alike: "I am going to say that a river, a troop of elephants, a climate, El Nino, a mayor, a town, a park, have to be taken as propositions to the collective" (Latour 2004, 83). The term 'proposition' "indicates wonderfully that what is in question is a new and unforseen association" (Latour 2004, 83). In the process of articulating propositions, "reality grows to precisely the same extent as the work done to become sensitive to differences" (Latour 2004, 85).

While Latour's idea is principally that "scientific and political debate should take place in a common space", he notes that for each problem or question specific protocols will be required; "[i]t is clear, for example, that global warming or drugs trials cannot be tackled in the same way. … It is clear that there is no one system that can be applied to each and every problem" (Latour, cited in Fronte 2003, 2). The specific problems facing the oceans are no exception to the need for specific processes.

A new separation of powers (with recycling facility)

Latour is concerned to ensure that his model for political epistemology does not collapse through the premature unification of the collective. Hence, he posits a new separation of powers in place of Nature and Society. The model can be explained as follows: There exists an upper house of perplexity and consultation. In the upper house actors attempt to clarify and describe situations. In Latour's model, the upper house is the first location for debates to occur. There also exists a lower house of priority and institution. In the lower house the situations that are adequately clarified and described are fitted into a scheme for action. That is, in the lower house, matters are prioritised and decisions are made about what to do.

The work needed to reach resolution in the two houses takes place over an extended period of time. The work of the houses ensures,

> we do not bring an end to perplexity too abruptly, that we not unduly accelerate the consultation, that we not forget to look for incompatibility with established propositions, and finally that we not register new states of the world without explicit motivation. (Latour 2004, 119)

The aim of the process entails collaboration between science and politics at each stage of the process, thus "permitting a synergy that was impossible earlier, when Science was concerned with nature and politics with interests" (Latour 2004, 234).

Furthermore, what has been described so far constitutes only one cycle of the collective. Latour writes: "the entities thrown out by the power of rank ordering [as per the proper task of the lower house] return as appellants, in the next iteration, to 'trouble' the power of taking into account" (2004, 122). Excluded entities, for which the collective has for now decided not to take responsibility, "*are going to put the collective in danger*" (Latour 2004, 125, emphasis in original). The process cycles through repeatedly, with the aid of a feed-back loop for appellants. Appellants can maintain their status for as long as they are able and relevant. In this regard Latour notes that:

> The collective, as we understand now, is not a thing in the world, a being with fixed and definitive borders, but a movement of the establishing provisional cohesion that will have to be started all over again every single day. Its borders, by definition, cannot be the object of any stabilization, any naturalization, despite the continual efforts of the great scientific narratives to unify what brings us all together under the auspices of nature. (2004, 147)

Moralists play a crucial role in the appeal process by questioning the established paradigms (Latour 2004, 157) and perpetuating a sense of "uncertainty about the proper relation between means and ends" (Latour 2004, 154). Latour explains:

> Ecological crises, as we have interpreted them, present themselves as *generalized revolts of the means*: no entity—whale, river, climate, earthworm, tree, calf, cow, pig, brood—agrees any longer to be treated 'simply as a means' but insists on being treated 'always also as an end.' … There is no longer any space set aside where we can unload simple means in view of ends that have been defined once and for all without proper procedure. … 'No one knows what an environment can do', 'no one knows what associations defined humanity', 'no one can assume the right to classify ends and means once and for all, the right to play down the boundary between necessity and freedom without discussion'—such are the *concerns* that the moralists are going to introduce into all the procedures of the collective. (2004, 155, emphasis in original)

Moralists assist the re-entry of those excluded from the collective, to the extent that:

> Moralists add to the collective the continual access to its own exterior [those excluded by the lower house of priority and institution] by obliging the others to recognize that the collective is always a dangerous artifice. In the eyes of morality, indeed, the closure of the collective by any global scenarization at all is not only impossible but also illegitimate. (Latour 2004, 157)

In short, moralists—who are no longer disenfranchised by Science—"keep the relation between the two houses from being a one-way street" by maintaining a loop for the sake of appellants and the otherwise excluded (Latour 2004, 159).

To sum up, Latour's collective procedure facilitates multifaceted engagement between actors as well as critical and imaginative thinking beyond human/nature and nature/society dualisms. Once the demands of a problem are made clear, the collective must consult, discuss and negotiate an outcome. Argument and decision-making are both important aspects of this democratic process. Reality emerges from the process of articulating a diversity of perspectives. As Healy writes,

> Reality, then, is not 'out there' or in our heads but is rather a complex, many-layered performance, constituted by the multiple performances of the relationships between both people and the things that go to make up it. … Performance in this … sense involves conceding the multiplicity of forms that reality may take and understanding how our performances involve choices over which of these we wish to bring into being. (2003, 98)

Forms of deliberation – practitioners interpretations

The political epistemology I have described in this Chapter, primarily through the work of Latour, does not make claims about the value of oceans, the ways humans are estranged from the oceans, or how to reconcile our estrangement from oceans. The process described would promote the performance of oceans on alternative grounds through an imaginative exchange of views, knowledge, ideas and understandings. At this point I want to mention some of the forms of deliberation that might facilitate the performative dimension of the collective with a practitioners

sensibility. To provide this level of elaboration the work of Innes and Booher offer valuable insights:

> People all over the world are experimenting with consensus building to deal with complex, controversial public issues, changing contexts, and uncertain futures in an institutionally and politically fragmented society. … Processes range in size from a handful of participants to hundreds organized into interlocking committees and task forces, each working on different aspects of complex questions. (1999, 10)

Innes and Booher define consensus building as:

> a process that is truly facilitated, as opposed to merely chaired. … The processes use special meeting management techniques that allow participants to be heard and be informed, and encourage discussion that is both respectful and open-ended. The techniques discourage the taking of positions. … Assumptions and constraints are not taken for granted, but explored. (1999, 10)

Consensus building can be brought about through role-playing games and bricolage, even when situations appear subject to intractable disputes. Innes and Booher write:

> role playing … allows players to let go of actual or assumed constraints and to develop ideas from creating new conditions and possibilities. Drama and suspension of reality allows competing, even bitterly opposed interests to collaborate, and engages individual players emotionally over many months. Scenario building and storytelling can make collective sense of complexity, of predicting possibilities in an uncertain world, and can allow the playful imagination, which people normally suppress, to go to work. In the course of engaging in various roles, participants develop identities for themselves and others and become more effective participants, representing their stakeholders interests more clearly. (1999, 11)

With respect to bricolage, Innes and Booher explain:

> participants play with heterogeneous concepts, strategies and actions with which various individuals in the group have experience, and try combining them until they create a new scenario that they collectively believe will work. This bricolage … is a type of reasoning and collective creativity fundamentally different from the

> more familiar types, argumentation and tradeoffs. … Bricolage … produces … a new way of framing the situation and of developing unanticipated combinations of actions that are qualitatively different from the options on the table from the outset. The result of this collective tinkering with new scenarios is, most importantly, learning and change among the players, and growth in their sophistication about each other, about the issues, and about the futures they could seek. Both consensus building and roleplaying games center on learning, innovation, and change, in a process that is entertaining and—when conducted effectively—in some fundamental sense empowers individuals. (1999, 11)

The processes of role-playing and bricolage are transformative: "they change the players, what they know, and what they are likely to do" (Innes & Booher 1999, 11).[12] They facilitate what Schechner describes in his theory of performance as a "collective reflexivity" where understandings, including the assumptions and preconceptions they embody, are clarified, contested and reshaped (cited in Healy 2003, 99). The reflexive character of these forms of deliberation "result in the articulation of relations between people and things that, in ANT terms, perform the environment along changed lines" (Healy 2003, 100).

Conclusion

In this Chapter I have navigated a course through ocean realism and constructivism to find a way of imagining oceans as a co-creation between humans and oceans. I suggest that in the task of envisaging nature as a co-creation, a performative notion of nature is useful because it does not conceive of humans and non-humans as pre-figured categories but as emerging and shifting within networks of relations (as we find in ANT theory).

I have provided an overview and critique of three approaches to ocean ethics and politics—a sea ethic based on Leopold's Land Ethic, marine stewardship and environmental pragmatism. I suggest all three approaches have their strengths but in

[12] However, in some situations where collective processes are enacted, role-playing may not be culturally appropriate (Sarkissian, Walsh & Gherardi 1994).

terms of my concerns in this dissertation with the agency of oceans, they do not address these concerns or deal with them adequately.

In setting out Latour's political epistemology, I highlight that his approach specifically addresses and facilitates non-human agency in a democratic process. Latour's collective procedure provides a useful model for facilitating both multifaceted engagement in decision-making and critical enquiry about oceans policy inclusive of non-humans. Latour's procedure importantly sets the stage for the performance of oceans. Role-playing and bricolage are discussed as examples of reflexive forms of deliberation that help to perform ocean environments along new lines.

In conclusion, the argument of this chapter supports the second part of my thesis statement that improving the prospects for just ocean existences can be achieved through the use of politically generated knowledges about oceans to shift policy towards social-environmental goals that are not widely imagined by the Western subject.

Chapter 7

Conclusion

The thesis for this discussion has been that particular conceptions of oceans developed and perpetuated in the Western discourses of law, aesthetics and science, are highly influential in structuring contemporary human-ocean relations. These conceptions are unnecessarily constraining upon possibilities for imagining and understanding human-ocean relations in Western societies. Consequently, just ocean existences are being hindered for identifiable reasons. Improving the prospects for just ocean existences can be achieved through the use of politically generated knowledges about oceans to shift policy towards a set of social-environmental goals that are not widely imagined by the Western mind.

In developing my thesis, I have taken on board and travelled with a number of philosophical, social and political theories. These theories have assisted me in the task of developing a critique targeted toward the social and cultural dimensions of human exploitation and degradation of oceans as well as exploring ways to include non-human agency in addressing the abuse.

In going beyond critique I have advocated for the structuring of policy debates and outcomes with a form of political epistemology that de-centres the experts. I have highlighted, in particular, the problem of defining oceans scientifically ahead of inclusive debate and constitutive discussion about what comprises oceans and marine environmental concerns. I have argued for a form of political epistemology that is inclusive of a diversity of perspectives—human and non-human—and takes

seriously the possibilities of a democratic process as a basis for greater knowledge and imagining of human-ocean relations.

The discussion of the thesis is developed from a social construction perspective that is attuned to the problems of realist accounts of ocean dwelling life and forces. In Chapters 2 to 5 I demonstrated that conceptions of the oceans that are largely taken for granted in Western societies—that is, oceans as the property of all (public access rights), oceans as the sublime archetype (or oceans as the trigger for the sublime in the case of Kant), oceans as resources and commodities and more recently, oceans as a great store of biodiversity—are not objective accounts of oceans but mediated by historical, material, socio-economic and cultural factors. I have demonstrated that different conceptions of oceans have dominated Western consciousness in different historical periods and suggested as part of my argument that this is testimony to the understanding that ideas about oceans are always mediated.

My major concern in Chapters 2 to 5 of this dissertation was with providing some of the social context for the development of particular and influential meanings ascribed to oceans in the Western discourses of law, sublime aesthetics and science. These chapters were, furthermore, concerned with how these particular meanings structure and delimit human-ocean relations. What I have demonstrated about the meanings attributed to oceans in the discourses of law, science and aesthetics is that they often narrowly define human-ocean relations. Chapters 2 to 5 focused primarily on supporting that part of my thesis which states: particular conceptions of oceans developed and perpetuated in the Western discourses of law, aesthetics and science, are first, highly influential in structuring contemporary human-ocean relations and second, unnecessarily constraining of the possibilities for imagining and understanding human-ocean relations in Western societies.

In Chapter 2 I provided a historical overview and analysis of the context for the development of the doctrine of *mare liberum* that demands universal public rights of access to oceans. The discussion is developed through the work of Grotius in particular, widely considered the progenitor of modern international law of the sea.

Chapter 2 demonstrated that the concept of the oceans as the property of all is not essential to the character of the oceans as Grotius argued but evolved in line with

economic and political interests of the European maritime powers, and more recently, the United States. What is more, the meaning of the oceans was shown to shift over time from that belonging to the sovereign to common property governed by open access rights in line with the economic and political interests of the European maritime powers. I also explored the more recently developed conception of oceans in international law of the sea as the common heritage of humankind. I noted that the common heritage concept has been shaped to suit the interests of industrialised nations seeking to safeguard their competitive advantage to freely exploit common spaces. Broadly speaking, concepts of oceans in international law of the sea continue to serve dominant political and economic interests.

At the same time, I argued in Chapter 2 that a third reality of customary marine tenure was, and continues to be, denied by Western legal discourse. I argued that customary marine tenure conceptions of oceans are important in terms of their potential role to diversify human-ocean relations beyond a narrow resource-focused perspective. Customary marine tenure conceptions of oceans closely bind economic uses of oceans with cultural and spiritual systems, imagining human-ocean relations beyond instrumental perspectives. They are, furthermore, guided by cooperation and often entail ideas such as reciprocity between humans, and between humans and non-humans, as found in Australian Aboriginal and Torres Strait Islander common property conceptions for instance.

Chapter 2 advanced my thesis to the extent that I demonstrated Western legal discourses are highly influential in structuring human-ocean relations and unnecessarily constraining on imagining human-ocean relations. That customary marine tenure conceptions have never been seriously considered in Western legal traditions is, in my argument, an important example of the paucity of commitment that international law of the sea has to human rights, Indigenous cultures and sustaining ocean environments.

The discussion of Chapter 3 further supported the argument of Chapter 2 that the concept of oceans as the property of all is not self-justifying. The case study of the Croker Island Native Title case (*Croker*) highlighted the difficulty Western law has in coming to terms with conceptions of oceans other than those of public rights as

outlined in Chapter 2. This case study established that the Croker Islanders' conception of seas is not equally weighted with Western conceptions.

My analysis of the High Court's majority and minority (dissenting) judgments in *Croker* provided the basis to argue that the law of sea could be interpreted to allow for Aboriginal Australian and Torres Strait Islander people's laws and customs to apply in various places and circumstances. Nonetheless, a law akin to providing for the customary marine tenure rights of the Croker Island native title claimants was ultimately dismissed by the majority of judges—based on a view that despite there being demonstrable native title rights that provide for ownership of the sea country those rights were held by the court to be in conflict with laws of the Commonwealth.

The critique I made includes the observation that the High Court majority proceeded in making their determination that the Croker Islanders do not have exclusive possession on the basis of attitudes to sea territories characteristic of the dominant culture upheld in Australian common law and international law of the sea. In coming to their judgments, the majority produced fixed, definitive statements, largely keeping from view the assumptions, processes and instruments that informed them. I contrasted the majority's judgment with Kirby J's dissenting judgment, noting how Kirby J proceeds by placing the two social orders in a conversation, giving an indication of the contestable character of the subject matter. In this manner Kirby J finds that the Croker Islanders do have a qualified form of exclusive possession and that the law of Australia can recognise this form of possession.

Chapter 3 advanced that part of my thesis that posited Western legal discourses have been, and continue to be, highly influential in structuring human relations with oceans. But in wielding such influence, legal discourses are unnecessarily constraining on human-ocean relations.

I concluded Chapter 3 by pointing toward the task ahead in the dissertation, which is set-out in the second part of my thesis: to develop an ethical approach for negotiating the just existences of oceans by promoting and advocating a diversity of views, human and non-human. This, I suggested, requires an inclusive democratic process that seeks cooperative solutions to shared problems.

Chapter 3 can be seen to link together with Chapter 6 in certain respects. In the discussion of Chapter 6 I noted how Latour sets out the problem caused by the separation of Nature and Society (the two illicit houses) through a critique of fact and value. In bringing the focus of this critique onto court processes such as occurred in *Croker,* we could note that a fact situation was accepted prior to a full and proper consideration of the issues at hand. That is to say, in *Croker* we saw that two competing conceptions of the oceans were at play: one was the Western conception that the ocean as the property of all. The other was the Croker Islanders' conception that the ocean can be exclusively possessed and, as a matter of fact (they argued), they own the area of the ocean that is within their traditional Country. My argument was that apart from Kirby J on the High Court and Merkel J on the Full Federal Court, none of the judges in the three *Croker* hearings seriously interrogated the claim of the Croker Islanders that they could and did own the sea country within their claim. The 'fact situation' was settled in the minds of most judges prior to considering the issues presented by the claimants.

As with Chapters 2 and 3, Chapter 4 proceeded, in the first instance, by demonstrating how the sublime has been, and continues to be, influential in structuring contemporary human-ocean relations. The initial discussion of Chapter 4 established the importance of eighteenth century aesthetic discourse in determining the Western subject's orientation toward oceans. In the discussion of Kant's concept of the sublime that followed I outlined in some detail his significant contribution to the placing of subjects in relation to oceans.

I argued that when appeals are made to a collective feeling for oceans in Western societies, we are usually tapping into eighteenth century and Romantic traditions of the sublime. Yet in tapping into the sublime's traditions we must be cautious of the perils of the sublime. I discussed specifically the perils of Kant's sublime noting that it authorises human estrangement from oceans, erases feelings toward oceans that are not expressed in terms of otherness and mastery through its pretence to universality, and it conceptualises oceans as a vast wilderness.

I demonstrated that while the traditional sublime may claim to give rise to a universal feeling for oceans, it is rather linked to specific developments of the eighteenth and

nineteenth centuries, particularly industrialisation and the domestication of terrestrial natures. The traditional sublime developed out of a relation to oceans based in the experiences of a privileged minority in Western societies. I suggest that in determining for all how to feel in relation to oceans, the traditional sublime denies those feelings for oceans that may be different to 'the rational subject'.

I further argued that the sublime's conception of oceans as wilderness is not universally valid but rather a particular Western conception of oceans perpetuated in the discourse of the sublime. I demonstrated that the contemporary conception of oceans as wilderness has considerable power in Western marine environmental decision making. I suggested that we should be careful in drawing on the idea of oceans as wilderness because of the dualistic vision it can invoke between nature and culture. 'Non-pristine' nature may be perceived as unworthy of defence.

The concept of oceans as wilderness is, furthermore, hazardous for Indigenous societies that perceive themselves as part of ocean environments—the sea is not a wilderness; it is an aspect of home. Thus oceans perceived as wilderness tend to erase the specific history of Indigenous peoples and their human-ocean relations.

In short, I demonstrated that the sublime is unnecessarily constraining on our understandings and sense of possibilities for human-ocean relations in Western societies. The sublime presents problems for an inclusive political epistemology because it obstinately denies some perspectives, including the ideas that oceans have agency and that oceans can be home. As such, we should be wary of uncritical appeals to sublime aesthetics as a basis for ocean ethics and politics.

In the final section of Chapter 4 I argued that aspects of the sublime do, nonetheless, provide possibilities for an ethical politics. I argued for a version of the sublime that emphasises humility and respect before the unfathomableness of the oceans. My argument was that a reconfigured sublime could bring to our attention ways in which the oceans can overwhelm our senses and physical being and with this an awareness of our limits in relation to oceans and our dependency upon them. The reconfigured sublime I promote highlights the agency of oceans, in particular, the idea that oceans will always exceed our ability to understand and represent them.

In Chapter 5 I discussed two influential scientific conceptions of oceans: the production model view of oceans of conventional fisheries science and an enclosed reserve view promulgated in MPA science.

The development of conventional fisheries science has historically been closely aligned with economic and socio-political interests and further influenced by some entrenched Western attitudes and beliefs about the character of oceans (limitless in abundance) and the potential for science and technology to expand fisheries endlessly. I pointed out that in its alignment with industry, fisheries science is likened to a service for industry, wherein oceans are viewed as factories and fish as commodities. I argued that in this production model view of oceans, oceans are valued only to the extent that they satisfy human ends. Fish and their ecosystems are conceptualised as resources without needs and agency of their own. The intimate relationship between human and ocean wellbeing is ignored and denied.

I traced the instrumental view of oceans through to the work of Plato, Descartes and Locke. Drawing on Plumwood's critique of dualistic conceptual frameworks I demonstrated how dualistic conceptual frameworks structured thinking and relations with oceans in Western societies in highly instrumental ways. Plumwood's analysis of rationality in ancient Greek and Enlightenment thinking demonstrates a crucial shift to the meaning and effects of rationality—to the point where rationality is reconceived as egoism and nature in instrumental terms as a resource for the master. In drawing further on Plumwood—particularly in regards to what she identifies as the West's reliance on a conceptual framework of subject/object dualism that underpins science—my analysis demonstrated that enterprises such as conventional fisheries science are predisposed to collaboration and capture by industry and the rationalist economy. I illustrated this point with a discussion of the types of research models used in conventional fisheries science.

MPA science was discussed as a partial counterpoint to the production model of oceans in conventional fisheries science. MPA science conceives of oceans as a vast source of biodiversity. I suggested MPA science is more inclusive than fisheries science in its approach to the production of knowledge because of the many factors it must take into consideration in developing and implementing MPAs successfully.

However, my discussion included a critique of the recent trend in MPA science toward advocating for marine reserves that prohibit human interventions as the best approach to conserving biodiversity. I argued that by placing a marine reserve conception of oceans ahead of others such as multiple use MPAs, without taking into account a range of factors specific to each reserve, this process was authoritarian and unfairly discriminatory. I argued that consideration of cultural, social, political and economic dimensions of oceans should all play a part in forming understandings of oceans.

The final part of the discussion of Chapter 5 reinforced the argument of Chapter 4 that conceiving of oceans as marine reserves, that is, as social or cultural free zones or wilderness, contrasts markedly with Indigenous perceptions—such as the Croker Islanders who view themselves as integral parts of ocean environments and human-ocean relations as reciprocal between humans and oceans. Marine reserves effectively exclude such understandings of oceans.

This chapter continued to focus on that part of my thesis concerned with the major Western discourses that structure contemporary human-ocean relations. The discussion of fisheries science and MPA science demonstrated how the most widely accepted variants of ocean-related science constrain our understandings of, and possibilities for, interacting with oceans in Western societies.

The shortfalls of science point to the need to open up assessment, debate and discussion through processes that allow a broader range of communities, human and non-human, to contribute to questions related to the use and protection of ocean environments and preferred human-ocean relations.

Chapter 6, the final Chapter, focused on supporting that part of my thesis that is concerned with pursuing just existences for oceans through a democratic political process, which I have referred to, along with others, as political epistemology. Political epistemology, I have argued, is useful for generating knowledge of oceans and for shifting policy towards a particular set of social-environmental goals that are not widely imagined by the Western subject. Political epistemology involves a greater inclusivity of perspectives structured into policy debates, including the creation of spaces for the agency of oceans to contribute.

The importance of de-centring of experts—as a political and ethical strategy aimed at promoting just existences for oceans—goes to the heart of my observation and supporting argument that the Western discourses of law, aesthetics and science have the effect of crowding out of different perspectives and a diversity of human-ocean relations. I have demonstrated in this dissertation some of the ways in which Western subjects and institutions have worked, and continue to work, tirelessly to sustain a sense of legitimacy and garner material benefits through assertions of authority and hegemony that are grounded in the discourses of law, aesthetics and science.

Chapter 6 was written as a challenge to the Western practices of asserting authority and driving toward hegemony in relation to questions regarding what to do about the oceans. Integral to the discussion of Chapter 6 was a further insight of a social construction perspective outlined in the Introduction to this dissertation that oceans are not simply artefacts of culture. Rather, oceans are living entities that are independent of us. A part of the discussion in Chapter 6 focused on how we might acknowledge the agency of oceans—indeed give a voice to ocean dwelling life in deciding what is to be done about oceans. I argued in Chapter 6 that in working towards just ocean existences, oceans must be considered as active participants in marine environmental disputes and policy making. This needs to occur through pluralistic, democratic environmental political processes.

I began Chapter 6 with a discussion of the problems of essentialist and constructionist notions of nature and argued that we need a concept of oceans that are not reducible to human objectivity or human subjectivity, or nature or culture but rather imagine oceans as a co-construction between humans and non-humans. I drew upon the insights of particular ecological feminist theories and performative notions of nature that support the idea of oceans as indissolubly mixed in with culture.

Second, I discussed a range of approaches to ocean ethics and politics—a Sea Ethic, marine stewardship and environmental pragmatism. I pointed out the strengths of all three approaches but was critical of their failure to consider the moral worth of the self-directedness of non-human oceanic life or how democratic representation might be widened to acknowledge non-humans as agents.

The approach I advocated for in Chapter 6 was a process for political epistemology involving an inclusive democratic process—of humans and non-humans—that seeks cooperative solutions to shared problems and critical enquiry. I argued Latour's model of the collective procedure is a useful theoretical model in this regard that moves us toward consensus and cooperation in the pursuit of marine environmental policy through multifaceted engagement. In setting out Latour's model, I highlighted that his approach specifically addresses and facilitates non-human agency in a democratic process. This approach I believe would help to perform the oceans along new lines or, in the words of Shakespeare (1964), *a sea change into something rich and strange*.

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