An underwater photograph of a person swimming in clear blue water. The person is wearing a white t-shirt, dark pants, and a snorkel mask. They are positioned on the left side of the frame, with their head and upper body visible. The water is a deep teal color, and the lighting is bright, creating a clear view of the swimmer and the surrounding environment.

AMPHIBIOUS ANTHROPOLOGY

*ENGAGING WITH MARITIME
WORLDS IN INDONESIA*

ANNET P. PAUWELUSSEN

Amphibious Anthropology

Engaging with Maritime Worlds in Indonesia

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Amphibious Anthropology

Engaging with Maritime Worlds in Indonesia

Annet P. Pauwelussen

Thesis

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Prof. Dr A.P.J. Mol,

in the presence of the

Thesis Committee appointed by the Academic Board

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Cover: A dive fisher ascending to the surface of the water

¹ All figures and pictures were made by the author. The map on figure 2.3 was co-created with fieldwork interlocutors (see Chapter 2).

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Chapter 1

Introduction

< *1.1 A travelling fish trader talking on the phone*

Setting the scene

This thesis is based on eighteen months of fieldwork in a maritime region that goes by the name Makassar Strait on cartographic maps (Fig 1.2). However, as a fieldwork setting the Makassar Strait is not contained in singular terms of demarcation. Instead, the Makassar Strait involves a multitude of different regions in different situations, constituted by different kinds of human-marine relations. It is a marine throughflow between the Indonesian islands of Kalimantan and Sulawesi. It is also a shipping highway, and a smuggling route linking Malaysian, Philippine and Indonesian border zones. Sea-nomadic Bajau people know the region as a living space for people and spirits. For them, the movement and rhythm of the water affects almost every aspect of daily life. The Strait is also an intersection of different piscine migration routes and meeting places. Its thriving underwater life attracts fishers from near and far who use a range of different methods, some of them officially banned. In conservation circles the region is renowned as an epicenter of marine biodiversity in need of protection: assemblages of coral reefs, mangrove forests and marine species that make up coastal and marine ecosystems belonging to the so-called Coral Triangle (CTI 2016).

In my research I have come to know these different versions of the Makassar Strait as real in practice – manifesting in human-marine relations, yet not necessarily reducible to one another. This is how the region captured my interest, while I conducted fieldwork for my Masters in 2009, two years before I embarked on the PhD project. What fascinated me – and still does – is its multiplicity. The region goes by many names, spaces and natures and is ordered and performed in different ways.

I have explored and engaged with the multiplicity of my fieldwork setting. The Makassar Strait maritime region figures as a complex and amphibious land-sea interface in which different performances of human-marine relations meet. In practice, these different performances defy both containment and separation as they leak, spill over, and flow into one another, potentially generating new currents. The field site has thus never figured as a passive ‘background’ for study, but rather an active and shifting world – or worlds – of relations to learn from and theorise about. Moreover, as I made my way through and along different currents, they also affected me, pulled me, and moved me over as I simultaneously issued forth my own course.

This dissertation engages with this flow, the continuous fluidity of being and moving in relation. Flow is neither static nor singular. Flow is both movement as a

pattern of activity – the flowing – and that what flows; elements, matter and meaning in motion. It is also the methodological state of being immersed while focused on and in practice. Flow troubles modern science's attempt to contain, fixate and create knowable objects. As relational motion and partial immersion, flow eludes and diffuses clear-cut categorization, both in defining what is real (ontology) and how we can know this real (epistemology).

My own interest in flow is intimately related to the amphibious setting of my research: intertidal worlds of sea and land, coral spirits and fish bombs, seafarers and conservation practices. Amphibiousness refers to the capacity to move in both marine and terrestrial environments. In this thesis, I also refer to amphibiousness as the capacity to move in and between worlds that relate and partly intermingle, yet are not reducible to one another.

Anthropology has a history of attending to other-than-modern knowledge traditions in which fluidity and relationality are considered constitutive of the world. The notion of worlds in flow has also infused recent debates in ontological currents of anthropological theory in which reality is assumed contingent, fluid and multiple – thereby revitalizing the philosophical work of earlier thinkers, among whom Michel Serres and Gilles Deleuze. Although these currents have produced a proliferation of new and thought-provoking concepts and theoretical claims, much less attention has been paid to how to engage with this flow in an intimate correspondence with the field site; that is, in all its amphibiousness. How to grasp this flow and write about it without losing its vital fluidity and relationality? This is a challenge both conceptual and methodological.

Social science studies of maritime worlds have long portrayed the sea as a dynamic yet singular background against which people organize their social lives. In this context, maritime anthropology has evolved since the 1970's primarily as the anthropology of fishing. Although there are noteworthy ethnographies of sea-based ways of life in Southeast Asia (Chou 2003; Fabinyi 2009a; Lowe 2006; Stacey 2007) and beyond (Van Ginkel 2009; Helmreich 2009; Walley 2004), what still remains understudied is the multiplicity of maritime worlds, how they take shape relationally and make a difference as mobile and affective ways of life. I contend that maritime scholarship has much to gain from more ethnographic exploration of the relational practices in which different maritime worlds come to be and matter, and how they flow into one another in different sites and situations. Such exploration is also of

societal relevance as it generates insight in the world-making practices that condition and interfere with conservation and development interventions in Indonesia.

The idea of ontological multiplicity has gained traction in recent anthropological discussions. However, to date it has much less been applied to maritime worlds. In this thesis I wish to do just that and bring together ontological theory and the anthropological study of human-marine relations to allow cross-fertilization. Or, to stay with the liquid theme: to have them flow into one another, hopefully stirring up some new currents.

The way in which my fieldwork has evolved, and the methodological challenges I faced along the way, have formed to a great extent the course of this dissertation. In turn, my characterisation of the research setting as an ‘amphibious interface’ of different worlds is also a conceptual intervention, infused by the thoughts and words of other academics. Throughout the PhD research project I have reflected on how fieldwork practice and conceptualisation have poured into, and affected, one another. Such an iterative process allows for a form of theorising that is ethnographically inspired. This dissertation is thus about both a theoretical and an ethnographic expedition. As my ethnographic exploration has been inevitably and deliberately iterative, intertwining with anthropological theory and methodology, exposure of this process is crucial.

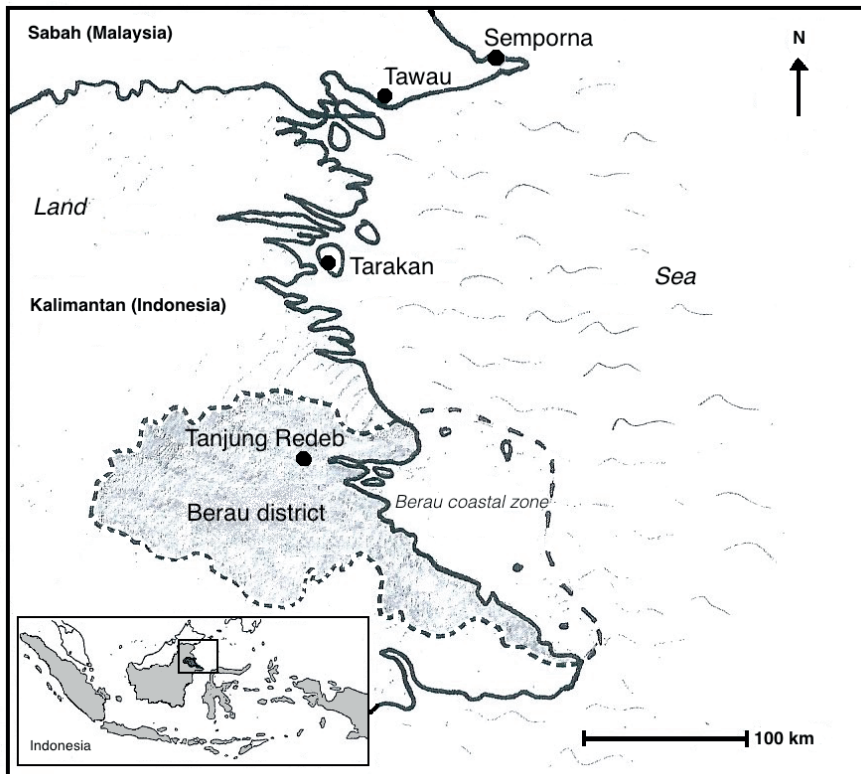
1.2 Cartographic map of the Makassar Strait



1.3 Seafaring in the Makassar Strait



1.4 Cartographic map of Berau, East Kalimantan



Preliminary developments

The story of this dissertation starts with my fieldwork experiences in 2009, in the northeastern part of the Indonesian island Kalimantan. There, I carried out thesis research for my Masters in Rural Development Sociology for Wageningen University. As a fieldwork site, I had selected a remote fishing village to explore how everyday life in this village was organised, and how this related to conservationists' attempts to involve local communities in their marine conservation program.² The village was situated within the Berau marine protected area (MPA), and international

² I went into the fieldwork with a critical attitude. On the one hand I sympathised with the conservationists' plan to work together with local communities to protect the coastal area against ecological degradation. On the other hand, I knew from my academic training that conservation projects' policies of local empowerment and community-based management are often at odds with local practices of organisation, and may exacerbate relations of inequality and marginalisation in the community.

conservation agencies TNC (The Nature Conservancy) and WWF (World Wide Fund for Nature) had an interest in involving this particular village into a program to make conservation community-based, or at least community-supported.

The Berau waters have attracted national and international interest from conservation organisations as an intertidal biodiversity hotspot (TNC 2006). The area has also attracted the interests of entrepreneurs in commercial fisheries and coastal development, as well as fishing crews who use methods deemed destructive to coral reefs. Protecting the Berau coastal waters from ecological degradation has been the primary incentive to designate this coastal area of the district as a regionally managed MPA in 2005. In the years that followed, TNC and WWF worked on developing zoning and management plans, while also attempting to generate support for this planning process among Berau's coastal and island population, referred to as 'local communities'.

The three months of fieldwork shook me up and left me a bit unsettled. The 'remote' village turned out to be an informal hub of overseas and inter-island trade and kinship relations. The more I delved into village life, the more it seemed to turn inside out and extend across the sea. The 'local' people I met appeared to be mobile and seafaring entrepreneurs who spoke various languages, none of which are considered native to Berau, or even Kalimantan. People – women and men, young and old – were on the move a lot to visit or stay with family and friends, to work, fish, trade, gossip or just for the sake of it. I was overwhelmed by the sense that my 'remote' fishing village was constituted by social and material movements and exchanges that exceeded my ability to comprehend from a land-based perspective. Following people's stories of origin, belonging, livelihood, and future plans led to a sense of following lines that string out overseas (Pauwelussen 2010, 2016). Moving along appeared a condition for getting closer to their way of life. Eager to move along, and explore these lines seawards, I decided to embark on PhD research. What followed was a reflection on how to set out a new line of inquiry.

Based on my fieldwork experience in Berau I first started to think that I had been moving about in a border zone involving a figure-ground reversal in perspectives (Strathern 2002). Conservation staff and policy makers in town (Tanjung Redeb, the regional capital of Berau) spoke of my fieldwork village as a remote and peripheral place at the 'edge of the land', far away from the 'centre' (Tanjung Redeb). In short, a land-towards-sea frontier. In contrast, people in my

fieldwork village spoke of Tanjung Redeb as a place in the ‘interior’ (*di atas*, up there), difficult to reach from the sea. In short, a sea-towards-land frontier.

Many of the villages along Berau’s coast emerged in the late 19th and early 20th century when migrants from Sulawesi, Sabah (Malaysia) and the southern Philippines came to Berau’s coast in search for fish, jobs in logging and trade or barter with Dutch colonial settlers (Krom 1940; Pauwelussen 2010). This history of migration has shaped the ethnic and linguistic composition of Berau’s coastal area. The majority of people living along the coast and on the few inhabited islands descend from the Mandar, Bugis (South Sulawesi) or Bajau (primarily from Central and East Sulawesi, East Sabah in Malaysia and the southern Philippines) families. As a consequence, narratives of belonging are often expressed as translocal and mobile webs of overseas identification instead of being indigenous to Berau’s coastal space (see Pauwelussen 2016). In other words, sea-based travel and mobility is a distinguishing feature of the Buginese, Mandar and particularly Bajau way of life.

Historical accounts have portrayed the Buginese as the quintessential seafaring entrepreneurs of the Asia Pacific, sustaining their famous traditions of boat building and maritime trade (Pelras 1996). Likewise, the Mandar are ascribed a collective identity of brave open-sea fishermen (Zerner 2003) and female fish traders (Volkman 1994). The Bajau – or Sama-Bajau – is an assemblage of semi-nomadic people that speak a similar language and are dispersed over maritime Southeast Asia (Sather 1997). While they have been stigmatised as outlaws and sea gypsies, the Bajau are also commonly known for their intimate practical and spiritual relations with the sea (Bottignolo 1995; Lowe 2003). Although only few Bajau people actually live on boats, those who are formally settled often alternate travelling and temporary boat dwelling with staying on land, typically in stilt-house villages above shores, reefs or sandbanks. Historical accounts describe Bajau worlds as inherently mobile and relational (Nolde 2009), creating and sustaining ‘trans-oceanic’ geographies (Tagliacozzo 2009: 98).

Obviously, such typology of peoples and traditions contains a risk of essentialising the fluidity between the different ways in which ethnicity and tradition are performed in everyday life. Moreover, I observed that intermarriage and adopting a different language was very common, adding complexity and fluidity to ethno-linguistic affiliations in coastal Berau. Indeed, the Berau coastal area could be characterised as a maelstrom of different peoples, languages, ethnicities, mobilities,

rituals, interests and senses of belonging flowing in and out of Berau's coastal waters. Importantly, the motion and convergence of these sea-based currents condition how new interventions – as new currents – are received or resisted.

In relation to this, the reversal I referred to above also applies to how people positioned themselves vis-à-vis the MPA. During my Master's research in the Berau protected area program, my fieldwork village was a 'local' instance in an encompassing conservation project. In contrast, my interlocutors in the village saw the conservation project as something local – a particular and temporary instance. The MPA project was subordinate to their immediate concerns with kinship, fishing practice, informal exchanges, sea spirits, debt, and patron-client relations. As I started exploring what the MPA meant, or was made to be in its webs of relations and practices, the MPA – both as an idea and as project – became unsteady, incoherent. As distance, scale and priorities were ordered differently, in everyday practice the MPA also changed form and sometimes disappeared in neglect.

This unsteadiness of the MPA was further exposed by other anthropological research in Berau carried out by colleagues from Wageningen University from the INREF-RESCOPAR³ (2007-2012) program. Kusumawati showed how diverging interests among public and private sector actors and agencies involved in the MPA program generated disconnects in how a marine conservation area was acted out in practice (Kusumawati 2014; Kusumawati and Visser 2014). Gunawan's research furthermore indicated how rules and zoning for fisheries in the Berau Delta contradicted each other, making the legal and spatial boundaries of the MPA ambiguous, negotiable and therefore highly permeable. The focus of conservation policies on making divisions between legal/illegal, and between local and foreign fishers appeared ineffective, as it disregarded how resource access was organised in practice (Gunawan 2012; Gunawan and Visser 2012).

In my reflections I sensed a structural incoherence, as I could not bring the world of conservation and the world of seafaring people together into one picture or narrative while at the same time retaining the principles that defined the Other. They both started with different assumptions of how to order time and space, how to belong together and how to know and relate to the sea. One way to settle the incoherence was to hypothesise that things were complex because different people

³ Interdisciplinary Research and Education Fund - Rebuilding Resilience of Coastal Populations and Aquatic Resources.

perceived, practiced, related to, enjoyed, managed and talked about the sea and the MPA in different ways. Such a position would suit a social constructionist approach. I would then conceptualise complexity as a matter of different perspectives on one dynamic yet ontologically fixed marine space – a sea known as the Makassar Strait that people relate to in different ways. Yet, by settling the incoherence in this way I would dismiss some propositions explained to me by my seafaring interlocutors, for example that the marine world was necessarily sustained in the exchanges with multiple spiritual and material agencies (see Chapter 4). Also, I would have to skip a question that I considered of primary interest: were they all talking about the same sea? I decided not to skip the issue but instead to go swimming: to engage with the different flows to explore how they do or do not go together.

This apparent incoherence of different basic propositions regarding what it means to live in a maritime world stayed with me and stimulated me to dive deeper into the matter of how to theorise and approach complexity and radical difference in human-marine relations.

Complexity and multiplicity

For theoretical guidance in exploring complexity I have consulted an extensive body of literature on the governance of marine resources and protected areas. Here, complexity is often described and studied as the dynamics and interaction of evolving social-ecological systems (Berkes et al. 2003). Among the influential research frameworks that have analysed complexity in coastal and maritime settings are social-ecological resilience (Adger et al. 2005; Cinner et al. 2009; Villasante et al. 2013), interactive governance (Kooiman and Bavinck 2013) and integrated coastal management (Christie 2005; Moksness et al. 2009; Pollnac and Pomeroy 2005). These are predominantly model-driven studies of institutional functioning and social-ecological system dynamics. Complexity is basically explained as the myriad features and properties of a multifaceted and highly dynamic yet ultimately singular world.

These theoretical frameworks turned out to not be useful as toolkits to study complexity in human-marine relations. Problematic is the tendency in these approaches to fixate the maritime world by imposing pre-defined categories of local/global, legal/illegal, land/sea and nature/culture that did not correspond with

the practices and relations I encountered in the field. An example is the common application of the term community – often together with the adjective ‘local’. Christie et al. (2009) for example point out the need for more empirical work to specify the local-level social dynamics for successful ecosystem-based management. These social dynamics are functionally integrated with ecological variables into the wider social-ecological system. The primary units of analysis to explain and prescribe social dynamics for management success are villages, used synonymously with ‘local communities’. Here, as in most institutional analysis in marine resource management (Thorpe et al. 2011), communities are the local, social instances of the wider and more integrated institutional system. The problem is that such analyses assume place-based, locally contained forms of cohesion and organisations that are untenable for many forms of maritime associations and collaboration (Pauwelussen 2016; St Martin and Hall-Arber 2008). Moreover, they assume a hierarchy in integration that is incompatible with the figure-ground reversal I described earlier.

For me, the problem is not so much that these approaches simplify what is always more complex in practice; rather, it is that they appeared to close off the very relations I wished to explore. Yet how to explore what escapes predesigned models without becoming endlessly descriptive, or falling back to a mere ‘celebration of complexity’? Simplification is an inevitable aspect of any process of ordering, making sense of complexity, and making it productive. In my search for an alternative theoretical approach I embarked on a voyage along a current at the time unknown to me: Science and Technology Studies (STS). In their edited volume on *Complexities: Social Studies of Knowledge Practices*, Law and Mol’s definition of complexity looked very useful and applicable to my case:

There is complexity if things relate but don’t add up, if events occur but not within the processes of linear time, and if phenomena share a space but cannot be mapped in terms of a single set of three-dimensional coordinates (Law and Mol 2002: 1).

In their introduction to the book, Law and Mol propose a line of inquiry that explores how complexity is ordered differently. The ontological assumption that underpins this approach is that there is not one single order, but that different simplification practices produce different orderings. It is this interrelation of different orderings

and simplification practices that make things complex. Complexity and simplicity are thus not opposites; they are mutually constitutive.

Philosopher of science Kwa (2002) discusses two tropes or metaphors to distinguish between different kinds of thinking complexity in the sciences: the 'romantic' and the 'baroque'. For the last two hundred years the 'romantic' conception of complexity has been the more orthodox, straightforward one in modern sciences.⁴ The idea is that reality is complex, but that in principle it "can be known and approached from the point of view of a fixed set of natural laws" (Ibid: 46). Every fragment and movement has its place in a complex yet functionally integrated whole and criteria can be established to delineate and recognise wholes, or systems, at different hierarchical levels of organisation.⁵

By contrast, in a 'baroque' notion of complexity as exemplified by Law and Mol's definition above there is no assumption of a higher-order whole or an underlying unity. Individuals or fragments relate by interference instead of by functional connection. They affect one another and in the process produce, or enact⁶ wholes. So, there may be orders or wholes of a higher conceptual abstraction than the swarming of individuals (or fragments affecting one another) but they are inherently contingent, and their delineation depends on situational criteria (Ibid: 46). In 'baroque' complexity, the world is uncertain. Uncertainty is ontological rather than epistemological, and it therefore cannot be fixed with more knowledge. According to Serres, dealing with this kind of complexity requires a new way of thinking:

Sea, forest, rumor, noise, society, life, works and days, all common multiples; we can hardly say that they are objects, yet require a new way of thinking. I am trying to think the multiple as such, to let it waft along without arresting it through unity, to let it go, as it is at its own pace. A thousand slack algae at the bottom of the sea (Serres 1995[1982]: 6).

⁴ Major theoretical currents in conservation biology and resource governance studies over the last decades are typically based on 'romantic' tropes of complexity.

⁵ Such holism furthermore assumes a hierarchy between different levels of organisation. Heterogeneous items or individuals of a lower level are integrated into a functional whole – or single entity – at a higher level of organisation.

⁶ The idea of enactment is a central conceptual tool in relational ontological approaches of STS, in which it refers to the relational practices through which reality is ordered, performed, continuously being produced (Law 2009).

Significant in Serres approach to complexity is the trope of flow, fluctuation and turbulence. It insists on a sensuous materiality that is not confined to an individual entity but flows out, leaks, spills over, blurring distinctions between individual and environment. Such irregular fluctuations in the movement of matter he calls ‘turbulence’. And it is this turbulence – the fluctuations that deviate slightly – that matters, that ‘makes a difference’ and is responsible for the continuous recreating of existence (Serres 1977, in Kwa 2002: 45; Prigogine and Stengers 1982).⁷

This way of thinking complexity is central to strands of literature revolving around the empirical study of relationality and ontological performativity. In the cross-fertilisation of STS, anthropology and philosophy, an assemblage of academic work has emerged that, despite differences, shares the objective to follow, engage with and translate how, in practice, material and semiotic realities come to be and matter – instead of developing a way to ‘access reality better’ (De la Cadena et al. 2015; Jensen and Rödje 2010; Kohn 2015).

Realities are being done in practices, as Mol (2002) has shown in her seminal work on atherosclerosis in *The Body Multiple*. As practices generate their own realities or orderings (which cannot be reduced to one overarching single order), there are always different realities in the making. So while in theory a body, or a MPA, may be single, in practice it is multiple. Multiplicity can thus be defined as the coexistence of different orderings, worlds or realities. How these relate has been empirically studied by Cussins (1998), Law and Lien (2013) and Verran (2001).

These relational approaches to the study of complexity and multiplicity have certain advantages for an explorative study of maritime worlds, or world-making. First, it ‘keeps the social flat’ (Latour 2005: 165-190). There is no a-priori division of the world into local and global levels, natural and social realms. As a consequence, there is no such thing as a neutral natural background against which human ‘social’ action takes place. As Law and Mol (1995) have argued, if the social were purely ‘social’, it would not hang together for long. The stability and durability of social relations reside in material heterogeneity. Dissolving the modern nature/culture

⁷ The significance of fluctuations can be explained by a textbook example of a fluid’s flow through a tube. The flow of individual moving particles can be described mathematically as long as the fluid proceeds slowly. Yet as the flow speeds up, small whirls appear. Although there is an empirical certainty that the whirls will appear, their movement cannot be predicted. The whirls are unruly; they do not behave according to natural law. As fluctuations or slight deviations in the movement of matter, turbulence matters, as it make a difference (Kwa 2002; Prigogine and Stengers 1982).

divide (see Latour 1993) creates room to explore how people, things and ideas associate materially and semiotically by following relational practices. Such approach furthermore sidesteps the structure-agency dichotomy, as every thing, agent, or structure is itself contingent on being relationally affected and enacted. Agency is thus distributed in the relations and practices that ‘make possible’ (Callon 1986; Law 2015).

Recent work in ontologically-attuned anthropology and geography has mobilised and reinvigorated the trope of flow and affect in anthropological analysis. For example, Ingold has critiqued STS studies for overlooking an element essential to world-making: the continuous becoming of the world in and by movement (Ingold 2011: 85-86, 149-152). Ingold draws from the philosophical work of Deleuze and Guattari (2004[1980]) by conceptualising the world as a ‘web of life’ generated in the lines along which life is lived:

[I]magine a world of incessant movement and becoming, one that is never complete but continually under construction, woven from the countless lifelines of its mani-fold human and non-human constituents as they thread their ways through the tangle of relationships in which they are comprehensively enmeshed. In such a world, persons and things do not so much exist as occur, and are identified not by any fixed, essential attributes laid down in advance or transmitted ready-made from the past, but by the very pathways (or trajectories or stories) along which they have previously come and are presently going (Ingold 2011: 141).

Deleuze and Guattari have elaborated the concept of affect as the capacity to move, or be moved. Affect (in Spinoza’s terms) means to have an effect/influence on something/someone. To affect is to make a difference in encounter, sustaining a relational and generative process. Stewart refers to affects as “moving forces” (Stewart 2007: 128), “the varied surging capacities to affect and to be affected that give everyday life the quality of continual motion” (Ibid: 2). Affect includes moving force, meanings or elements, but also emotion in the sense of feeling moved (by something) which subsequently finds expression. In short, an encounter is affective when it triggers a fluctuation, however tiny, that inspires, unsettles, troubles, or impresses (Archambault 2016) and thereby makes a difference. Importantly, Deleuze’s concept of body is not tied to the ‘natural’ or individual human body, and

can be seen as a way to shift focus from human agency to embodiment as a site for productive relations. Bodies, whether human, animal or mineral, are always relationally constituted: as bodies affect one another in encounter they also modify one another. In the process, new relations and affects are produced (Deleuze 1988: 124).

Taking in the notion of affect does (for me) two crucial things. First, it enables me to acknowledge effects of other-than-human beings and things without having to engage in a structure/agency debate (Archambault 2016). Second, it allows for exploring a sensuous performance or manifestation of a way of life (Hayward 2010). If I consider ontological anthropology as an ethnographically informed study of enactment, then it makes sense to also study how enactment works through anthropology's (human) interlocutors, not only to study how they (en)act, but also take seriously how they feel acted upon, affected, and moved.

Problem statement and research questions

In my research proposal for this PhD study (2011) I linked the notion of complexity and multiplicity as defined and explored in the previous section to the study of marine conservation policy and projects in Indonesia. However, fieldwork experience affected my navigation. The course of events I engaged with increasingly pulled me seawards. So much so, that I adjusted my research objective and guiding questions.

My initial objective was to carry out an ethnographic study of how MPA's are differentially enacted and made complex in practice. Conservation policies in Indonesia prescribe collaboration and local participation in setting up marine conservation interventions. Earlier studies have described these interventions as multifaceted and politically charged processes in which different versions and justifications of what the sea or marine nature is, and how people relate to it, co-exist and interfere (Gunawan 2012; Kusumawati 2014; Satria et al. 2006). These differences appear not only between project planners and so-called 'local people' but also between different sectors and agencies involved in marine conservation – thus complicating collaborative and participatory marine protection (Kusumawati and Visser 2014; Steenbergen and Visser 2016).

Conservation and development literature commonly present the MPA project as one whole. This whole is considered complex, but usually in what Kwa (2002) has

called the romantic version of complexity: The MPA is complex yet holistic and thus of a singular nature. Difference is (to be) ultimately integrated. This is clearly illustrated by studies of marine conservation and development (see previous section) that consider local complexity as an instance of a wider and encompassing framework of institutional relations.

Inspired by 'baroque' STS studies of multiple objects (Latour 1996; Mol 2002) my idea was to explore how the MPA is differently enacted in practices. I hypothesised that situated practices would generate different yet partially connected (Strathern 1991) MPA realities that may be coordinated to momentarily hang together, but do never really add up to one whole for good. Ontological incoherence is immanent to the MPA as it progresses materially and semiotically in different, situated enactments.

Taking a cue from my earlier experience with the 'local community' (Pauwelussen 2016) and the reversal that turned the local community inside-out, I assumed a similar move in exploring practices and relations of 'MPA building'. Turning around the idea of the local community in the MPA-building project, I proposed to investigate the MPA in the different knowledge practices and ways of life in which the MPA project was planned to intervene. Through this inversion I initially came to the following research question: *How do actors perceive social and institutional complexities in MPA building, and how are these differentially constructed through the actions and networks actors are engaged in?*

In my operationalisation, I focused on two conservation-building sites: the Berau coastal waters (Fig 1.4) and the islands off the port town of Makassar in Southwest Sulawesi, including the Spermonde Archipelago (Fig 1.2). Both field sites were subject to marine park development by governmental and non-governmental agencies. Moreover, anthropological and historical accounts of the region have described these field sites as two hubs in one cultural-historical seascape of migration, trade, and seafaring societies (Sutherland 2000; Tagliacozzo 2009; Warren 1997).

Over the course of research, my focus of study shifted from marine conservation to human-marine relations. As I followed the practices and stories of people offshore, the idea of MPA moved out of focus; that is, after months of fieldwork among Berau's coastal and island people, I realised the MPA was a matter of concern to me, but not to (many of) them. As I let the MPA drift a bit, I engaged

more in the stories, rumours and discussions whirling about around me. I made room for turbulence. Various other matters of concern then surfaced, among which debt, family, loyalty, fish bombs, disgruntled sea spirits, ice blocks, caring for intoxicated fishes, the tidal rhythm of the sea and the pleasures and fears of losing oneself by submersion in drugs and water. These matters did not fit my narrow MPA focus, yet appeared intimately tied up with how human-marine relations were experienced, narrated and 'done' in situated and embodied practices. I could have dismissed these matters as non-relevant, forcing myself to 'keep to the plan', but I chose to deviate from this path and let my study be pulled seawards.

Although this was a gradual process, I have a clear memory of one moment, several months into fieldwork, when I found myself sitting late at night with Bajau women around a petrol-lamp, weighting their plastic bags filled with dried clams. Next to me sat Langkah, a charismatic female trader, showing off her passport full of stamps. She asked me, with a mischievous twinkle in her eyes, if I was in for some adventure. She then invited me to travel (*jalan-jalan*) with her to Tawau as her adopted daughter and business assistant. The MPA was far away there and then, and Langkah's proposal was an offer I could not refuse. A few hours later I joined Langkah and her skipper to Malaysia. In other words, I was moved over by certain people, things, stories, and practices as they intrigued me, affected me and sometimes literally pulled me seawards to learn about different configurations of maritime ways of life. Marine conservation was the issue that provided access to these different human-marine ways of being, but ceased to be the primary research topic.

As my research focus changed I also switched the thematic and theoretical focus of the anthropological discussions I engaged in. Although I started with a critical engagement with conservation and development studies, my seaward voyages took me to maritime anthropology, looking for studies of seafaring and maritime people and how they relate to the sea. My new objective thus became the study and ethnographic description of the different ways in which human-marine relations were performed in practice and to explore how these differences could be conceptualised and theorised.

The first question that guided my fieldwork thus became: *How do maritime, sea-based people associate in ways that endure, and how do these associations relate to marine conservation policy?* Posing this question, I was primarily interested in

exploring a non-essentialist way to study the social condition of marine conservation in Indonesia. Following Latour's (2005) concept of the social as a sociology of heterogeneous associations acted out in practice, I was after ways to empirically and conceptually follow the relations through which enduring associations in the Makassar Strait were assembled and sustained. A novice still in relational ontological approaches, I was delighted by the practical use of the concept of network (or actor-network), discussed by Latour (2005) as the continuous assembling of relations in practice. This performative notion of network helped me to indeed explore how people form and sustain enduring webs of relations, and how these webs of relations – or networks – elude common marine conservation and development discourses. In this thesis I have elaborated this through a case study of Langkah, the female trader, and her informal and highly mobile sea-spanning trade network, the performance of which blurs common distinctions between business and family, legal and illegal, us and them.

The world of marine conservationists and the sea-spanning networks of relations that are exemplified in Langkah's case (Chapter 3) appeared as worlds apart. This seemed even more so in the ways sea-based people expressed and performed their relation to the sea. As Chapter 2 shows, the practices, relations and narratives I experienced during fieldwork at times intrigued me by their radical difference to what I knew or assumed. My second guiding question therefore became: *How do sea-based people in the Makassar Strait perform (think do and feel) human-marine relations?* Partially connected answers to this question are elaborated in Chapter 3, Chapter 4, and Chapter 5. Chapter 2 engages with the question of how environmental and affective alterity can be grasped in ethnographic practice, while Chapter 4 focuses on sea people's way of thinking and doing their environmental relations and Chapter 5 explores how these relations also include feeling through an affective interference between bodies and fluids.

Although I first experienced the onshore practice of conservationists and the offshore practice of sea people as worlds apart, as fieldwork proceeded it dawned on me that they also partially connected in certain encounters of ideas, practices, or people. This led me to my third guiding question: *How do these different worlds of human-marine performances relate?* This question is central to Chapter 4, which focuses on the way in which, in practice, people and coral move amphibiously in and between worlds that partially flow into one another. Importantly, here I also took into

account conservation outreach as one of the world-making practices to be included in my study.

After I addressed these questions – both in the field and behind the writing desk – I realised that they joined to form my ultimate research question: *How to grasp flow – the fluctuations of and between bodies, things or worlds in the making – conceptually and methodologically in relation to the multiple ways maritime worlds are performed in Indonesia?*

By addressing and engaging with the above questions I wish to contribute first of all to current debates in the field of maritime anthropology by way of ethnographically inspired theoretical and ontological reflection based on my study of different ways of performing human-sea relations. This objective follows from my own dissatisfaction with the conceptual-theoretical approaches offered in maritime anthropology. To navigate and grasp the different worlds, relations and practices I encountered during fieldwork, I experimented with different theoretical approaches that allowed me to critically reflect on and sharpen debates on human-marine relations in maritime anthropology.

In maritime anthropology, deductive research – with a focus on institutional analysis – has gained more traction than explorative, ethnographic research of sea-people's life worlds. The value of such ethnographic study lies not only in allowing room for the unexpected, equivocal, and informal relations that are elusive to models, but also to critically reflect and advance the conceptual and theoretical apparatus of maritime studies. More than a method to fill in empirical gaps, maritime ethnography allows for a critical reflection on how human-marine relations are theorised, and developing ways of thinking these relations differently.

Ethnographic insights, then, contribute to the advancement of anthropological theory on human-nature relations by including how *sea-based* ways of life come to be, and matter. Recent discussions on ontological multiplicity and fluidity stimulate such exploration of world-making that extend and elude the conceptualisation of maritime life as 'one world' – a world of a singular form and nature (Law 2015). Maritime anthropology has much to gain from more methodological and theoretical experimentation and reflection on the politics entailed in its choice to foreground

certain human-marine relations, while other are rendered invisible. This PhD dissertation provides such empirically based experimentation and reflection.

New ways of theory-building in the anthropology of human-marine relations have political and societal relevance. Conservation and development policies and research projects often prioritise one version of what is real, true, and what matters in terms of how people relate to the sea. In this, science-based knowledge is often considered as more authoritative than other knowledge traditions – which are seen as somehow flawed or, at best, subordinate to scientific knowledge (Holm 2003). Such approaches thus often exclude, and fail to take into account, alternative currents in which what is real, true and what matters is not only differently perceived, but also differently done.

Recognising this difference is of political, scientific and practical concern. Political, because exclusion of alternative currents reinforces the domination of one world-making project over others, without critical reflection and discussion on who suffers and who benefits. Such reflection and discussion is needed to make conservation and development projects truly collaborative and participatory. It is of scientific concern because these other-worldly practices often deserve or require to be taken into account to understand contemporary environmental challenges. Finally, it is of practical concern because these other world-making projects are being done anyway, even if scientists and policy-makers disregard them. Moreover, they are bound to affect how interventions are acted out. Excluding them will only make them more elusive to policy-makers and researchers alike.

Engaging with relational ontological approaches through my sea-oriented ethnography also led me to critically reflect on recent discussions about the use of ontology in anthropological theory. Incoherence and fluidity are theoretically constitutive yet ethnographically underexposed elements of how different ways of life and world-making come to be and matter, particularly in intertidal land-sea interfaces. This thesis therefore also aims to contribute to the critical development of ontological currents in anthropological theory.

Maritime anthropology

Imagine yourself suddenly set down surrounded by all your gear, alone on a tropical beach close to the native village, while the launch or dinghy which has brought you sails away out of sight (Malinowski 1922: 4).

In the early years of the discipline, anthropologists went overseas literally, seafaring to, from and between fieldwork sites, as Malinowski's opening scene of *Argonauts of the Western Pacific* (1922) illustrates. "[A]nthropology, the study of humanity, is as much the child of seafaring as of colonialism" writes maritime anthropologist Pálsson (1991: xvii). By these voyages overseas, different worlds were connected into a globalising and polarising network of power relations.

Ethnographic studies of island-dwelling and fishing communities date back to the founding fathers and mothers of the discipline (Firth 1936, 1946; Lévi-Strauss 1995[1955]; Malinowski 1922, 1935; Mead 1928). These were often focused on the in-depth ethnological study of folklore and material culture of fisher folk or island communities. However, the proximity of the sea did not make their "rustling-of-the-wind-in-the-palm-trees" style of ethnography" necessarily 'maritime' (Van Ginkel 2005: 46). The sea was hardly considered a substance to theorise on. Rather, the sea was a wet and windy passage 'in between', separating cultures, and at best a source for romantic rhapsodising (Helmreich 2011; Steinberg and Peters 2015).

It was only in the 1970's that the term 'maritime anthropology' gained some currency as a sub-discipline focused on human-marine relations – primarily fisheries. From then on, the field was staked out in academic courses, conferences and publications (Breton 1991; Van Ginkel 2005) and became institutionalised through the development of several academic hubs in maritime anthropological expertise⁸ and the founding of specialist journals, such as *MAST* (currently *Maritime Studies*) in the 1980's.

Early attempts to consolidate maritime anthropology were, however, met with scrutiny. While "maritime anthropology indeed has [had] few – if any – particular methods, concepts and theories" (Van Ginkel 2005: 47), others called into doubt the usefulness of making a sub-discipline out of "studies [that] have nothing in common

⁸ Maritime research groups were established at the Memorial University of New Foundland, University of Iceland, University of Tromsø, University of Girona, and the University of Amsterdam (Van Ginkel 2005; Pálsson 1995).

but water” (Acheson (1981: 275), summarizing Bernard’s (1976) critique. Acheson saw the significance of maritime anthropology as a sub-discipline in the shared interest in how human beings adapt to making a living from the sea, and in the idea that “[f]ishing poses similar problems the world over” (idem). Indeed, since the 1980’s maritime anthropology has become increasingly concentrated around themes and issues specific to fishing (McGoodwin 1990; Pollnac 1985; Smith 1977), with a common interest in cultural adaptation in fisheries’ communities (McCay 1978; Pálsson 1991).⁹

Overall, maritime anthropology has focused far more on fishing than other sea-oriented practices and occupations, even though the term ‘maritime’ may include ‘naval’, ‘seafaring’ and ‘ocean-going’ practices and relations. Acheson’s (1981) review article is telling in this respect, as it exposed the past contributions and future agenda of maritime anthropology as the ‘anthropology of fishing’.¹⁰ Nevertheless, social scientists have published on navigation (Gladwin 1970; Hutchins 1995), sea-nomadic lifestyles (Chou 2006; Ivanoff 1997; Sather 1997), coastal tourism (Boissevain and Selwyn 2004) and the practices and relations of marine scientists on board research vessels (Bernard and Killworth 1973; Helmreich 2009). However, these topics have remained marginal to what has come to be known as the canon of maritime anthropology. Likewise, the primary focus in maritime studies has been on the instrumental relationship between people and the sea, rendering symbolic, cosmological and phenomenological studies of human-marine relations scattered throughout anthropological literature (Driessen 2004; Magowan 2001; Ota 2006).

The sea gained a more prominent role in societal and academic debates since the 1980s due to an encroaching commercialisation of the sea and growing concern about the loss of marine biodiversity and changes in the biosphere, especially the threat of sea level rise (Butcher 2004; Visser 2004). This has evolved parallel to the development of international frameworks for the regulation of the sea and marine resources. Maritime anthropology likewise shifted from the investigation of a wide range of themes related to fishing and the sea to a narrower focus on marine policy

⁹ Due to the influence of cultural/human ecology USA-based maritime anthropology in the 1970’s and 1980’s focused on adaptation of fishing communities to environmental change. In the 1990s fisheries management became a more central issue (Jentoft and McCay 1995; Bavinck 2001).

¹⁰ See also the 1980 special issue on maritime anthropology in the *Anthropological Quarterly* (Poggie 1980).

and management, and a predominantly policy oriented type of anthropology (Bavinck 2001; Jentoft and McCay 1995).¹¹

Within policy oriented maritime scholarship major steps were taken to illustrate and theorise the importance and value of social science in marine policy and governance, which until then was dominated by natural science and economic theory (Bailey et al. 2016; Gray 2005; Pinkerton 2009; Tatenhove 2013). There is now a mainstream appreciation in marine governance and conservation literature of social science input in policymaking regarding livelihoods and poverty (Béné et al. 2016), legal pluralism (Bavinck 2005; Jentoft et al. 2009), and traditional ecological knowledge in a fisheries context (Adhuri 2013a; Berkes et al. 2001). Anthropological contributions to this body of policy oriented literature have shown how fishing communities are affected by, and cope with different legal frameworks and management regimes. Also, these have shed light on the value of fishers' indigenous institutions, norms and knowledge to the success of sustainable fisheries (co-)management (Dyer and McGoodwin 1994; Osseweijer 2000; Satria and Adhuri 2010; Steenbergen and Visser 2016). As Moore points out, such case studies often intend to guide policy implementation rather than scrutinise the main assumptions undergirding the models and policies that marine scientists and policymakers use (Moore 2012).

Despite the mainstream turn to policy and resource management, a sustained undercurrent in maritime anthropology has revolved around issues of structural inequality and social justice. Anthropological studies influenced by Marxism, world systems theory, and political economy have theorised and described the intensification of structural inequality in maritime economies with the spread of capitalist modes of extraction and production (Dodds 1998; Gaynor 2010; Warren 1980). Others have shown how maritime societies themselves, especially in Indonesia, have been organised along asymmetric patron-client relations, in which kinship and business interests are dynamically intertwined (Adhuri 2013b; Meereboer 1998)¹². Although often ignored or criminalised, these asymmetric relations condition how interventions for coastal development or marine conservation play out, and who benefits or loses (Fabinyi 2009b; Ferse et al. 2012;

¹¹ See also the journals *Marine Policy* and *Ocean & Coastal Management*.

¹² Particularly the historical literature on Southeast Asia has produced quite an extensive body of literature on how capture and trade of marine products is mediated through patron-client networks (Pelras 2000; Sather 2000; Schwerdtner Máñez and Ferse 2010; Warren 2007[1981], 1997).

Kusumawati et al. 2013). Asymmetry has also been described in terms of gender relations in fisheries (Gerrard 2008). Gender-oriented literature has pointed out the androcentric bias in Western fisheries paradigms, which has systematically ignored, undervalued or discriminated against women's 'publicly invisible' roles in fisheries (Novaczek and Mitchell 2006; Schwerdner Máñez and Pauwelussen 2016).

Another strand of social justice literature focuses on the very projects and programs set up to regulate, develop or conserve maritime sectors, communities or spaces. Marine conservation projects and policies have been exposed as interventions serving Western ideals and interests (Lowe 2006; Walley 2004). Similar to terrestrial cases, ideals of local or indigenous participation in marine resource management have turned out as discursive tools in top-down social engineering or identity politics to resist these interventions (Afiff and Lowe 2007; Søreng 2008). Fabinyi et al. (2010) have shown how ethnographic research can provide crucial insights in the local inequalities that condition how interventions for marine resource management are received or resisted.

Indigenous ways of perceiving, knowing and managing human-marine relations in Indonesia may differ radically from western notions of rights to, and management of, marine resources (Kusumawati 2014). A telling example is the case of Mandar fishers in the Makassar Strait, described by Zerner. Mandar practice of calling out verses and singing songs to move fishes' spirits while fishing illustrates not only a poetic performance of an intimate human-fish connection, but is also a distinctive and historically shaped poetic-political performance of claiming rights to marine nature (Zerner 2003). Likewise, Clifton and Majors (2012) have shed light on the disjuncture between marine conservation schemes and the tradition of the seafaring Bajau. They point out that the assumption of linear time on which conservationist ideals of sustainability are based are incompatible with the way Bajau perceive marine time as cyclical and tidal.

From this angle, social justice is commonly linked to a call to take (more) seriously the very different knowledge schemes by which indigenous and local people perceive and relate to their marine environment. It has been pointed out that taking seriously other experiential and epistemological traditions entails more than a mere adopting of local or traditional knowledge into (natural) science-based knowledge schemes (Brosius 2006; Holm 2003), but requires an appreciation of their value and rightfulness as a form of epistemological self-determination.

However, the critical reader may smell something fishy here. While a discussion of epistemological disjuncture in claiming fishing rights is important, ‘taking seriously’ other-than-western, or ‘non-modern’ claims also necessitates the acknowledgement of new entities and agencies in the political arena – such as fish spirits or poems. Doing so would require a reconsideration of what is real and what/who can act and affect. Also, if the Bajau assume their relation with the sea in tidal time and environmentalists assume that people relate to the sea in linear time, this begs the question: are they talking about the same kind of human-sea relations, or about the same sea, or even about the same notion of time? A difference in the temporal conditions of being in relation to the sea, as reported in the case of the Bajau, suggests a difference in how marine reality is ordered, lived, and performed. In other words, a difference that is not only epistemological, but also ontological.

Amphibiousness

When I was on the verge of diving into fieldwork for my PhD in 2011, to study the complexity and multiplicity of human-marine relations, I felt certain unease. Was I prepared well enough? Had I read enough? My promoter said to me: “You can prepare, and then prepare some more, but in the end it really is a plunge into the deep. Doing anthropological fieldwork is a matter of learning how to swim”. With renewed confidence, I plunged. And indeed, I became moved, thrilled, confused, and sometimes exhausted while learning to find and feel my way in a world sometimes radically different and at other times also intimately familiar.

The metaphor of learning how to swim, with its connotation of learning how to move in a different world in flow, is essential for doing anthropological work in an explorative way. It induces the ethnographer to move and think along unfamiliar currents, and to infuse existing theory and concepts with fieldwork insights. This, in my view, is what ethnographically inspired theorising is about. A methodology that allows for what Serres calls ‘thinking the multiple’: to immerse in it, let it waft along, and follow its pace, without a-priori arresting it in imposed concepts (Serres 1995[1982]).

My approach is inspired by the growing body of literature around the ‘ontological turn’ in anthropology (Holbraad et al. 2014; Kohn 2015). The term ‘ontology’ has become a popular means to serve the advancement of theorising

difference beyond cultural perspectives (Viveiros de Castro 1998) and has placed enactment central to the exploration of how realities or worlds come to be, endure, interfere or co-exist (Blaser 2012; Mol 2002). In theorising difference some ontologically attuned anthropologists have called for taking seriously Other – radically different – realities, or ‘world-making projects’ without reducing these to Euroamerican notions of objectivity, agency or ontological singularity (Blaser 2012; De la Cadena 2010; Viveiros de Castro 1998). Others, particularly those associated with (STS), have focused more on enactment and an explicit acknowledgement of ontological multiplicity (Jensen 2015; Mol 2002; Verran 2001). While the first has focused on ‘alterity’ and used the concept of ontology as a ‘model’ (different theories of existence), the second has engaged more in describing enactment, and used the concept of ontology as a reality claim. I have experimented and employed both ways of using the concept of ontology in anthropological analysis.

In ethnographic analysis, an emphasis on taking other realities seriously may very well go hand in hand with describing how different realities are enacted or assembled (Bonelli 2015; Pickering forthcoming). Also, despite their variation in focus and emphasis, different strands of ontological anthropology coincide in that they do not assume a stable ontological ground. They share a methodological commitment to trace in ethnographic engagement how worlds or realities are continuously being shaped – instead of assuming who acts and what exists. Such an ‘ethnographically inspired ontological anthropology’ makes room for non-human participants in world-making but is, due to its ethnographic methodology, never detached from human concerns (Kohn 2015: 312-313).

Considered as a conceptual-methodological approach that allows for getting closer to what moves and motivates *people*, and how they define problems, issues, and social orders, ethnographically inspired ontological anthropology is not new or unique. The tracing and describing of relational practices has also been central to ethnomethodology in social anthropology, particularly in phenomenological studies (see Garfinkel 1984). Indeed, it shares the radical and principled ‘agnosticism’ (Callon 1986) regarding social theory in order to describe how fieldwork interlocutors understand and analyse their world – instead of explaining their views away with pre-defined categories of reality. Two important ways in which current ontologically attuned approaches in anthropology differ from ethnomethodology is in the departing from the latter’s romantic holism, and by the often explicit taking in of

non-human agencies, things, beings, affects as moving forces that give direction to the currents of social life.

There are however tensions in the intersection between anthropology and recent post-human currents in relational ontological studies, for example in the vibrant materialism of Bennett (2010) or Steinberg and Peters' (2015) proposal to turn to 'the sea itself', its three-dimensional materiality and phenomenological distinctiveness.¹³ While I draw inspiration from post-human and STS-influenced theorising beyond hegemonic nature/culture and body/mind dualisms in modern thinking (see complexity and multiplicity section), mine is not a post-human project.¹⁴ My anthropological project is inevitably attached to human concerns due to its ethnographic – human-mediated – methodology (after Kohn 2013). In my research, my focus has been primarily on people and on their practices, narratives and logics of performing reality. However, by engaging with these people and their worlds I have learned about various other, non-human beings, things and flows that participated in the performance of these worlds – as they affected my interlocutors and me and the course of ethnographic events (Chapter 2). Through the practice of fieldwork, and following people and their concerns, I have encountered sea spirits, corals, ideas, emotions, maps and sea currents that appeared tied up with how maritime worlds are relationally constituted.

For Serres, translation is the following and making of relations between different worlds (see Harari and Bell 1983). As a metaphor of this relating and moving between different orderings of reality, Serres has drawn on the mythical figure of Hermes – patron of traders, thieves and travellers – who moves amphibiously in and between worlds (Ibid). Viveiros de Castro links a sortlike notion of translation to the primary anthropological task which he explains as a moving relation-making practice between ontologies: ways of thinking about and theorising the world that are (radically) different (Viveiros de Castro 2003). The concept of ontology here serves a commitment to take seriously the world-making projects and propositions of others (Blaser 2014). Instead of searching for what is ultimately true

¹³ Marine geographers (Anderson 2012; Steinberg 2013; Steinberg and Peters 2015) have explored the human-marine relationship as a dynamic social-material interrelation. Their works are inspiring as they draw attention to the sea as having a rhythmic and an affective capacity and therefore is also a force to be reckoned with in social science research.

¹⁴ It is not post-human in the sense of going beyond the human, due to my human-mediated methodology. I do however consider world-making as not limited to humans.

or real, anthropology engages with difference, thereby allowing for multiplicity and fluctuations in and between different ways of thinking and being. As Ingold contends, “we are dealing here not with a way of believing *about* the world, but with a condition to *be in it*” (Ingold 2011: 67; emphasis in original).

If indeed anthropology is a science of translation, then comparison is inherent to anthropological knowledge practice; ‘their’ (i.e. our interlocutors’) terms and propositions are determined in relation to ‘our’ terms. As a consequence, the Other cannot be known in absolute terms. I can only try and make explicit my relation with the Other by apprehending difference in relation to my conceptual and descriptive work (after Viveiros de Castro 2003). How to engage with and grasp difference in a way that saves room for Serres’ ‘thinking the multiple’?

Due to the iterative nature of my research, I have experimented with different concepts to capture, order and translate the relations that I explored. If these concepts were rafts, they have helped me making sense of complex fieldwork data. But I have not been sitting on one raft throughout the research project.¹⁵ This allowed for a certain mobility to not become too attached onto one conceptual raft, and keep my theoretical voyaging through literature in correspondence with the equally thought-provoking practice of fieldwork. I take concepts as metaphors, not representations of reality. As heuristic tools they help organise the sense-making practice of the ethnographer. For me this has been a two-way process: while a theoretical conceptual guidance was necessary to navigate through fieldwork, ethnographic engagement in the field also guided my practice of making sense of different theories. This was a progressive learning process, and this learning curve also shows in the way I use concepts in the chapters of this dissertation.

In chapter 3 I have used the Latourian concept of (performative) network to organise the mobile and fluid relations I engaged with during fieldwork. I wrote this chapter at the very beginning of the writing process, when I was searching for conceptual tools to help order the overwhelming complexity of ‘fieldwork data’. The other chapters were written about two years later. By that time I had moved towards translating concepts from my interlocutors’ stories or my own experiences with doing fieldwork. Chapter 5 therefore moves in a different direction compared to Chapter 3,

¹⁵ At times, finding my way through the multiple lines of thought with their corresponding conceptual scenery evoked a sense of swimming too. Sometimes I was splashing around without direction. At other times I eagerly moved along a productive current of thought which allowed me to deepen my analysis – or sometimes (to my frustration) drift away beyond the scope of the PhD.

as here I started with Bajau divers' concept of *kram* ('cramp') as a phenomenon that cannot be explained or reduced to modern science explanations of diving illness without losing its vital meaning in the divers' world of cyanide fishing. My fieldwork experience also inspired me to write about moving in and between worlds in a land-sea interface as a central theme for my PhD thesis (Chapter 2 and Chapter 4). Of major influence was the recurring narrative of Mandar people's relation to the sea through their kinship with animal-twins (crocodiles, snakes) that live both on the land and in the sea. Yet the concept of amphibiousness itself was introduced to me during the writing of the paper that lays at the basis of Chapter 4. My use of the concept of amphibiousness is therefore itself an amphibious product generated in the shifting interface between fieldwork and academia.

Making sense, while allowing room for multiplicity and flow, is also a methodological problem. To Serres, the most interesting places are sites of multiplicity, where different orders rub against each other, possibly infusing, destabilising or moving one another, and generating new connections (see Law 2009). Likewise, Strathern (1999) has written about the ethnographic moment as the bedazzling yet productive moment of incoherence when the fieldworker's analytical work and her ethnographic experience do not add up. There is turbulence. As these events invite the ethnographer to make sense, the ethnographic moment can serve as a possibility to new relations and interferences in fieldwork and analysis. To make room for this productivity, I had to let myself be moved over, and start wayfaring (Chapter 2).

Methods and practical considerations

In April and May 2011 I carried out a short field visit of six weeks¹⁶ to Makassar and East Kalimantan (Samarinda and Berau's capital Tanjung Redeb) as a preparation for the longer fieldwork planned later that year. During this visit, I reconnected with friends and acquaintances from my earlier Masters research, and explored how things had changed. In Makassar I scouted a site that was new to me.

¹⁶ Research costs were covered by the Wageningen School of Social Sciences (WASS) and the Rural Development Sociology group of Wageningen University, which was renamed Sociology of Development and Change in 2014.

A major part of the scouting during these six weeks in both East Kalimantan and Makassar was based on developing a network of acknowledgment and collaboration with official agencies and university departments. With the Indonesian Institute of Sciences (LIPI) as my research sponsor, the department of Fisheries and Marine Sciences of Mulawarman University (UnMul) in Samarinda was my local sponsor for my research in Berau. UnMul sustains a strong relation with Berau as a fieldwork site; over the last decade fisheries scientists of UnMul have been involved as researchers and advisors for the zoning plans for Berau's coastal waters. In Makassar I established collaboration with the department of Anthropology of Hasanuddin University (UnHas), which has functioned as the local sponsor for my research in Makassar, Spermonde Archipelago and Masalima Archipelago¹⁷, and its Research and Development Centre for Marine, Coast and Small Islands (RDS-MaCSI).

The main fieldwork took place from November 2011 until May 2013. During these eighteen months I was often on the move. Initially, I moved between Makassar and Tanjung Redeb, alternating several weeks or months of fieldwork in each of the two coastal cities. In both sites I visited and conducted interviews with various governmental agencies at provincial, regency, district, and village level offices. I had more informal conversations with security officers (navy, police) and Fisheries officers, who were stationed in coastal and island villages.

In Tanjung Redeb I had many conversations with staff members of The Nature Conservancy (TNC). While some were planned as interviews, others were informal conversations as I stayed with them (as homestay), worked at the TNC office, or joined their staff during outreach visits. Likewise, I interviewed and joined staff of the local NGO Bestari (Berau Lestari). I attended several workshops and training sessions organised by TNC or Bestari as part of their conservation or community organisation outreach programs both in town and in coastal villages.

In Makassar conservation outreach was primarily organised as part of the international donor-funded governmental program COREMAP (Coral Reef Rehabilitation and Management Project). COREMAP delegated part of its research, outreach and field monitoring to scientists from UnHas, whom I have also interviewed and joined to islands to discuss conservation with local fishers. During

¹⁷ Formally, only part of the Spermonde Archipelago falls under the jurisdiction of the Makassar municipality, while the other islands - and the Masalima Archipelago - are part of Pangkep Recency.

the first month of fieldwork I joined a group of marine ecologists and social scientists of the Centre for Tropical Marine Ecology (ZMT) of the University of Bremen, Germany on a weeklong field trip by boat.¹⁸ Later visits to islands in Spermonde I undertook alone or accompanied by an UnHas anthropology student to help me translate interviews carried out in Buginese and Makassarese. I spent several weeks on one of the islands on the outer rim of Spermonde Archipelago; an island known as protected by a strong guardian spirit and one of the few islands of Spermonde with a Mandar-speaking majority.

Although my fieldwork in and from Makassar was insightful and enhanced my understanding of the complexity of marine conservation with new insights of the COREMAP program, it does not figure prominently in this dissertation. My fieldwork in Makassar and Spermonde mainly served to broaden my view, and to raise new questions in the case of Berau. During the last six months of my fieldwork, Makassar and surrounding islands came back into focus through the seafaring relations of my interlocutors in Berau.

In Berau, from the start I weaved a web of familiar relations that gradually made it possible to travel seawards. My earlier research in Berau was helpful as a basis to meet and join new people. By chance, my host family during my Masters was part of a regency-wide network of extended Bajau kinship association, referred to as *bubuhan* (Kusumawati 2014) or ‘the Bajau family’. My own position as adopted daughter in this Bajau family through my former hosts was crucial for the development of my research. All along the Berau coast and in Tanjung Redeb I always had a place to stay and ‘family’ to ask for support. Moreover, it allowed me to contact one of my key research interlocutors: Ibu Langkah (Chapter 3), who happened to be a niece of my former host. Although I met her by chance, she later explicitly told my former host-‘mum’ that she from now on would take me (from her) as adoptive daughter. Joining Langkah opened doors in terms of gaining trust with the sea-based Bajau people on Sarang Island and beyond. Yet it was not just a matter of coming along on a boat. Sustaining these relations also required considerable effort and adaptation from my part. It included adaptation to a way of living and conducting that is in many ways different, adjusting to a diet of rice and fish, learning to sleep on the floor with the lights on, and gradually becoming sensitive to all kinds of subtleties of how one should relate to others.

¹⁸ This was part of their SPICE II research.

One of the practical consequences of expanding my adopted kinship networks was that I was increasingly moving around more stuff for other people. Bringing ‘souvenirs’ (*oleh-oleh*) – along with gossip and stories – from elsewhere was one way in which relationships are confirmed, as is the obligation to visit them whenever passing by their village or home. Travelling became both a consequence and a precondition for sustaining and expanding fieldwork relations and truly engaging in the way of life of my sea-based interlocutors. In order to keep up, I had to come along with those who themselves were constantly on the move. In effect, my research thus evolved from a multi-sited ethnography into a mobile ethnography; or, ‘to go’ appeared to be a condition ‘to know’ – not unlike Ingold’s wayfaring (Ingold 2011).

My primary take-off site was Sarang Island (a pseudonym). I refer to this island as a take-off site because I have repeatedly come back to it – though I never stayed for more than two weeks. Although just a tiny island with officially less than 1,000 registered inhabitants, Sarang was a hub for people coming and going, for trade and barter, fishing, work opportunities, finding a spouse, kin to stay with, or to join at ceremonial occasions. Some people – boat captains, traders and sea nomads looking for shelter and barter – would stay a few days, while others were seasonal visitors, coming and going with the abundance of certain fishes, or rather fleeing from the storms in other seas. Yet others stayed for several years, trying their luck in the island’s thriving fishing and trading business before moving along to other places. There was also a more permanent settlement of people owning houses and taking responsibility for the continuity of local customs and administrative tasks belonging to the Island’s status as a Berau village. The majority of the Island’s more settled population was of either Mandar or Bajau descent. While the Bajau were oriented northwards to other (mostly Bajau) islands in the coastal waters of Berau as well as Bajau enclaves in Tarakan, Tawau and Semporna, the Mandar were oriented southwards to the Masalima Archipelago and the harbour of Makassar (Paotere) (Fig 1.2 and 1.4).

From Sarang Island, I followed people overseas to other coastal places and islands in East Kalimantan, Sabah (Malaysia) and West and South Sulawesi. The vessels for these journeys were mostly fish transport boats, while shorter travels were done by speedboat or fisher boat. The purpose of the travels ranged from trade to family visits. While men were often at sea or travelling to fish or transport fish to coastal markets, women were no less mobile. It was mostly women who travelled

between islands and coastal villages to attend weddings, funerals, rituals to honour ancestors, and more in general to support or join their kin in times of hardship or celebration. Because Mandar and Bajau kinship relations are geographically dispersed across the Makassar Strait, following them also extended my fieldwork seawards up until the moment that my two field sites became partially connected through the travels, stories and enacted kinship relations of my interlocutors.

Towards the second half of my research I developed a close friendship with a Mandar woman whom I refer to in my dissertation as Alisha. My relationship with her, her husband and her adopted son introduced me to another overseas kinship network, yet this time linking Berau to the Masalima Archipelago situated somewhere halfway between Kalimantan, Java and Sulawesi (to which it formally belongs; see Chapter 2). My engagement and travels with Alisha and her extended family opened a route from Sarang Island along the Makassar Strait ‘highway’ of maritime trade and travel southwards to Makassar and Masalima. My mobile ethnography took me from a land-world bordered by sea to a sea-world bordered by land.

As I elaborate in Chapter 2, coming along was important in terms of gaining knowledge of what it means to live an ‘amphibious life’, yet travelling or coming along on fishing or reef gleaning trips was also important to gain the trust of the people whose life I intended to grasp. This has not been easy, and I have had to overcome considerable discomfort and – sometimes – fear as I spent the night hanging on to a pole as our boat was thrown around by wind and waves, as I became seasick, shivering from cold wrapped in my *sarong*, or as my bags were soaked by rain. Yet I also cherish the seafaring journeys – some took several days and nights – as some of the most beautiful and intensive moments of my research. Out of such initial discomfort it becomes possible to engage in a more sensitive way with what it possibly means to be or live at sea, not only as a cognitive relation but also an embodied and affective relation. Perhaps such engagement could be considered as a form of ‘affective participant observation’.

During the fieldwork I may have conducted over 40 planned semi-structured interviews, but actually I did not count them because the definition of and distinction between separate interviews is impossible and irrelevant (see below). For these semi-structured interviews I usually made an appointment, prepared a topic list and (sometimes) used a recorder. Yet often these interviews remained rather superficial. It happened regularly that only after the official interview, the interviewee started

talking openly about the more interesting issues. At other times, it was only after two or three interviews that someone decided to talk more freely. I have come to regard formal interviews more as a way to establish contact and acknowledge a person as somebody I wish to listen to and learn from, than as the crucial sources of ethnographic data. By far the most important way of interviewing in my research has been informal interviewing – ranging from hundreds of unscheduled conversations or intended visits to ask for someone’s explanation to recurring evening gossip sessions. Informal interviewing differs from ‘just a conversation’ in that I would still be doing my work as ethnographer by taking notes or by a deliberate effort at remembering.

The fluidity between interview and conversation has ethical implications, particularly regarding informed consent. I have from the start of my fieldwork been honest about the purpose and topic of my research, and about my ultimate intention to write about it for an academic audience. Although I think I explained my intentions well, the mobility of my research made it impossible (and absurd) to acquire explicit informed consent with all people I conversed with. I have explained my interest in the daily lives and practices of sea people, how they fish, trade and travel, and their relations with sea spirits. I have also made clear my academic interest in marine conservation, and how this is organised. It took some effort and time to explain to people that my research was not an extension from any TNC intervention or any other environmental program. Also my hosts and key interlocutors have played an important role in explaining to others my intentions to study and learn rather than change and educate. All personal names in this thesis and some of the place names (like Sarang Island) are pseudonyms. To protect the anonymity of the people I worked with I have not indicated Sarang Island on the maps that indicate my fieldwork site (Fig 1.2 and 1.4).

During fieldwork I have not used a formal translator. I speak *Bahasa Indonesia* well enough to conduct interviews and understand what people say even when not talking to me. I have also learned to understand and speak a little Bajau, and I have a very basic comprehension of Mandar. Informally, I have enjoyed the assistance of many ‘on the spot’ translators and guides who were willing to translate a conversation or made the conversation switch to Bahasa Indonesia. Also, some of my key interlocutors were precisely key interlocutors because they could (and wanted to) – more than others – explain to me what was happening, and what was being said

and done. Conversely, they also helped me with explaining my research intentions to the people I interviewed. Obviously there is always a risk of losing part of the conversation and receiving a partial message through the translation, yet my long-term stay in the field, repeated discussions with the same people, and the fact that I was not dependent on only a few translators makes up for some of this inevitable distortion.

Over the course of research, I have collected and studied a range of secondary sources like documents, maps, films, PowerPoint slides, and drawings. I have also made my own photos and films. Besides using these as documentation, I have also used photo, film and maps for elicitation, as they spurred new discussion or explanation among interlocutors (see Chapter 2).

The writing of notes was a daily and continuing activity throughout the fieldwork period. I have organised my note-writing as follows: I used a logbook to document my whereabouts, travels, and the productivity of my research (interviews, meetings, etcetera). During the day I carried along a notebook to jot down observations, short reflections and notes from informal conversations. Carrying around my notebook had the advantage of making people conscious of the fact that I was (also) still doing research. I used my laptop to elaborate notes into longer field notes, observations and interviews. While staying on the island or while travelling I used another notebook because of the lack of electricity. My analytical thoughts often emerged from writing my field notes, or while travelling. I also used a daily personal diary to write down personal experiences and reflections on doing fieldwork. Every three months I secluded myself to write an interim report to the Indonesian Ministry of Research, Technology and Higher Education (RISTEK) on my preliminary findings; this made me reflect on my progress and helped me set out my strategy for the months to come. I have not been back to Kalimantan between the end of my fieldwork period and today (end of November 2016).

Outline of the chapters

Chapter 2 presents a methodological reflection on how to translate environmental otherness in and through ethnographic fieldwork encounters. With this otherness – or alterity – I refer to ways of thinking, knowing and performing human-marine relations that differ substantially from the modernist nature-culture dichotomy in

which environment is considered a biophysical background against which human practice and meaning is formed. Although there is a rich and evolving assemblage of anthropological and geographical literature theorising and describing human-environment relations as fluid, hybrid and performative, much less effort is taken to reflect methodologically on how translation of environmental alterity can be done in ethnographic practice. Chapter 2 provides such reflection by narrating three dazzling moments of ethnographic encounter that initially confused me but also allowed me to follow new analytical or practical currents. This chapter thus first of all illuminates and substantiates how I did my own methodological and theoretical wayfaring throughout fieldwork and analysis, and provides empirical and methodological ‘meat’ to my concept of flow and amphibiousness. Secondly, I here develop the concept of amphibious ethnography as a methodological disposition relevant for anthropological research beyond my own project.

Chapter 3 juxtaposes sea people’s way of life to the way in which they are usually defined and targeted in marine conservation policy. I do this by way of describing my travels with Lankah. This Bajau woman sustains her overseas network of trade relations extending from Berau across the Indonesia-Malaysian border. Drawing from my experience of joining her along her travels and business exchanges, I describe the performance of her trade network as a continuously generated effect of practice and movement. I show that the performance of her network requires the ceaseless movement of people and things, in travelling (mobility) as well as in the reshaping of relations (fluidity). Langkah’s assembling of relations is furthermore intimately entangled with historically grown relations of (enacted) kinship, ethnicity, and patron–client associations across the sea.

The chapter is based on my publication with the same title in *Anthropological Forum* in 2013. Although I still agree with the main storyline of the article, I would probably write the article differently now – three years later – as my theoretical approach has ripened, and I have reconsidered clear juxtaposition between worlds. Also, inter-human associations receive more attention in Chapter 3 than the non-human and material relations that co-constitute the network I describe. This is an effect of a methodological choice to focus on Langkah’s moves, as well as my own learning curve to become sensitive to other-than-human agents, relations and affects, to guide me. I decided to keep the chapter as it is, because it actually suites very well

my intention to show the iterative process of ethnographic research – of which learning while writing is an essential part.

What the chapter does show is the relevance and importance of a relational ontology of the social in marine conservation policy. A relational turn in conservation is a necessary step towards bringing into interaction the world of conservation and the world of trade in maritime Indonesia. This idea is further developed in Chapter 4, which I wrote together with Gerard Verschoor for a special issue on Amphibious Infrastructures in *Engaging Science, Technology and Society*. Instead of juxtaposing the world of conservation and the world of the Bajau, this chapter describes how they also partially flow into one another. The continued practice of blast fishing among the Bajau is a thorn in the side of The Nature Conservancy in Berau. We describe how TNC attempts to stop Bajau people from using destructive fish bombs and turn them into coral protectors instead. But among the Bajau, blast fishing is discussed in very different terms. Both corals and the sea-dwelling Bajau people appear to be amphibious beings, moving between a changeable land-water interface, and between fluidly interwoven constellations of different beings and spiritual agencies. We show that the failure of conservation organisations to recognise the ontologically ambiguous nature of ‘coral’ and ‘people’ translates to a breakdown of outreach goals. We mobilise the concept of amphibiousness to describe the moving land-water interface as the actual living environment for both coral and people, but also to engage with the ambiguity and fluidity in the encounter between different, partly overflowing ways of knowing and being.

Chapter 5 turns to another ‘thorny’ fishing practice known as destructive to coral reefs. In Berau and the Masalima Archipelago, Mandar and Bajau fishers capture live fish by stunning them with sodium cyanide. To do this, some dive beyond the limit of what the human body can bare – or sea spirits allow. This chapter – co-written with Leontine Visser as an article submitted to an internationally peer-reviewed journal – focuses on the affective relations that cyanide fishing involves and generates. People engage in cyanide fishing not only despite known risks, but also because of known risks. The very riskiness of deep diving with cyanide is a source of pride to those who dare, and the practice excites feelings of both fear and delight. It is a sensational practice; it works not just through the senses, but also generates bodily and emotional alteration. Taking seriously these affective relations helps

understanding why cyanide fishers continue their practice despite its destructive effects.

Chapter 6 provides the conclusion to the thesis and discusses the four ethnographic chapters in line with the argument set out in Chapter 1 (Introduction). In particular, the chapter focuses on three main elements: i) The contribution of this thesis to a rethinking of maritime anthropology, ii) a methodological reflection on how to 'do' an ontologically attuned ethnography in the field, and iii) develop some ideas of how amphibious anthropology can contribute to reconsider marine conservation policy and implementation.



Chapter 2

Amphibious ethnography

< *2.1 A dive fisher disentangles his oxygen tube*

Introduction: relational environments

We leave Sarang Island as high tide sets in, heading for *Karang Besar* (Big Reef). Sitting at the back, Bahar steers his motorised boat, while his two cousins sit at the front. I'm next to Bahar, and look around. The island is shrinking to a spot behind us. Soon, we are surrounded by a greyish blue. Some moving shapes in the distance: other boats, I guess. Bahar slows down. As the engine calms down I can make myself audible, and ask: "Bahar, how do you know where to go?" He points to the water below and says: "Look at the colours in the water. You see how the water is playfully moving (*bermain-main*)? That means we have reached shallow water." I look down. I see coloured shapes of coral shimmer through the water. Bahar seems to see more; he knows exactly where he is. "A bit further" he mutters and while peering down into the water Bahar makes a slight turn and turns off the engine. "Yesterday, while diving around here, we came across a group of lobsters", he says. "We hope they are still around here." The fishing trip will be continued vertically. While his cousins prepare the air compressor, Bahar asks the *penghuni's* (guardian spirit) permission to go diving. (Field notes, 1 March 2012)

During my fieldwork in East Kalimantan I regularly stayed with Bahar and his wife on Sarang Island in their partly stilted house above the shore. Like many others on Sarang Island, Bahar practiced the Bajau way of life (*kehidupan Bajau*), alternating stays on land with dwelling for days or weeks at sea in his boat. Bahar was an experienced seafarer, diver and fisherman. Several times a year he travelled along familiar routes to the Island of Sulawesi, to Malaysia and the Philippines to visit family and friends. While familiar with an extensive marine space of travel and trade, he also had intimate knowledge of the coral reefs in the vicinity of Sarang Island. He had been diving on these reefs for years to catch fish and invertebrates.

Eager to learn about his in-depth knowledge of his marine environment, I initially attempted to interview Bahar. He was not a very talkative man, however. Instead, he often invited me along on his boat to test a new boat engine, to collect fish traps, or to go hunting for lobsters and sea cucumbers (*tripang*). It was only after the fieldwork that I realised that precisely because Bahar was not that talkative, he became a key instructor for learning what it means to live in an amphibious

environment – a dynamic and intertidal land-sea interface. It required me to – as he said – “*ikut saja, lihat sendiri*” (just join and see for yourself), following his guidance.

By joining him I gave in to not only a different way of sharing knowledge – showing rather than telling, but also a different way of knowing or experiencing the marine environment; one that is both relational and affective as it involves finding and feeling one’s way through a world in motion. Learning to know in such a relational and affective way changed what the knowledge was about. The marine environment appeared increasingly relational and affective too; a fluid and moving interface that can only be (partially) known in a sensitive and reflexive kind of engagement.

In this chapter I present and discuss a methodological approach and reflection on how to translate environmental alterity in and through ethnographic fieldwork. With ‘environmental alterity’ I mean ways of thinking and being in the world that are alternative to modern thought and/or different to the researcher’s mind-set/conceptual disposition. It also refers to the sea itself as an ‘alien’ world. As Helmreich writes: “If the wild and wondrous sea belongs to a zone of being beyond a steady and grounded self – (...) it belongs in part to what anthropologists call the order of the Other” (Helmreich 2009: 15).

My methodological approach – as it developed over the course of fieldwork – is best described as amphibious ethnography. Amphibious here refers not only to the practical engagement in the fluid land-sea interface that my interlocutors inhabit, but also to the methodological practice of moving in and between different worlds that are partially connected. This includes the worlds of the researcher and of the interlocutor, which are also simultaneously different and interrelated. They flow into one another through multiple fieldwork encounters, sometimes converging while at other times causing turbulence. These moments of turbulence may, as I elaborate in this chapter, be expressed in logical, emotional or bodily confusion.

The reflection links up with recent debates in anthropology on environmental otherness. A growing body of anthropological and geographical literature theorises the environment as not simply a biophysical background for human practice and meaning, but as inherently relational, performative and affective; a maelstrom of relations – both material and semiotic – that is generative of the world (Descola and

Pálsson 1996; Howitt and Suchet-Pearson 2003), including marine environments (Brown and Humberstone 2015; Helmreich 2009; Steinberg and Peters 2015).

Also, in anthropology different influential works have emerged that give room and thought to different ways of performing and conceptualising human-environment relations that may be different or even incommensurable with modern metaphysics. These are described as expressions of modes of being that overflow, resist or undo modernity's defining principles and orderings of the world, including its signature nature/culture divide (Ingold 2000, 2011; Escobar 2008; Viveiros de Castro 1998).¹⁹ This includes – but is not limited to – ethnographic studies of indigenous peoples' ways of thinking and performing their relations to non-human others (Blaser 2009; De la Cadena 2010; Kohn 2013).²⁰

In line with the turn to ontology in anthropological theory, there is now a widely shared dedication to take seriously different ways of understanding and performing human-environment relations without reducing such difference to one ultimately encompassing notion of what is real. Of course, non-modern ways of thinking about and relating to the environment have also been amply described and conceptualised in studies of ethnoecology and traditional ecological knowledge in environmental anthropology (Ellen et al. 2000; Nabhan 2016). As explained in Chapter 1, what is new in what I would call 'ontologically attuned environmental anthropology' (after Kohn 2015) is its commitment to take in difference as potentially ontological. Rather than seeing this disjuncture as a matter of different perspectives on the environment, these studies shed light on an underlying ontological disjuncture regarding what constitutes the environment in the first place (Howitt and Suchet-Pearson 2003).

If difference is seen as an epistemological divergence, people are thought to observe and know reality – the one 'really real' world – through their different

¹⁹ According to Latour (1993) one of the primary characteristics of the modern paradigm is that it assumes one all-encompassing reality, which is divided along a separation of nature and culture. In this, nature refers to the 'natural environment', considered as a universal reality 'out there' and culture refers to a layer of meaning, as subjective webs of significance which humans spin over reality, and the forms of social organisation. So much so, that the social and nature, and the separation thereof, have often been taken for granted as common sense in western knowledge traditions.

²⁰ Ingold has also pointed out that in practice, 'Western' people perceive and perform space or 'environment' in a relational and performative way too. In everyday life, people often know and use different repertoires of knowing and performing human-environment relations. Maintaining and imposing a clear dichotomy between 'Western' and 'Indigenous' environmental performances would therefore be unsound. Rather, certain spatial performances (have) become dominant or considered 'common sense' especially in the context of scientific practices.

culturally tinted glasses (see Peterson et al. 2010). However, if difference is taken to be ontological, people enact different worlds – or ‘natures’ in their multiple relations with others (things, beings, ideas). This corresponds to Viveiros de Castro’s (1998) ‘multinaturalism’, which he associates with Amerindian metaphysics: every way of being opens up to enact different worlds, natures.

A study of how different, partially related worlds come to be and matter is not necessarily of a metaphysical nature only.²¹ The enactment of reality is not limited nor contained in concepts, even though anthropologists do – in the end – seek to do conceptual work with them. Ontologically attuned anthropology may explore modes of being ‘made over’ (Kohn 2015: 313) by realities that are only partly human and that are vitally affective.

In the emphasis on logics and metaphysics in apprehending the relative difference and sameness of human-environmental worlds, one may almost forget that people are caught up in material, emotional and weatherly flows and fluxes that move us, penetrate us, or leak out of our body to mix with others. Realities are sticky, windy, wet and full of smells, vibrations, creeping creatures and leaky bodies (see Chapter 5). “What we have come accustomed to calling ‘the environment’ might, then, be better envisaged as a domain of entanglement”, writes Ingold (2011: 71). In Ingold’s theory of life, beings do not occupy but inhabit the world. By threading their paths through their multiple relations with others these beings grow or ‘issue forth’ in a continuous rhizomatic entanglement. This entanglement is the texture of the world, weaved through the ravelling and unravelling of relations (Idem).

These entangled human-environment relations have been theorised and described as affective in several recent anthropological works (Archambault 2016; Hayward 2010). These are two examples of a growing interest in anthropology to use the Spinozan-Deleuzian concept of affects as emotional and material flows, resonances and intensities beyond individual bodies (Jensen and Rødje 2010; Seigworth and Greg 2010). Studies in social geography have likewise theorised environments and spaces as of a corporal hybridity and material and affective fluidity (Thrift 2008; Whatmore 2002). In social geography, the material flow and vitality of the sea has also received ample attention recently as a source for thinking about the

²¹ I follow Kohn’s definition of metaphysics here: “the systemic attention to or the development of more or less consistent and identifiable styles or forms of thought that change our ideas about the nature of reality” (Kohn 2015: 312).

world as always on the move (Steinberg 2013). Anderson – for example – considers the relationship between surfer and wave as a fleeting moment of material and corporeal convergence (Anderson 2012). Embodied and affective encounters of people and the sea are also central to the edited volume ‘Seascapes: Shaped by the Sea’ (Brown and Humberstone 2015), based on auto-ethnography.

Relational and anti-essentialist approaches thrive in current studies of human-environment relations. They are producing thought-provoking theories on ontological multiplicities and the hybrid, affective and material relations involved in world-making and the continuous generation of life. It is important however to also explore and reflect on the methodological puzzles these approaches require and simultaneously generate in and for anthropological methodology. It is one thing to theorise relational and affective environments, but quite another to translate such relational ontology into the practice of ethnographic fieldwork.

If the human-environment relationship is considered as performative and multiple then anthropological methodology also requires reflection on how translation of environmental alterity can be done in ethnographic practice. Such reflection pertains to questions like: How to describe ontological fluidity without imposing coherence? How to grasp relational environments in anti-essentialist ways? What kind of reflection is needed, and what methodological tools or practices are helpful in this? New modes of thinking the hybridity and performativity that characterise nature-culture relationships (Tsing 2015) need to be extended by a critical reflection on how we – anthropologists – ‘do’ our knowing in ethnographic encounters and translation practices. This chapter is an attempt to do so.

In the next section I discuss anthropology as a project of translating difference and explore how such difference can be translated. I draw inspiration from three anthropologists – Eduardo Viveiros de Castro, Marilyn Strathern and Helen Verran – who all have put centre-stage the productive capacity of incoherence in the translation of difference. The subsequent three paragraphs narrate three of my own ethnographic moments of confusion during fieldwork that appeared productive for me to learn ways to think, perform and feel human-marine relations differently. Finally, in the conclusion I sketch out what is required in order to do ethnography amphibiously.

Anthropology as translation of difference

Howitt and Suchet-Pearson (2003) have called for attempts to grasp other ways of performing the environment and make them explicit. An attentiveness to other environmental performances and knowledge practices requires acknowledging that these do not follow an all-encompassing, or universal, logic or mediation (Law 2015). They can (partially) connect or converge in practical engagements (Blaser 2014; Jensen 2014, 2015; Watson-Verran and Turnbull 1995). Grasping such different performances of environmental reality in practical engagements of fieldwork inevitably entails a messy and experimental process, in which the world-making and sense-making practices of the fieldworker interfere with those of her interlocutors. Therefore, an ethnographic study of environmental alterity requires room for such messiness, experimentation and reflection. The experimental, ‘messy’ nature of anthropological fieldwork is “something to be celebrated rather than covered up” (Ingold 2011: 16).

I take the practice of ethnography as basically a process of translating other people’s worlds or way of life – including but not limited to linguistic and visualising repertoires – into description. This process of translation is intimately related to doing fieldwork – engaging with others in an attentive and reflexive way, and the ongoing effort to make sense out of these encounters. However, taking on an ontologically attuned approach in fieldwork requires a rethinking of comparison, which is a basic component of translation. For this rethinking I return to Viveiros de Castro’s (2004) concept of multinaturalism.

One of the most productive aspects of multinaturalism is in how it turns inside-out the comparative method that undergirds anthropology’s translation of differences. In multinatural metaphysics there is no stable ontological ground, nor one ‘nature’: “The shaman walking through the forest does not ask whether spirits exist (...); he wants to know only how to actualise a relation with them” (Kohn 2015: 319). Consequentially, Viveiros de Castro proposes to think of translation as ‘equivocation’: “[T]o translate is to presume that an equivocation always exist; it is to communicate by differences, instead of silencing the Other by presuming a univocality – the essential similarity – between what the Other and We are saying” (Viveiros de Castro 2004: 10).

A tension therefore lies in the commitment to engage and immerse with what is Other and the inevitable partiality of this immersion. This tension is also central to

Strathern's (1999) concept of the 'ethnographic moment'; a dazzling experience that takes the fieldworker off guard, disorients her, yet also invites her to follow and explore an unexpected analytical current. Strathern's ethnographic moment emphasises the productivity of analytical confusion to discern Other ways of performing and ordering reality. As a site of turbulence, the ethnographic moment allows differences to communicate as the fieldworker holds back (at least a little longer) her explanation of the Other by her own terms.

In line with this, Verran (2001) has narrated a disconcerting moment in a Nigerian classroom when her students taught children how to measure length though a different logic of abstraction and numbering than she was used to – and had taken for granted. She felt confused and disconcerted while at the same time curious to explore this puzzle. She contends that:

[T]his disconcertment, source of both delight and confused misery, must be privileged and nurtured, valued and expanded upon. These fleeting experiences, ephemeral and embodied, are a sure guide in struggling through colonizing pasts, and in generating possibilities for new futures. As a storyteller (a theorist) I treasure these moments, I do not want to explain them away. They are the first clue in my struggle to do useful critique (Verran 2001: 5).

In their fleeting subtlety these disconcerting moments are easily ignored, passed by as nuisances, interruptions. It is however possible to become sensitive to these moments of fluctuation and to learn to value and use them.

Following the lead of these three anthropologists I consider moments of confusion, uncertainty, and equivocation encountered in fieldwork practice as productive moments that can stimulate a reflective translation process. Like Verran, I do not want to explain them away. Instead, I take them as clues to explore otherness while also drawing inspiration from them to develop my own critique – in an iterative and cross-cutting movement between fieldwork and academia.

In order to work with the idea of the 'ethnographic moment' in my exploration of environmental alterity, I need to go beyond the analytical confusion and metaphysical difference described by Strathern and Viveiros de Castro respectively. This is a consequence of drawing on a relational ontological approach that takes in affective relations as essentially part of how the world – life – is constituted and reproduced in all its potential multiplicity. If I take reality to be affective, how to learn

about and engage with affects in fieldwork encounters? I am therefore interested in extending Strathern's 'bedazzling experience' of the ethnographic moment by including visual disorientation, haptic confusion, nausea, irritation, and the process of learning to become affected differently through fieldwork practice. In the next three sections I narrate three ethnographic moments that disoriented me but at the same time – in retrospect – also moved me over into exploring and learning a radically different way of seeing, performing and feeling the maritime world(s) of sea people.

The mapping experiment

During fieldwork, one of my primary take-off sites was Sarang Island. While staying on this island, I often watched boats coming and going overseas bringing along various people, fish, things and stories from and to other places. Boats were portals that brought parts of life from elsewhere to Sarang including relatives, tastes, smells, stories and trade wear. Those coming from Palu's harbour Donggala were known to bring juicy fruits from Sulawesi's highlands as well as stories of life 'up there' across the Strait, news from relatives, the price of fish, the condition of the sea.²² The sweet taste of ripe mangoes or watermelons was a treat for children and a taste of nostalgia for those who had left Sulawesi's rich soil for a fishing career in East Kalimantan.

One of the most anticipated vessels was the '*kapal loding*'²³ that sailed monthly between Sarang Island and Bali to transport live reef fish and lobsters, with a stop-over in the Masalima Archipelago. The voyage from Sarang to Masalima (or back) took at least 3 days of seafaring along the currents of the Makassar Strait. The arrival of the *kapal loding* always stirred up some temporary turbulence among Sarang's people, as it also brought along passengers, people, presents, trade wear, news, etc. Masalima was a place simultaneously far away and intimately near, as every month a bit of Masalima came into Sarang's village life. Most of the Mandar people on Sarang were born in Masalima and sustained close relationships with friends and family overseas. I first learned about Masalima through the stories of my

²² At the time of fieldwork there was no phone connection or mobile phone network on Sarang Island and in the Masalima Archipelago. Messages, stories and information between places often travelled along with boats.

²³ *Kapal* mean 'boat' or 'ship' in *Bahasa Indonesia*. People referred to the loading process of the live reef fish from the fish cages onto the boat as *loding*, and the boat was referred to as the *kapal loding*.

hosts Alisha, Masrif and their adoptive son Amir who had moved from Masalima to Sarang years before my arrival. Alisha's mother, living in Masalima, often sent along with the ship bottles of coconut oil which she extracted herself from the coconuts growing in her backyard – much tastier than those in Sarang, so Alisha claimed. After every shipment, we enjoyed the rich smell and taste of the oil in which Alisha fried our fish and bananas for breakfast. And along with the oil came the stories, the longing for home and the gossip.

Masalima triggered my interest and imagination particularly because it was a place often so present, yet I couldn't grasp its whereabouts in the way I used to: by looking it up on a map. On the cartographic maps I had brought along, Masalima was absent, as were the various places that the *kapal loding* passed by on its way to it. Obviously this was partly a matter of scale – the level of detail the map provides. But what struck me in particular was the discrepancy between how the Makassar Strait appears as an empty blue space devoid of habitation, while to people on Sarang the Strait was a lively and social space spotted all over with inhabited places related in a continuous current of overseas travel. The thought arose to start mapping these places, to visualise and discuss the Strait as a world to live in.

2.2 A cargo-passenger boat travelling between Makassar and Masalima



After one year of fieldwork, I saw my chance as Amir and Masrif invited me to travel along with them to Masalima. Assisted by Amir, I started soliciting stories and drawings from fishers and seafaring traders on our way from Sarang to Masalima and back. Making maps was however less straightforward as I initially imagined it to be. During our stay in Masalima, I ask Amir to help me with soliciting maps from fishers. However, Amir was puzzled about my intention to solicit maps from them in the first place. He said:

I asked around, and I haven't found a fisher who can help you with that. They don't understand what you want from them. I am not sure if I do, actually. These fishers, they are not the right people to ask, they don't know how to make maps. (Amir, 1 April 2013)

He suggested we would go to one of the nautical shops in Makassar instead, "to get you GPS, so you can make yourself a map that is accurate". Amir's initial resistance made me rethink my mapping plan. Either I would give in, and accept that making fishers map their environment is too much of a bold intervention, and stick to oral accounts of storytelling and performing marine space (see Turnbull 1990; 2007), or I would experiment by trying to find a way of mapping that is more in line with Amir and the fishers' terms. I went for the second option:

I: "Amir, but the fishers... they know where and how to go when they sail out?"

Amir: "Yes, of course."

I: "Do you think we can ask them to tell me more about this, while drawing on a piece of paper?"

Amir: "Sure, I'll do my best and explain this."

'Telling and drawing where and how to sail out for fishing, trading and travelling' appeared to be a method that Amir could work with, as well as the three fishers whom he contacted that same day to help us drawing. However, at the moment we started the 'mapping' alterity crept in. As I show below, now it was my turn to become confused, as our mapping oscillated between different ways of performing space.

The first fisher to map with was Budhan, Amir's cousin. Amir did the drawing, following Budhan's instructions. The first step was putting our position on the map. 'Where are we?' From here Amir drew a line, following Budhan's storyline.

Budhan: [Looks at the sheet]: "So, where are we?"

Amir: "We start here, this is Pamantauan Island." [He draws an oval in a corner of the paper, writes 'Pamantauan' under it.]

Budhan: [Taps his finger next to the Pamantauan oval] "If Salirian Island is over here, I depart in this angle" [Moves his finger over the paper, making the gesture of a line]. "The direction is 32 degrees northeast. First you reach the sandbank." [Amir meanwhile writes 'T' at one edge of the paper to indicate East (*timur*)]

Budhan: "After that there is reef one, then reef two, reef three, reef four, reef five, reef six, reef seven. Do you want me to give you the mileage?"

I: "Do you use it yourself to find your way over there?"

Budhan: "No. I follow the string of reefs."

I: "Do you recognise them individually?"

Budhan: "Of course. If I'm there around low tide, I see their shape. At high tide one can see the reef because the colour of the water is different. And the waves behave differently. Now, after reef seven, one sees the light of Lari-larian Island and the light of Lumut-lumut. I turn to Martaban and continue until the sea is populated with islands. I'm used to staying there, I have relatives on Balak-Balakan Island. My father and uncle are from there."

I: "How far is it from Pamantauan?"

Budhan: "One day and one night."

(Field notes, 1 April 2013)

When I asked him to draw the islands and reefs south of Pamantauan Island, he said:

This [he taps his finger on the paper, on the drawn lines] is what I know of the sea over there because I have been there often. When I was a boy, I already joined my father sailing along these routes to visit family. Not this here [he moves his finger over the paper Eastwards from Pamantauan]: I'm not used to going there, nor was my father. We don't have family over there, those are not our places. You need someone else to tell you. I think Achmad knows, he often goes there for trade. (Budhan, 1 April 2013)

Makassar]. Or we go here, Tinggalungan Island, I have family there; my cousin, she can cook the best squid! And this reef over here, it is crowded this time of year with fish and fishers. With Tambora Mountain at our left we go towards the Island of Lombok. From Sapuka Island it's one day and one night. (Field notes, 1 April 2013)

Achmad was narrating his itinerary while drawing lines, drawing and telling a lived-in marine environment of stories and travel. Enthusiastically, he travelled on paper while associating his lines with stories of where he (had) travelled or lived and where he knew others he related to. While he was doing this, other people joined. Soon his wife, cousins and children were sitting around the map, discussing the curious lines radiating from the oval in the middle: Pamantauan Island.

At the end of the mapping exercise on that April 1st fieldwork day, we had solicited three spatial drawings with three different men, visualised on one odd-shaped piece of paper (Fig. 2.3). What was this map? It was not necessarily a representation of the men's perception of marine space. They did not need a map, *I* did (or so I thought at the time). So one obvious insight from the mapping experiment was that the map was more about my own urge to create visual order in the myriad of spatial stories encountered during fieldwork than it was about the spatial or environmental knowledge or experience of my interlocutors.

Furthermore, the mapping made explicit some basic differences in organising environmental and spatial knowledge. My interlocutors' ways of drawing and telling environmental experience differed from what I had in mind as a productive organisation of human-environment relations. An example of this is our different ways of spatial orientation. Budhan indicated a familiar wayfaring mark and, applying his knowledge of cardinal points, set out a line of travel he knew from experience. Watching his drawing of islands and reefs, I felt disoriented. I felt an urge to visualise landmasses as a point of reference to know my position in the map. After Budhan finished his drawing, I drew two lines on the map, indicating the coastlines of Kalimantan and Sulawesi, thereby situating Budhan's line of travel in between – in the Makassar Strait. While I was hovering above the map – trying to oversee the whole area – Budhan started with locating himself in the map. From here, he set out

a journey along wayfinding marks in a maritime world without pre-defined geographical contours.

While Achmad's map foregrounded an inherently relational environment of memories, kinship ties, physical objects, and experiential knowledge of duration and navigation, it rendered invisible or irrelevant other (cartographic) ways of spatial ordering – by way of landmasses, administrative divisions and calculated distances along a timeless systematic grid. All the drawers knew of mileage, compass use and cardinal points, but in their stories and drawings these were subordinate to a relational form of environmental navigation. Their narratives were experienced itineraries through a highly dynamic social-material environment replete with varying intensities (e.g. the strong current of the deep sea) and seasons.

While most seafarers I met and travelled with knew the mileage between places, mileage did not provide much useful information in an environment of fluctuating intensities and forces. Whenever I asked 'how far?' people first answered in terms of duration; how many nights and days it would take to go from one island or harbour to another one using a particular kind of boat engine, depending on seasonal circumstances of currents, winds and spiritual presences. This corresponded to what I have come to know as one of the routine practices of seafaring people who are on their way – or about to take off: storytelling the conditions of their fluctuating marine environment with its seasonal changes in the intensities, routes and directions of winds, currents and fish. The mapping exercise sensitised me to the complexity of these environmental storytelling practices. The map brought together different lines of environmental wayfaring, however these lines narrated temporal as much as spatial environments. While Amir was drawing Budhan's story on paper, I asked Budhan if the map would look the same next month. He answered:

Of course not. Next month starts the stormy season. That's a different sea. Everything is much stronger then. Knowing the sea is a matter of knowing how to deal with the currents that cross your path. Sometimes it is fluent (*lancar*), at other times it is twisting and turning (*putaran*). One has to know these forces.

The environmental storylines solicited from the three men could belong to different seasons, different times, adding to the complexity of the men's environmental stories. However this complexity entailed more than their elaborate detail. However detailed,

the drawings by different men together would never provide an inclusive picture of ‘the’ marine environment, or ‘the’ sea. On paper, the three drawings resulted in a multiplication of places that were the same, but also different.

Although I offered new sheets of paper, they all decided to add their own drawing to the same map (the sheet we started with Budhan). On the map, the oval of Pamantauan Island was the natural starting position for the drawing of lines extending into different directions, as it was also our current place of telling spatial stories. As each line soon exceeded the edge of the (A4) paper, Amir glued new paper to the edges. This way, the contours of the map followed the extension of the lines. As a consequence we ended up with an odd-shaped paper surface made of several sheets of A4 paper glued together in different ways.

As a result, there were two Islands of Lombok on our map. Also, because we had been adding paper every time we hit the edge, Amir had added new orientations (West, East, etcetera). We ended up with three ‘Easts’ on our map, in different places. I admitted to Amir my concern that the map was becoming too complex, that it did not make sense anymore. I suggested to keep one ‘East’ and one ‘Lombok’, and have the others go – but then parts of the map wouldn’t fit anymore. Amir said to me: “I told you this would become a mess. They draw from experience. Their routes change, but the map can’t.” Then Achmad’s wife Mila joined our discussion and said: “don’t worry”. She moved her finger over the lines and islands that her husband had drawn and said: “You just follow the routes. This route has its Lombok, and that route too. See? It’s just like that” (Field notes, 1 April 2013).

As I travelled back with Amir from the Masalima Archipelago to Sarang I showed our map to various other seafaring people, while we also solicited new ones (Fig 2.4). No one ever expressed confusion about the proliferation of ‘Lomboks and ‘Easts’ on the first map, as long as it was clear from *where* they had to start reading the map: Pamantauan Island. Reading the map proceeded by way of following lines, in the same way as Achmad’s wife had pointed out: The map makes sense as long as the route or story can be followed. There are two Lomboks because they are produced in different stories, in different environmental performances, along different lines.

The making of the map sensitised me to this environmental multiplicity. The practice made this multiplicity readable and traceable to me as relationally constituted marine environments – or seas – that flow between being different and being the same. This multiplicity was not just discursive. As Budhan stated, seasonal

changes make for different seas, which is not the same as different temporal perspectives on one sea.

Discussing the map with different seafaring people, I also learned that this was a productive rather than a problematic kind of confusion or convergence of different itineraries. It made possible a productive exchange of ideas and practices in an ethnographic encounter where I learned how to follow and grasp and retell different spatial-temporal stories without reducing these to one topology of marine space; a neutral background in Euclidian space ordered along Cartesian coordinates.²⁴ Obviously, the mapping endeavour did not lead to a singular nor final representation of the fishers' environment. The mapping was translation in the sense of Viveiros de Castro's equivocation; a dialogue that sensitises to 'different differences'. In that light, it was an experimental intervention that amplified divergence between different ways to perform and enact space; relational space and cartographic space.

2.4 Mapping on an envelope while travelling by boat



²⁴ Euclidian space, with its 3-dimensional Cartesian coordinate system, defines the conditions within which objects can exist, maintain their shape and experience proximity and distance. Euclidian topology has become so much ingrained in Euro-American knowledge traditions that it often goes for common sense: "[That] space comes before us, that it is a neutral container within which our bodies (...) happen to exist" (Law 2002: 96). Conversely, in a relational and performative spatiality, it is impossible to pre-define and fixate what exists and affects. Objects, agencies and places occur as contingent effects, enmeshed in lines of other stories and trajectories.

My methodological experimentation to visualise seafarers' environmental knowledge evolved into an interactive mapping process that solicited discussion and reflection regarding how seafarers perform, organise and recount their marine environment in a way that makes sense to them. This was possible on the condition that I refrained from reducing my interlocutors' storylines to my terms of spatial ordering in my attempt to map the unchartable.

The practical engagement of the mapping endeavour had me reflect on my own land- and cartographic bias. For example, it led me to reconsider my idea of 'field site'. Although I initially planned to do my fieldwork in two sites, one in East Kalimantan and the other in Southwest Sulawesi, I increasingly let go of this land-based demarcation of fieldwork space, and instead saw my field as a meshwork of relations and travels, and proceeded accordingly. Moreover, the mapping triggered my reflection on the Makassar Strait as a multiple rather than a single environment. In my introduction to this PhD thesis I have therefore introduced the Makassar Strait as of different natures, alongside a cartographic translation (Fig 1.2 and 1.4). These insights and reorientations are an effect of the productive confusion this fieldwork intervention generated.

Affective navigation

The mapping experiment shows how seafarers' navigation entails a continuous positioning and moving along in a relational field. But what moves the seafarers? This information eludes the map.

To understand how seafarers move and are moved, I had to come along with people like Bahar, whom I introduced in the opening section to this chapter. I joined Bahar on his fishing trip on the coral reefs near Sarang Island – to 'see for myself' as he said. After several dives at this familiar spot, Bahar sailed his boat to another fishing site. However, the diving had to be discontinued. The sea around us had become eerily quiet. A storm was approaching. When it hit us, we all moved into the hut on the boat to shelter from gusts of water and wind. Our boat heaved up and down while rain showers smashed against the hut. The men reclined on their back, smoking cigarettes. I sat upright and looked outside. I noticed the direction of the wind had changed, the sun hid behind dark clouds, and the sea was a fierce whirling

of waves, surges and splashes of seawater and raindrops. I wondered how one could ever navigate such turbulence. How to find your way home?

Later, back home on Sarang Island, I asked Bahar these questions. He smiled and said:

I will tell you a story: Once I left Donggala [Sulawesi] to go here [Sarang Island]. In my boat [was] my family, and some other passengers. When we were halfway, in the middle of the deep sea, storm and rain caught us. My wife, she was afraid. The thing is, one just can't overpower the sea, it is always much stronger than us. So I gave in and waited while the sea rocked our boat to and fro. After the storm, the stars were hiding behind clouds. But lying down in the boat I felt the rhythm of the waves. There are different ones; long and short waves. The wind can make the short waves change but the long waves... they change with the seasons. We use those to know where to go. You get used to it. If we are on the sea often, we start feeling it inside, without being aware. As long as I am at sea, I feel [the motion] here [He places his hand on his stomach]. From that I knew in which direction to continue. We arrived here safely. I was never in doubt. (Bahar, 1 March 2012)

Joining Bahar made me consider what it means to travel 'in'²⁵ (and not 'on') the sea as a weather-world of a material velocity that gives shape and direction to navigation. I learned that navigation for Bahar – and for many other Bajau seafarers – is to a great extent based on an affective relationship with the sea and the sea's movement. This resembles Ingold's (2011) notion of wayfaring as navigation that actively involves all the senses; it is haptic as much as optic orientation (see also Hutchings 1995; Turnbull 2007). Such knowledge often remains implicit – as it is ingrained in the embodied relation that seafarers sustain with the sea.

These relations include the sensation of feeling good, confident, comfortable, or the opposite. I once asked Bahar if he ever felt bored at sea, especially on trips that take days or weeks. He replied: "Never! The sea is different every day. Moreover, there is always something to do." (Bahar, 1 March 2012) While staying with Bahar's family for a few weeks, he mentioned several times how he preferred to sleep in his boat over his bed in the house, because of the feeling of being rocked. His wife

²⁵ Sea people in Indonesia commonly say they "go down to the sea" (*turun ke laut*).

referred to Bahar's addiction to the sea as a typical Bajau issue: "these Bajau men, they just can't stand staying on land for too long; they'll feel land-sick".

At another moment during the fieldwork, I happened to cross the Makassar Strait along the same route as Bahar's in his story above (albeit in reverse). I joined a fish transport boat from Sarang Island to Donggala in Sulawesi. The sea was calm, so I was resting outside on the front deck. The captain walked out of his wheelhouse to the front of the boat. Standing there, facing the sea, he inhaled deeply. He lit up a cigarette, kept standing there for a while, silently staring into the distance. After he had finished his cigarette he turned around and said: "Rough weather is coming. You need to get your things and go inside" (Field notes, 5 February 2013). He then walked back to the hut to take place behind his steering wheel. Instead of crossing the Strait, he slowed down the engine and continued navigating southwards, staying near the shoreline of East Kalimantan. Within an hour, high waves rocked the boat from left to right; I had to hide from rain showers and seawater splashing into the boat. Upon arrival in Donggala, after a long and exhausting journey, I asked the captain how he knew rough weather was coming. "I smelled it" he replied matter-of-factly. "The sea has different smells. Over time you'll get to know these." The captain's wheelhouse had been fully equipped with modern navigation appliances. However when he – at a certain moment – explored his options for crossing the Makassar Strait eastwards, he went outside and used his nose.

Research that focuses on optical and verbal ways of sharing knowledge easily overlooks embodied environmental knowledge like smelling the rain and feeling the waves. In order to learn about such knowledge I had to come along. I had to submit myself to the same affects, the same flows of smell, water, wind and motion. Obviously, I felt waves when I joined Bahar on his fishing trip, even though I was mostly apprehending the sea's turbulence visually at that time. Did Bahar feel more, or differently? Did he feel a rhythmic composition of moving seawater? Pálsson has described sensitivity to sea motion as a bodily disposition acquired through a process of 'enskillment', which his Icelandic interlocutors referred to as 'getting one's sea legs' (Pálsson 1994). In a similar vein, Latour has described how the art of wine tasting involves 'developing a nose'; an olfactory training of the nose to become affected and make differences in (wine) odours (Latour 2004). Over the course of research, I have also learned to become affected by – more sensitive to – the rhythm of waves and the

different smells of the sea. I do not know if I feel or smell the same, but by joining I have become sensitive to the significance of these kinds of affective and embodied environmental relations in the practice of seafaring.

2.5 The sea as a weather-world



The egg incident

During the second half of my fieldwork period I often attempted to learn about the relations Bajau sustain with spiritual beings. From the literature on Bajau cosmology, one can learn that the Bajau world is an animated world in which people live with ancestors, guardian spirits, wandering souls, and other spiritual presences and absences (Bottignolo 1995; Nimmo 1990). However my own exploration of human-spirit relations among the Bajau in Berau was mostly met with accounts of haunted reefs or of persons who had disappeared at sea because of a vengeful sea spirit. Although fascinating, these stories remained rather anecdotal, and often appeared to be told (partly) as a form of a storytelling entertainment. When I asked if the Bajau

people believed in the existence of these spirits, people mostly laughed and said something like: ‘No, we are Muslims, we believe in one God’. Asking about the spirits’ existence and the consequences of such existence for Bajau people’s relation to the sea appeared not a fruitful move.

At one moment when I was staying on Sarang Island – ten months into the fieldwork – I was invited to come along with a gleaning trip. It is common practice among Bajau women to go reef gleaning in search for edible or otherwise valuable marine creatures, such as clams, lobsters, sea cucumbers and edible seaweeds (Schwerdner Máñez and Pauwelussen 2016). While most women went gleaning in pairs or in small groups – leaving the island walking or by a small wood-carved boat and peddle – there were also gleaning trips in groups of eight to ten people (mostly women) by boat to more distant reefs and for more commercial purposes. These trips were organised primarily to collect giant clams (*kima*) which were bought by traders for export to Malaysia (see Chapter 3). Eager to participate in and observe one of these gleaning trips, I accepted the invitation. Below, my field notes from this trip show how I accidentally offended a sea spirit.

I arrive at the boat owner’s house at 8 am, as instructed. In my left hand a plastic bottle filled with drinking water. My right hand carries a metal food container that fishers use to bring lunch on their fishing trips. From my host family I have borrowed the pieces of my reef gleaning outfit; a hooded sweater and an old legging that disappears into long football socks in rubber shoes. On my head a straw hat to protect my face from the sun. As I expected, the other women can’t help giggling about my appearance as a born-again Bajau woman. But there is not much time for joking: we have to reach the Big Reef before low tide sets in.

The captain heads north. For about one hour we glide through a calm blue at a steady pace, until we reach the Big Reef. The captain slows down. The women know precisely where we are. They point around the boat to the coral reef formations below the water surface and discuss. They recall what kind of creatures they have found during earlier visits, and they comment on changes they observe. This is their working space. After considerable discussion they reach consensus and instruct the boat captain where to stop and anchor the boat.

As soon as the boat is anchored, the women start preparing. They clean their masks, put on their rubber shoes and they check their gear: a forked

crowbar (to pry open the clams) and a fine-meshed netted bag (to carry the harvested clams). I am eager to dive into the water, because my black leggings is burning under the scorching sun. “No, no”, one of the women tells me: “We have to eat first”. I tell her I just had breakfast and I’m not hungry yet. Not the right answer, I realise, as the women almost simultaneously dig up their lunch from their bags. One of the women approaches me, picks up my lunch and drops it on my lap and says: “Here, you’d better eat something”. Then she adds whispering: “If you enter someone else’s home, and you refuse to eat, this can be perceived as rude”. I agree, and silently wonder who our host is.

Soon everyone around is eating; rice, fried fish... some have brought freshly made hot *sambal* sauce. The women are cheerful and peer in each other’s lunch containers. “What fish did you bring?” “I have rice left, who wants?” I open my lunch container to join them, and I show what my lunch has to offer. At the moment they set eyes on my lunch box, the atmosphere changes.

“An egg!” One woman yells. “Look, she brought an egg!” Others react: “No! Did she? A boiled one?” They all stand up immediately. Some approach me while the rest starts discussing something in agitated whispers. They appear afraid. “Annet, come here, quick!” An older woman next to me looks me in the eyes firmly and points to the cabin on the boat. “You go down there now, and you take that egg with you”. I crawl into the small cabin, holding my boiled egg tightly against me. Before the woman closes the cabin door behind me she urges me to eat my egg as quickly as possible and not to throw away the shell in any circumstances. Startled, I follow up her instructions immediately without even trying to grasp the situation. I sit in the cabin silently listening to the women’s incantation addressing a sea spirit, until they open the cabin. I see relieved faces. They smile at me. From my hiding place I tell them that I am sorry. The older woman says to me: “We know. You can come out now. We made clear you didn’t know. You are ignorant. I think she understands that”.
(Field notes, 19 September 2012)

The rest of our gleaning trip proceeded as planned, and during the boat ride back to the island the women were cheerfully reflecting on their good catch. At first, it seemed nothing had changed, apart from the fact that all women dropped by my house in the week after the incident to ask if I was feeling okay. Admittedly, I suffered from a nasty headache for two days after the gleaning trip. Soon I started to notice that people on the island were treating me differently. They now came to me to

explain their relations with spiritual and ancestral beings at sea. After the gleaning trip the elderly woman (who was also known as a spirit medium) explained to me how I had interfered with human-spirit relations on the coral.

We are not alone at sea. We can't behave as if we are at our own home, doing as we please. We are in the home of the spirit guardian. Round eggs²⁶ are ritual food. We feed those to the sea spirits, just like yellow rice. So we should not just go and eat it ourselves while we are on the reef. That's offensive. One insults the spirit in their own home, and this can be catastrophic. We're never sure, because some of these beings are hot-tempered, which also makes them unpredictable. So we have to be careful. They can really harm us. (Field notes, 21 September 2012)

One of the Bajau elders, granny Juhaira, was often called for to identify the sea spirit or ancestor disturbing someone returning from a diving or fishing trip. Sometimes it concerned visiting ancestors from the Semporna area, two days by boat northwards from the island where she lived at the time. Juhaira was born there, and sustained family relations with Bajau kin as well as with spirit worlds overseas through her frequent visits and by attending ceremonies. She was knowledgeable of spirit dwellings closer to the island too, as she had roamed the coral reefs in the vicinity of the island for decades, gleaning for shellfish and invertebrates. Once, just coming back from one such gleaning trip, she explained the importance of acknowledging and respecting the homes of non-human beings:

I: "So there's someone there?"

Juhaira: "Well, yes of course."

I: "And you ask permission?"

Juhaira: "Yes. I ask her permission. Before we go down [into the water] we say: excuse me mam, we go down now (*permisi ne, kita turun dulu*). Not acknowledging her so would be rude. It's her home."

(Juhaira, 13 January 2013)

²⁶ Eggs can be brought along as ordinary food provided that the shell is broken (e.g. as a fried or scrambled egg). These rules apply to situations in which something is taken from the sea such as fishing and gleaning. When travelling, taking along and eating a boiled egg it is not considered problematic.

2.6 Bajau woman cutting clams



2.7 Bajau woman preparing for reef gleaning



2.8 Bajau woman on a gleaning trip

2.9 On-board preparations for reef gleaning

Bahar similarly told me: “Mostly it is enough if you acknowledge them with respect, particularly when you go inside [the reef]. In principle, people and spirits are not in each other’s way”. Another complemented:

But during the stormy season they sometimes come on board. I was taught by my father always to check the flagpole, they appear as a sparkle. You can chase

them away by sprinkling lemon juice on the flagpole. If you let them come along on your boat they interfere with your travel. (Field notes, 18 January 2013)

Similar stories of ‘hitchhiking’ spirits abound across the Makassar Strait. Also in Masalima, where Amir once told me: “The spirits show themselves at night, as a sparkle. Look at the fishing boats: the bundles of hair tied together and hanging from the flagpole. It’s to keep the spirits off the boats” (Field notes, 17 January 2013). Other recurring stories narrated the encounter with spiritual agencies in the shape of (schools of) fish, notorious currents, and peculiar coral- or rock formations (see Chapter 4 and Chapter 5). Some coral spaces were haunted spaces, narrated in ghost stories. An example is the story of a flourishing reef, which was inhabited by a being that sometimes showed itself as a man with a pointed head, probably (so the story goes) the restless spirit of a deceased person:

A blast fisher from elsewhere saw him again some years ago, when he took a lot of fish from there. While he was underwater, collecting the fish, he saw the figure with a pointed head between the coral rocks. He quickly went back to the boat and threw another bomb towards the place where he saw the figure. The body surfaced as a human body. They quickly fled, and told us [on the island] the story. We have heard it before. We know that if we go back, the body has disappeared. (Umar, 18 January 2013)

I’ve come to know the world of the Bajau and Mandar as populated by different kinds of spirits, ghosts and ancestors. Some dwell in particular places; others travel, while some are notoriously fluid and able to shift between different kinds of bodies – including human ones (see also chapter 5). Some of the Bajau and Mandar elders performed shamanic practices on an almost daily basis, particularly during stormy seasons (known also as the season of spirit possession and spirit-induced diseases). Navigating this lively and animated world at sea requires relational skills and spiritual knowledge. It is no coincidence that some of the most skilled maritime navigators on Sarang Island were also spirit mediums and traditional healers.²⁷ Knowing one’s way at sea is inseparable from knowing how to identify and associate

²⁷ The general Indonesian term is *dukun*, but during my fieldwork people more often used the term *orang pintar*; ‘smart person’.

with various forms of (spiritual) agency or affect, whether waves, winds or spirits. Being a good seafarer is about being relationally sensitive and knowledgeable.

Joining the gleaning trip with the egg incident was a crucial ethnographic moment. Obviously, joining the women provided new insights. Although not done on purpose, my 'mistake' as an ignorant apprentice allowed for seeing implicit rules and norms become explicit. What is important here is not just the joining of the practice, but the opening up to become affected in a new way. I took seriously the women's concern that indeed something was wrong and out of place. Holding back my own explanation, I immediately did what the women told me to do – crawling into the hut and eating the egg – because I trusted their wisdom and followed their guidance, even though I did not understand why. Showing that I took their fear seriously had the effect that people became more willing to share their stories about spiritual relations with me. In retrospect, I showed them that I had become affected too by the turbulence of the situation. Even though their fear was not mine, I acted in correspondence with it. By allowing for this incoherence and fluctuation to happen in my mode of puzzlement, I had started to learn what it means if the Bajau and Mandar way of life is affected by human-spirit relations.

Conclusion

In this chapter I have addressed the methodological question: How to grasp environmental alterity in and through ethnography? This question is central to my goal to apprehend multiplicity in motion; the fluctuations between different ways of living and thinking the marine or intertidal world that partly flow into one another, yet cannot be reduced to either one. I have referred to this situation as amphibiousness (Chapter 1).

A growing body of anthropological literature has departed from the often-implicit idea that the environment is a mere bio-physical background against which social action takes place. While some have focused on alterity in terms of different ways of thinking and enacting the world – not reducible to the modern paradigm of one ultimate nature – others have emphasised the material and affective motion inherent to the reproduction of human-environment relations.

I have argued that if anthropology turns to ontology and affect as guiding or defining concepts for thinking the world differently, it also requires methodological reflection on how we do such thinking in and through the process of fieldwork and ethnography. Translating environmental alterity requires insight in the 'how to' of the ethnographic translation process. If one wants to approach the complexity and multiplicity of human-marine relations in an explorative, non-essentialist way, then how to do this methodologically?

I have taken inspiration from the work of three anthropologists – Viveiros de Castro, Strathern and Verran – who have referred to confusion and equivocation as productive moments or situations in the translation process of ethnographic fieldwork. In these 'ethnographic moments' differences are allowed to fuse, interfere with one another, without one being absorbed by the other. As such the ethnographic moment could also be referred to as the 'amphibious moment' where two worlds meet and the fieldworker is allowed or invited to dwell and move in the interface between them. This applies to the entangled difference between the anthropologist and her interlocutors, but also to the moving interface between fieldwork immersion and analysis.

I have narrated several moments of confusion in this chapter; situations that disoriented me yet also – as they intrigued me – induced or enabled an unexpected analytical twist. The experimental and at times confusing mapping endeavour stimulated and allowed me to acquire new insights in how environments are performed relationally. It was important that I let the mapping be partly done on others' terms. Joining people at sea furthermore stimulated and allowed me to acquire new knowledge of how environments are performed relationally and affectively in an intimate and embodied interaction with the sea.

Affect is part of how the environment is understood. Therefore 'joining' entails more than a mere following on a boat. It is also about a commitment to learn new sensitivities, to learn to become affected differently in order to 'get one's sea legs'. To grasp human-marine relations of seafarers I had to also look, listen, feel and smell. I also had to gobble down an egg while hiding in a cabin at sea. This was a consequence of a difference in thinking and doing between Bajau women and I. Even if I did not feel the same fear, I was affected by their fear, and acted accordingly. By doing as they instructed, even if I did not understand, it opened a way to grasp their different

understanding, as they subsequently involved me into their relations with spirits. Holding off explanation is a vital requirement of approaching what is Other.

In this chapter I have tried to show that amphibious ethnography involves a deliberate movement in and between different worlds – that of the researcher and of her fieldwork interlocutors – which generates a partial fusion or flow in between. Amphibious methodology entails more than learning how to see or think the environment differently; it requires learning to feel and engage with it differently too. This may entail disorientation and confusion, as the researcher temporarily has to unlearn some of her own taken-for-granted cognitive and affective bearings in order to navigate through fieldwork. I have shown how dwelling in confusion a bit longer and learning to be affected differently have been crucial methods or dispositions in the production of ethnographic knowledge. It is this amphibious disposition in doing ethnography that forms the methodological undercurrent of this thesis. Only with such amphibious methodology can anthropological research empirically grasp radical Otherness, albeit always partially and contingently.



Chapter 3

The moves of a Bajau middlewoman

Exploring the disparity between trade networks and marine conservation

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Content has been slightly edited to make the chapter fit into the rest of the thesis.

< 3.1 *Blasted fish drying in the sun*

Introduction

There she was: dressed in thick golden jewellery and a jumble of brightly coloured cloths waving around her stocky figure. A purple headscarf shaded her eyes from the scorching tropical sun. She called out to me: “Come here, you” and pointed to the rusty boat anchored besides her. “You want to go to Sarang Island? I chartered a boat, so you come with me.” Her name was Langkah and she didn’t take no for an answer. And so I came along. As the boat left the tiny village harbour, Langkah told me she came from elsewhere, a day’s trip by boat to the north. She went to Sarang Island frequently; “for business”, she added quickly, followed by a mischievous giggle. Soon our conversation drowned in the pumping noise of the boat’s engine.

When we arrived at the pier of Sarang Island, it was rush hour on the water – wooden boats coming from all directions to the island, unloading fish, ice, boxes and passengers. Right off the boat I followed Langkah along sandy pathways whirling between stilt houses, clotheslines and palm trees, until we reached the house of *nenek* (granny) Juhaira, one of her relatives. I saw a graceful old woman in a green silk dress standing on the veranda. Langkah said: “*Nenek*, this is my adopted daughter, she travels with me”, which apparently was all information granny Juhaira needed to welcome me with a bright smile, and hurry me inside. (Field notes, 23 January 2012)

When I met Langkah for the first time, at the pier of an Indonesian coastal village, I had just started my fieldwork. I knew that the small island to which we went – off the coast of Berau – was a reputed hub of illegal fishing and trade – a thorn in the side of conservation agencies in the region. However, I did not know about Langkah’s role in these activities yet. Over the course of the fieldwork I came to know her as a highly mobile and energetic businesswoman involved in the international trade of marine products, including protected marine species and ingredients to make (illegal) fish bombs. According to my interlocutors in several coastal villages and islands, Langkah was one of the most successful maritime traders in the region at that time, sustaining an extensive network of family and patron–client relationships in and beyond the coastal waters of Berau. Langkah guided me away from the island as fieldwork site, to an exploration of a contingent and mobile web of relations across the sea.

This chapter gives an ethnographic account of a female Bajau trader’s network as she sustained it in 2011-2013. Following Langkah along her travels sheds light on

the practices and movements entailed in enacting and maintaining an informal trade network and how – in practice – relations of business and family converge. The case of Langkah's trade network is particularly relevant in relation to marine conservation in Berau because it crosses the boundary between legal and illegal, formal and informal notions of organisation in fishing and trade. Langkah's movements illustrate the disparity between the mobility and fluidity of maritime trade networks, on the one hand, and the spatial fixation of people, places, and borders in conservation discourses on the other.

Earlier studies have documented various attempts to regulate marine resource exploitation in Berau, such as the creation of a marine protected area (MPA) and patrolling and monitoring to stop illegal fishing and trade in endangered species (Gunawan and Visser 2012; Kusumawati and Visser 2014). Reports that have been used as a basis for the planning of the Berau MPA recommend active community participation in conservation management (Wiryanawan et al. 2005; Studi Rencana Zonasi 2009). However, in practice, engaging Berau's coastal people has remained difficult, particularly on the islands where the majority identifies with Bajau ethnicity.

Clifton and Majors (2012) link the recurrent failure to involve Bajau people in conservation work to the disparity between marine conservation policies and the Bajau way of life. As they point out, the highly mobile lifestyle of the Bajau is at odds with the spatial and terrestrial bias inherent to contemporary marine conservation policies in Indonesia. Ethnographic insight in their sea-spanning relations and movements is relevant in terms of understanding the maritime world that conservation policies attempt to intervene, and manage.

Historical studies have shown that sea-spanning webs of kinship and trade relations are a constant feature of maritime life in Southeast Asia. Seafaring peoples of South Sulawesi – Makassarese, Bugis, and Mandar – are renowned for sustaining extensive, sea-based networks of commerce and exchange (Pelras 1996; Butcher 2004; Schwerdtner Mánéz and Ferse 2010; Sutherland 2000). Bajau traders have had a crucial role in the historical development of centres of maritime commerce in Southeast Asia (Sather 2002; Warren 2007). Bajau women have been active participants in marine resource trade and exploitation, although their role has been generally overlooked (Schwerdtner Mánéz and Pauwelussen 2016). Practices of fishing and trade among the Bajau often traverse national borders, as well as areas of

restricted access, generating discussions of their legality and legitimacy (Adhuri and Visser 2007; Stacey 2007; Adhuri 2013b).

A recurring theme in the literature on maritime trade is the convergence of economic relations with networks of kinship and patronage that span across seas. Patron-client networks create long-standing relations of mutual expectation and dependency in Indonesia's coastal areas (Meereboer 1998; Pelras 2000) and enable, but are also an effect of, geographical and social-political mobility (Acciaioli 2000). Through such trans-local and asymmetric networks of resource extraction and trade, local maritime livelihoods are linked to distant markets (Stacey 2007; Ferse et al. 2012; Fabinyi 2013; Gaynor 2005). Among Indonesia's maritime peoples, affinity and loyalty follow translocal relations of kinship, credit, and debt rather than the borders of a village or island (Kusumawati et al. 2013; Pauwelussen forthcoming).

Although ethnographic studies in Southeast Asia have shown that fishing practice and its organisation often proceed through informal relations that shift and blur regulatory boundaries between insider/outsider and legal/illegal (Fabinyi et al. 2010; Ferse et al. 2012; Gunawan and Visser 2012), the very concept of marine conservation as the establishment of spatial and legal boundaries remains largely uncontested in maritime literature (Thorpe et al. 2011, but see Lowe 2006; Walley 2004). Through the case of Langkah's networking practice in and beyond Berau, this chapter sheds light on one of the main disparities by which sea-based Bajau webs of trade, kinship and credit relations and projects for marine park development remain worlds apart.

In the following section I explain my approach of tracing Langkah's trade network as an assembling of relations. We will then take a ride with Langkah, follow her doing business and performing her network on Sarang Island and on her way into different spatial and social directions along the coast of northeastern Kalimantan. Next, I discuss the marine conservation policy in Berau and how it is at odds with mobile trade networks such as Langkah's, followed by a conclusion.

Performative networks

In my ethnography of Langkah's world of trade relations, the notion of network figures as a conceptual tool that helps with exploring the relational and performative nature of Langkah's trade practice, not as a model representing 'a' reality. Such use of

the concept of network resonates with the actor-network in STS, deployed to follow and describe how things, institutions, groups, are not only made up of heterogeneous material and semiotic elements, but also need to be performed, enacted, in order to subsist (Latour 1996; Law and Hassard 1999).²⁸

Following this line of thought, the social network can be reconceptualised as the effect of the association of heterogeneous relations, and not some kind of a ‘social fabric’ that pre-exist people’s practices. Or rather, the social is this very practice of association (Latour 2005). In such performative and relational ontology of the social, social reality is contingent on relational practices that sustain in the association and friction with the ‘sticky materiality of everyday life’ (Tsing 2005). The methodological consequence is that by following relational practices, one can trace how the ‘social’ (communities, kinship) is enacted in different sites and situations, and who and what participates. Such approach fits an explorative and emic anthropological methodology because it allows for following interlocutors along their world-making practices, instead of defining for them what their world looks like.

Langkah’s network is thus not a self-contained structure, but an open-ended performance. Exploring the performance of Langkah’s network in practice sheds light on the multiple dynamics and movements of the relations she assembles. Langkah’s networking practice shows her as a roving woman mediating a wide array of relations extending into different spatial and social directions. Her network is not enacted in a vacuum, but along a hinterland of relations already performed and experienced and paths trodden by journeys already made. Tracing empirically what it takes to associate webs of relations, how they keep together (or disassemble) allows me to show coherence and durability of the network as conditional accomplishments. Crucial is that the temporary stabilisation of Langkah’s network does not mean it stops moving. On the contrary, making the network cohere requires movement.

The chapter is foremost based on my experience with joining Langkah along her journeys in and beyond the coastal waters of northeastern Kalimantan, as I gradually learned what it takes to keep a profitable web of trade moving and

²⁸ A performative notion of network differs from the common use of the network concept in maritime studies (Janssen et al. 2006; Marin and Berkes 2010) in which the lines of the networks connect – in an unilinear way – places, people, or things that are already established and spatially determined. Such conceptualisation fits the common tendency to predefine and fixate the social as a reality outside of, and preceding, practice.

circulating. Importantly, Langkah herself invited me to join her on her travels and learn about her practices. I have been clear to her from the start about my intention to write about our journeys and conversations for an academic public.

Doing business

This section describes a ‘day of doing business’ from Sarang Island. In 2012, Langkah came to the island once or twice a month, staying for three to five days. During these days she moved from one house to the other, talking and drinking tea for hours with (old or new) trading partners. Our visit to one of her main trading partners was typical of the way she worked.

Langkah prods me and exclaims excitedly: “Come on! Let’s go and do business!” (“*Ayo! Kita berbisnis!*”). While I grab my notebook, she already walks ahead. She doesn’t like waiting. “Susi has export fish for me, which needs to go to Tawau [Sabah, Malaysia] quickly.” This is urgent, she explains: “Part of the fish has turned mushy. Part of it has already been cut to sun-dry. That’s a shame. I’ll go bankrupt!” As we stride forward, the path turns into sand. We approach a quarter inhabited mostly by Bajau people from the island of Sulawesi. It consists of shaggy stilt houses built over the shoreline. One house stands out, looking slightly better. The wooden walls are painted blue. We walk around the back, over a plank that leads us to the wooden platform at the back of the house. The platform is partly covered by racks with fish on it, their bodies slit open and drying in the sun. Four women are bent over the fish, turning them over to let the other side dry. “Hey, come here!” Susi calls us from the house above. We climb up the stairs to sit with her on the terrace, overlooking the women working.

Langkah takes mangoes from her bag; she bought them earlier on the mainland, for Susi’s children. She always brings them a small present. We sit down, and Langkah and Susi start talking. “My husband just sailed out this morning, with his crew”, says Susi; “they took enough rice with them to stay out on the reef for one week, but they may come back earlier, ’cause we’re low on fertiliser.” For a moment, I think they get to the point directly (Langkah supplies Susi with fertiliser, used to make fish bombs), but I am mistaken. Langkah talks at length about her sons’ educational achievements, and how busy she has been with renovating her house. The fertiliser issue will be dealt

with later. She demands more updates first about the education of Susi's daughter.

After the wellbeing and whereabouts of direct relatives have been discussed, the women discuss the latest news about others (friend or foe) in the fish trade business: Who is selling what to whom and for what price? While talking, a woman drops by, to 'borrow' sugar and kerosene from Susi. When she's gone, Susi tells me: "The women on this island like to borrow. They are all indebted". I know Susi is no exception to this herself, as she is indebted to Langkah. Langkah just paid two million IDR for her daughter's school tuition fee.

Langkah moves on to the gossip-session, an integral part of every business meeting she conducts. "Oh Susi, listen ... last time Mr Zainal said he sold me 600 kilos of fish, and I just had to believe him, right? But in Tawau, I found 20 kilos missing. Has my captain eaten the fish or what? [Laughs]. I told Zainal: 'We're together in the business. We're both trying to make a living (*kita sama-sama cari makan*). We have to help each other out. I have no other means than my trust (*kepercayaan*)'. But he's not Bajau like us, you know, and he drinks too much. It's better to do business with your own kind of people." Susi nods and mentions how Zainal approached her to share fertiliser, which Langkah definitely thinks is a bad idea. "Please don't do that, Susi. I know him. He may play you. It is better you arrange those things through me." (Field notes, Sarang, 19 June 2012)

The informality of the setting shows 'doing business' as part of engaging with the other in a purposeful way, associating relations of work, marriage alliances, weather, and ethnic affiliations. Although Langkah often framed her business in a state of urgency, she took considerable time to conduct it in an intimate and informal way, smoothening and arranging her relationship with stories, jokes, and gossip.

The informal conduct entails more than creating a relaxed sphere before 'getting to business'. The interactive practice of sitting together and talking is what 'doing business' is all about. By discussing the situation of relatives, allies, and rivals, Langkah kept herself informed about the constantly moving associations in her world of fishing and maritime trade. She also applied her skills to move associations herself, illustrated by her gossip about the untrustworthiness of another fish patron, Zainal, who actually was her other long-term trading partner on the island. In her conversation with Susi she applied her 'divide and rule politics': keeping two of her

main allies on the island apart and reinforcing her own role as middlewoman and her position as provider of fishing supplies.

Langkah's world of maritime trade relations is a dynamic one, and she has mastered the skills of engaging in this flexibility and turning it to her advantage. But this flexibility does not mean that 'anything goes'. Langkah's exchanges with Susi are guided by patron-client relations. Although debt relations were crucial in sustaining Langkah's commercial network, so was the fulfilment of more traditional obligations associated with the role of a patron, such as sponsorship of life-cycle rites of her clients, and other non-calculated financial contributions in times of need, as well as protection from law enforcement. In return, she expected loyalty. For example, supporting Susi by paying her daughter's tuition, Langkah expected Susi's export quality fish to be reserved for her. Although prices for fish and fertiliser were carefully calculated, such 'loans' were not expected to be (fully) paid back. In another case, Langkah paid the fine for her captain, keeping him out of jail, without expecting to be reimbursed. When he then tried to work with another patron, she felt severely betrayed.

Unlike the Lindu case described by Acciaioli (2000), Bajau traders in Berau did not clearly differentiate between a primarily economic character of their relationships and their social interdependencies. Also, in most business exchanges, when not speaking Bajau, they used the general term *bos* for (male/female) Bajau or Mandar assuming patron roles, not making the clear distinction between *bos* and patron (or *punggawa*) as observed in southern Sulawesi societies (Acciaioli 2000; Pelras 2000).

Evidently, patron-client relations may shape exchanges, but they do not fixate people and things in particular places or positions. While Susi is a client to Langkah, she also acts as a *bos* to her own clients (*anak buah*) on the island. Similarly, Langkah is patron and *bos*, but also a client to her Chinese-Malaysian patron (*tauke*) in Tawau. The relational character of patron-client partnerships shows it as a dynamic association of mobile and shifting social-material relations across the sea. As the following fragment illustrates, such an association better resembles a performative notion of network than the static notion of network connecting pre-defined and spatially fixed people and things:

Langkah inspects the iceboxes filled with fish in ice water. Langkah is interested in the species and sizes fit for export to Tawau, provided they are not too damaged from the blast. I can see she is not happy. While she pokes in the belly of a fish, she says: “Susi ... there are two kinds of ice: Wet ice (*es air*) and dry ice (*es kering*). My fish needs dry ice. This is important, Susi. The wet ice makes the flesh go bad. My *tauke* will not accept it. Tomorrow morning my captain will take this fish and bring it to Tawau. But I’ll send him to Lenggau first to get new ice blocks. Now, the fertiliser ... I’ve sent [her other captain] to Malaysia to get ignition fuses and 35 bags of fertiliser. He called me this morning. If weather allows it, he will be here tomorrow afternoon. I’ve reserved twenty bags for you, okay? You can sell part of it and make a nice profit yourself.” (Field notes, 19 June 2012)

3.2 Ice and fish at the *tauke*’s jetty in Tawau



The ‘local’ scene above is overrun by relations with others, elsewhere: captains, ice, weather, and the *tauke*’s fish valuation. As a middlewoman, Langkah mediates a diverse set of mobile and shifting relations. Keeping them productive and in line with her interests requires on-going practice of association and mediation: instructing Susi on caring for the fish, translating distant market values, and mobilising her captains to move around the fish, ice, and fertiliser.

Patron–client arrangements are commonly seen as ways in which the volatility of maritime trade networks is stabilised – relations of debt, loyalty, and mutual expectations make for durable trade arrangements. But their relational character begs for continuous enactment. Moreover, once relationally stabilised, the network does not stop moving. On the contrary, the forming and temporary stabilisation of Langkah’s network-as-association requires continuous movement – her mobilisation of other people as well as her own mobility. This shows in the mundane practical necessity of moving around the island to engage in face-to-face interactions and exchanges – crucial to sustain relations of trust and reciprocity. Also, by moving around, Langkah assembles information, orders, and tries to lure new trade partners into her network. This is shown in the next fragment from my notes:

Langkah proceeds on her round on Sarang Island: she takes every chance to ask people for news and fish. She talks with two women who just came back gleaning a nearby reef for giant clams (*kima*). Langkah wants to buy their *kima* to sell in Tawau. The women hesitate; they also had an offer from another trader. Langkah urges them to drop by at granny Juhaira’s house later. “I brought dresses from Malaysia”, she adds.

By the time we walk back to granny’s home, it is night. Inside the house are two old women sitting on the floor, chatting with granny while waiting for Langkah. They brought plastic bags filled with dried clams. The peculiar fishy smell of the clams has spread though the room, nauseating me. More women walk in, plastic bags with *kima* in hand, and soon there’s a circle of women sitting around a candle, having a thriving discussion about relatives in Malaysia. Langkah brings out for the women her collection of Malaysian silk dresses, glistening in the candlelight. (Field notes, Sarang, 19 June 2012)

Giant clam (*kima*, *tridacna gigas*) is a highly valued commodity in Tawau, particularly on the Chinese–Malaysian market. Commercial trade of (wild) *kima* has been internationally banned because of the animal’s status as a threatened species, yet during fieldwork hundreds of kilos of dried clams were exported monthly from Berau to Malaysia. On Sarang Island, I observed increasing competition between traders to obtain giant clams from the (mostly female and Bajau) collectors. Engaging in this trade was a very lucrative business for Langkah. One kilogram bought for about 100,000 IDR in Sarang was sold for 180,000 IDR or more in Tawau. But the

collectors were rather independent. Whatever they gleaned from the coral, they could sell for the best bid. However, they did not necessarily opt for the highest bidder. Other items than cash could be more valuable. Cash money was of limited value on Sarang Island anyway, as the informal island economy was to a large extent based on sharing and reciprocal exchanges.

Providing the women on the island with desired dresses from Malaysia was not just an economic transaction. By providing such goods, Langkah hoped they would have a bag of dried clams for her on her next visit to Sarang Island. The women did not pay for the dresses directly. For some women, Langkah reduced the price she paid for the clams with (part of) the price of the dresses, whereas for her more steady clam suppliers, such as granny Juhaira, the dresses became gifts, to be returned with continued loyalty and hospitality. Her being a woman was an asset here, as few men would be able to buy the dresses that suited the new clothing trends in the coastal zone.

Langkah also invested in sustaining relations of mutual affinity and affection with the women. The women-only candlelight sessions, using a shared Bajau language and tracing common ancestry to overseas places, helped in creating a sphere of intimacy. Sustaining this intimacy and promising new goods were some of the practices that helped to stabilise Langkah's relations with the clam-collecting women, keeping these relations productive while she was absent. But again, this (temporary) stabilisation of her network was only realised on the condition of her constantly moving about. Keeping the women attached to her required Langkah to travel. Because promises were not enough, in the end she had to show up on the island, bringing from Malaysia a bag full of goodies.

3.3 Dried clams ready for transport to Malaysia



Performing (a) network

This section focuses on the practice of travelling, while putting Langkah's performative pattern of movements in historical perspective. Using field notes jotted down during my travels with Langkah, I take her movements through the coastal zone of northeastern Kalimantan (and into Sabah) as an example of spatial network enactment. I also show how these movements are patterned by a history of migration, trade, and family relations among the Bajau.

Langkah and I left Sarang this morning by boat, heading to Tawau. According to Langkah, it is a 3-day journey. Soon after we left, Langkah changed our route, making a detour. I feel annoyed; why the delay already? Langkah said: "I have to get cash in Lengan, and then I have to arrange orders with my partner who handles the ice. If I don't go over there myself, people will be reluctant to deliver. If I want to run a good business, I have to go over there and take piles of cash with me." (Field notes, 21 June 2012)

We're on the road again, by taxi. Langkah ordered one by choosing a number from her phone book. She handles the little book with care; it contains all her phone contacts. It is one of the things always travelling with her, in her leather handbag. The bag is like an extension of Langkah, it contains all the items she needs to sustain herself while being on the move; a roll of paper money, a pencil, receipts, her passport, facial whitening cream, two sets of change cloths and her two mobile phones (one for Indonesia and one for Malaysia). While travelling, Langkah uses these phones frequently to order our next transport, to keep track of her load, or to arrange new business opportunities. 'What's your position?' is often the first thing she asks, followed by an update of hers:

"*Salamalaikum!* Listen, what's your position? I can't hear you ... where?" (...) "We're almost in Teluk Panjang, half an hour. Listen, Mr. Mandul just called me, says he has three tons of export fish for me. He can't sell to Bontang. They increased inspection over there." (...) "No, don't pay for the fish. I don't trust the man. He says three tons ... but I'll send my captain over to weigh it first. I need you to share some of the ice blocks, Zainal. The blocks I ordered you'll get tomorrow. I'm on my way to Tawau now." (Field notes, in a taxi, 23 June 2012)

We just made another stop at her home village. Langkah has decided to attend a ceremony held by one of her uncles. “It’s family’ she says, ‘We can’t leave now, it’ll bring misfortune”. I adapt to this new change of plans reluctantly. (Field notes, 22 June 2012)

We’re heading for Tawau again! This morning Langkah’s captain called to inform he just left from Sarang Island, taking eight tons of fish and 50 kilos of dried *kima* by boat to the jetty of the *tauke*. Langkah says she waited for his departure before moving along. Why didn’t she say so? Now she’s in a hurry, she wants to be in Tawau before the load arrives. (Field notes, 24 June 2012)

Although I initially saw the travelling as a necessary inconvenience to follow Langkah’s moves, travelling itself turned out to be an insightful experience. It allowed for a reflection on what initially were different experiences of movement. During the many hours of travelling by cars, boats, and ferries, my focus was on ‘getting there’ – seeing the journey as a way to get from A to B. Hence, my impatience with detours and delay. For Langkah, however, travelling was a productive (and fun) mode of being, a way of life in which stops and destinations were temporary pauses in her continuous wayfaring. As she put it: “I like to travel, Annet, it keeps me awake. I can’t imagine myself sitting at home” (Field notes, 24 June 2012). Langkah’s older sister once said:

[Langkah] has always been like that; always on the move, exploring opportunities. As a kid, she couldn’t be kept in the house. While I was cooking, my sister was outside selling the pastries. (Field notes, 12 June 2012)

Langkah is a quintessential wayfarer in Ingold’s sense: “continually on the move (...) instantiated in the world as a line of travel, (sustaining) himself, both perceptually and materially, through an active engagement with the country that opens up along his path” (Ingold 2011: 150). The network thus emerges as a crystallisation of activity and movement in a dynamic relational field (Ibid.: 47). Langkah constantly adjusted to the configuration of routes and interests as they manifested in her network while travelling. She almost continuously kept track of her trading associates—her captains, the fish, the ice, the *tauke* in Tawau, and fish bosses on Sarang. With phone calls and visits she also mobilised and steered her network while moving along herself.

Whereas it was sometimes hard for me to adjust to Langkah's seemingly capricious way of planning, hers was also a very adaptive and flexible way to keep business moving. Certainly, in Langkah's case there was a personal disposition to travel and enjoy this. However, this inclination to move only underlines the skills of a successful middlewoman: being able to sustain a dynamic and mobile network while and by moving, and engaging productively in a continually unfolding field of relations along the way. Again, it shows the network as a tangle of lines formed and associated in practice and movement. In other words, taking network as a practice, Langkah's travelling is network in the sense of the work, motion and translation that goes into the stabilisation of a relational net, or 'worknet' (Latour 2005: 132).

In spite of the dynamics of movements and relations, Langkah's ways are not erratic. She is not just going anywhere, associating with anyone and anything. Her mobility— both in terms of travelling and in 'getting things forward' for business—is enmeshed in a historically grown field of relationships patterned along notions of kinship and ethnic (Bajau) affiliation. The remainder of this section shows how spatial patterns of kinship and ethnic affiliation condition the ways and routes along which Langkah performs her trade network.

Two weeks after our first encounter in January 2012, Langkah had said:

I'll introduce you to my family. I have family everywhere! All the way to Tawau, even in Semporna, I have cousins. We Bajau are all over the place [laughs]. Good for you that you travel with me, so you don't need to go to a hotel. We stay with family only.

In the months that followed this was exactly how it turned out to be. All along the route from Sarang Island to Malaysia we stayed with those to whom Langkah referred as family. Family could be relatives by blood or affinity, but also people related by 'fictive kinship', a common practice among the Bajau in that region (Morrison 1993: 111-112). An example is granny Juhaira, whose 'kinship' relation to Langkah was based on the fact that their forefathers had come from the same Malaysian village. Whatever detour we made, we always ended up staying with family. In fact, a business trip with Langkah was as much a string of informal family get-togethers as they were visits and engagements for economic interest. Langkah's travelling thus

generated and wove together a string of ‘homes’ that were also her business ‘hotspots’.

After two hours in a speedboat we reach the jetty of Tarakan [an Indonesian coastal border town]. Two cousins of Langkah take us home by motorbike. Soon they turn off the city highway to a side road that turns out to be some kind of a wooden jetty, flanked by stilt houses. It is the Bajau quarter, and Langkah greets people left and right while we bump along until we reach her brother’s place—one of the many places Langkah calls ‘my home’ (*rumahku*). On her way to and from Tawau, she usually stays here for one night or more, meanwhile handling some business in the neighbourhood. (Field notes, 24 June 2012)

This house used to be her parental home, as Langkah narrates:

I grew up in that house. My father built it. He came from a village near Semporna [Malaysia] and had been travelling for years, to Berau, Palu, Bontang, Makassar. He was a trader. He traded logs mostly, from Berau to Tawau. For this, Tarakan was a good spot to have a home [situated in between]. He was a real Bajau man – he liked to be on the move. Sometimes I was allowed to come with him. My mother comes from a poor family of fishers. Hers is a big family, spread all over the coast ... however we feel close. If you compare: on my father’s side, they are all doing fine and in good positions in Malaysia. They own two-story buildings. (Langkah, 11 June 2012)

This family narrative of Langkah fits earlier observations that the Bajau in Berau sustain close relations of trade and family with overseas ‘homes’ and kin (Pauwelussen Forthcoming). Networks of Bajau kinship and ethnic affiliation are geographically dispersed, but made cohesive through visits and exchanges, based on and resulting in a constant flux of kin, valuables, and trade partners traversing administrative boundaries. Being related by kinship and ethnicity may account for feelings of trust and loyalty and can help stabilise the volatility of trade associations. Relations of kinship and ethnic affiliation are performed and sustained in practice, such as gift exchanges, gossip, remembering children’s names, and attending ceremonies. Real or fictive family bonds are also performed and sustained in movement, by way of multiple visits and exchanges.

3.4 Bajau women eating seafood together



3.5 A Bajau home



Langkah's trade route is patterned along, but not determined by, such lines of kinship and Bajau affinity. Historical trajectories of trade, travels, and exchanges of family preceding her—among whom are her parents—have formed pathways for Langkah to follow and re-enact. After Langkah's parents married and built a house in Tarakan, they continued moving around, visiting family dwellings elsewhere, taking along Langkah and her siblings. Langkah grew up visiting relatives, attending ceremonies in an extensive maritime space spanning the Indonesian–Malaysian border. And this practice was still everyday business during fieldwork. She also learned and inherited from her father's trading relations. Some of the people with whom she did business in the present she had known through her father in early childhood. In Langkah's network, family and business relations converge into a world in which whom you know and whom you owe are of crucial importance.

Historical accounts have documented waves of migration by Bajau families from the Southern Philippines and Sabah southwards to the coast of northeastern Kalimantan (Sather 1997; Warren 2007). Rather than a one-way movement from A to B, this Bajau migration constitutes dynamic and moving fields of interactions and exchanges across a vast marine space. When asked about the origins of her family, Langkah explained:

We Bajau often move from one place to the other, and there are many trade and family relations between Bajau in Malaysia, the Philippines and Indonesia. So you have people coming, going back, settling here for a while, then they go elsewhere, and have kids. And then later those kids will travel. And in the end where does one come from? The Bajau here ... it's actually a hodgepodge. They're from different places, but they all came here by boat. (Field notes, 11 June 2012)

The historically grown network of relations based on notions of family and Bajau ethnicity motivates and mobilises loyalty and reciprocity in Langkah's network. Particularly apparent is the way she safeguards border passage for her and her valuables by maintaining productive relations with politicians, police, and navy officers all along the trade route to Malaysia by appealing to a shared ancestry or ethnic background. The following account of her border crossing illustrates this:

Sometimes she crosses the Indonesian-Malaysian border along an official route, by ferry. But not too often. “Out of four times I cross the border, I take the official route once. Here’s the reason.” She shows me the inside of her passport, page after page filled with stamps. She adds: “I go to Tawau at least twice a month, that’s 24 times a year. I would need a bigger passport, there’s simply no place for all the stamps! [Laughs]. And they’ll see me coming at customs. Crossing the border so many times makes them suspicious. They asked me last time, I lied that I’m developing an Indonesian restaurant with my family over there in Malaysia.”

So this time, Langkah takes her regular route into Malaysia, moving ‘through the margins’ (*lewat minggir minggir*), as she calls it. This route goes by different chartered speedboats that stay close to the shore of the mangrove forests in the delta near the Indonesian-Malaysian border. Despite the association with the margin, it is also a highway. Speedboats taking the unofficial routes to Malaysia depart from Tarakan continuously. It is also a very familiar route to Langkah. She explains: “I have lots of family living along the way, so there’s always a place to stay or someone to ask for help”. She also keeps herself familiar with some of the officials stationed along the route. “Paying for passage is something I calculate as travel expenses”, Langkah says. “And I look for the ones that are Bajau.” Some days ago she told me that soon her son will be stationed here as a customs official. “Then things will become easy”, she remarked. (Field notes, 14 June 2012)

The coastal border area between Indonesia and Malaysia is populated by Bajau and other ethnic groups. The fact that people are crossing borders this way continuously through the Indonesian–Malaysian coastal zone is an open secret. By skilfully mobilising networks of collaboration that follow or mimic kinship relations, Langkah eases her movements in the grey area of ‘illegal but licit’ practices (Gunawan and Visser 2012). This ‘twilight’ route evades formal customs, but moves along informal relations with police and customs officers, many of whom she says are related to her by kinship or ‘Bajauness’. This practice also includes the border crossings of her valuables and trade-family associates. For example, Langkah’s uncle working in the Tawau government arranged her license to import fertiliser. In fact, with this license, Langkah’s importing of Malaysian fertiliser of the Matahari brand was legal, even though the fertiliser was widely used in northeastern Kalimantan to make fish bombs. Another example: During one of our stays in Tawau, Langkah’s captain was

apprehended for importing sea turtle eggs and other disputed goods from Malaysia to Indonesia. Appealing to her ethnic affinity with the Malaysian marine police officers helped to smooth the passage of captain, boat, and eggs in the end.

Evidently, Langkah's trade network involves the fusion of legal/illegal practices with formal/informal, family and business relations. It is important that in such a dynamic association, people affiliate more with trans-border relations of Bajau kinship and ethnicity (and the expectations of loyalty and reciprocity that come with it) than with national borders or the rule of state law. In other words, in this apparent continuity of the seascape, national borders and the rule of law seem arbitrary (Stacey 2007). Yet, they are simultaneously present, as I illustrated with the relational practice required for illegal border crossing. Likewise, Langkah's trade network systematically transgresses rules and borders for marine conservation. Langkah's network as a mobile association of family and business relations goes beyond, or rather deliberately eludes, marine conservation borders and zones. The performance of the sea-oriented networks of trade and family and the continuity of the seascape described here require relational practices that are at odds with marine conservation discourse.

3.6 Billboard showing marine conservation areas in Berau



Marine conservation in Berau

Since 2003, international conservation agencies have been working to protect Berau's marine biodiversity in collaboration with the Berau district government. In 2005, these efforts resulted in the establishment of an MPA of 1.27 million ha, covering the Berau waters. During my research in 2011–2013, the most prominent non-governmental organisations involved in marine conservation were WWF, TNC and locally based Bestari. Whereas all three organisations had been involved in the initial MPA collaboration, at the time of research only TNC explicitly oriented to the enhancement of MPA policy and practice by working towards collaboration with governmental partners and local communities. However, despite TNC's community-based conservation policy and advocacy, the implementation of the Berau MPA has not resulted in active participation of the majority of the people living on the islands and coastal villages of Berau (Chapter 4; Gunawan 2012).

During my fieldwork, TNC was in the process of conducting outreach activities with communities in the Berau MPA region. This outreach mostly revolved around explaining the MPA zoning plan and acquiring local feedback. The zoning plan, drafted in 2011, was based on scientific data of critical habitats in need of conservation (Studi Rencana Zonasi 2009). These habitats were proposed as the conservation core zones within the MPA, to be protected from all forms of exploitation (Interview staff TNC Marine, 30 January 2012). TNC subsequently presented the plans at sub-district (*kecamatan*) level for public consultation. The selection of the public to be consulted followed the ecological assessment of the places TNC aimed to protect (Interview staff TNC Marine, 30 January 2012). In every sub-district that was assigned a core zone, the local community was asked to provide input regarding how conservation rules should be locally implemented. This input was focused on the specific rules and rights of local fishers and the precise location and borders of the core zone within the sub-district's administrative borders (Interview Fisheries officer, 19 April 2011, and own observations).

Included in the consultation were villages within the sub-district. Fishers, traders, and patrons who had no formal residency in the sub-district, but were nevertheless operating directly or indirectly within the sub-district's waters, were excluded. TNC further limited its outreach to those villages receptive to conservation because they encountered a considerable difference among villages regarding the way the conservation plans were received (Interview staff TNC Marine, 30 January 2012).

In 2011–2013 TNC staff increasingly considered the islands as off-limits for outreach work because of strong anti-NGO sentiments among the island population. Yet, people on the islands were also most involved in practices of blast- and cyanide fishing, and trade in endangered species. Although TNC staff in Berau knew this, they felt there was little they could do – considering the influence of patrons and traders operating in and beyond Berau (like Langkah) in the continuation of these practices (conversations with staff TNC Marine 2012-2013, see also Kusumawati and Visser 2014). Addressing the networks in which these anti-conservation practices were embedded was seen to lie outside their professional field of operation. Instead, conservation project guidelines required TNC staff to focus on administrative villages as local communities for capacity building and explaining conservation rules.

A TNC policy document on community outreach in Indonesian MPAs reads that the success of marine conservation depends on “the active involvement of people and partners whose lives and livelihoods are linked to the natural systems we seek to conserve” (Soekirman et al. 2009: 6). The document underlines the importance of forging relationships with local people based on mutual benefit and sharing, and applying sensitivity in regard to their cultural and economic realities. Yet, such noble intentions for a relational and culturally sensitive approach are compromised by the dominant ecosystem-based conservation schemes in which they are embedded. Whereas the authors point out that “protected areas should be integrated within a broad sustainable development system” (Soekirman et al. 2009: 9), in the case of Berau sustainable development has instead been integrated ad hoc in an already established protected area, the design of which was based on ecological, and not social, assessment criteria (Wilson et al. 2010; Kusumawati 2014: 30-35).

TNC’s stated objective is to ‘solve the problem’ of exploitative fishing practices in Berau with micro-credit schemes, by empowering women and by appointing village representatives as mediators of conservation outreach (Soekirman et al. 2009: 13, 26). The everyday reality of patron-client relations, entrepreneurship, and mobile networks of loyalty and exchange described here thus remains beyond the horizon of TNC policy implementation. Unfortunately, the intention to be sensitive to local customs is not based on, nor does it lead to, an exploration of the kind of cultural and economic realities to which policy implementation has to be sensitive.

MPA solutions are based on stereotypical perceptions of the maritime realm in which fishery is a masculine affair, loyalty follows village borders, and illegal fishing is the work of non-resident fishers driven by poverty. Pre-defined borders are used to divide 'rightful insiders' from 'intruding outsiders', even though in practice lines of debt, loyalty, and collaboration traverse these borders, as the case of Langkah's network illustrates. In conservation management this also leads to the supposition that village- or island-based communities within conservation borders are the only stakeholders for the use and management of Berau's marine resources, and that conservation borders need to be protected from outsiders. Such a view ignores the permeability or even arbitrariness of the boundaries of the Berau conservation area (Gunawan and Visser 2012), and it negates the crucial role of patrons and traders in this region who can 'make or break' conservation projects (Kusumawati 2014).

The dependency upon patrons of the coastal population in Berau is common knowledge, but so far traders and patrons have been excluded from MPA policy-making in Berau (Kusumawati and Visser 2014). Roving traders such as Langkah, who sustain networks that systematically cross borders and play the illegal field, are kept out of the conservation picture. To some extent they also exclude themselves, moving their practices deliberately out of view from administrators and conservationists alike. Langkah, for example, knew of conservation (the husband of one of her cousins even ran a local conservation initiative), but she chose not to be part of it. However, when the practice of middle(women) like Langkah is systematically precluded from conservation policy and practice, their mobile networks are rendered invisible and intangible by design. This also entails the risk of excluding part of the coastal population that depends on, or affiliates with, these networks.

Conclusion

International agencies and Indonesian governments stress that destructive fishing practices and illegal trade in endangered marine species thrive across the Indonesian-Malaysian border. One of the primary hubs in the organisation of these networks is the Berau coastal area, and Sarang Island in particular. Yet, attempts to conserve marine resources in Berau do not correspond with the way in which these networks of fishing and trade are organised and sustained in practice.

In this chapter I have described the practices and movements of Langkah, a female Bajau trader, enacting a network of maritime trade. Drawing from my experience of joining her along her travels and business exchanges, I have described the performance of her trade network as a continuously generated effect of practice and movement. I have shown that the performance of her network requires the ceaseless movement of people and things, in travelling (mobility) as well as in the reshaping of relations (fluidity). Such highly informal, relational and mobile networks systematically elude the spatial and land-biased demarcations of people, places, and borders in current conservation policies.

Following Latour's notion of network as associational and relational effect (Latour 2005), augmented by Ingold's theory on movement as a generative practice (Ingold 2011), I have used a performative approach showing Langkah's network as a dynamic association enacted in practice and movement. Following her on her travels along the coast of north-eastern Kalimantan, I have experienced and described how she maintained her trade as a 'worknet' by being on the move continuously to associate with people and things that are themselves in motion, and to keep volatile relations aligned with her interests. Langkah's movements are furthermore intimately entangled with historically grown relations of (enacted) kinship, ethnicity, and patron-client associations across the sea. National borders and the rule of (state) law seem arbitrary, yet they are simultaneously present in the practical organisation of crossing the border through the Indonesian-Malaysian 'twilight zone' near Tawau, where legal/illegal and business/family relations converge.

The ethnography of the performance of Langkah's network illustrates the need for a relational approach to conservation outreach that takes into account the mobility and interdependency of social-material networks of maritime resource use and trade, instead of current approaches that fixate people and their maritime practices into place. A socially and spatially mobile network such as Langkah's is at odds with conservationists' notions of fixed places, boundaries, and 'local' communities. The lines along which resource exploitation and trade are mobilised extend far beyond the border of the Berau district into Malaysia, thus beyond the scope and influence of district-based conservation agencies. These agencies are concerned with the over-exploitation of endangered species and the widespread use of unsustainable fishing methods but their policies do not take into account the socially dynamic and spatially mobile networks in which these practices are

enmeshed. It is important to understand and acknowledge how marine resource use and trade are conditioned by the fluidity and permeability of legal/illegal distinction and sea-spanning relations of loyalty, debt, and ethnic affiliation. Excluding these movements and relations from conservation discourse also makes them invisible and intangible.

Engaging mobile maritime people like the Bajau in conservation planning will remain difficult as long as conservation discourse and practice is based on spatially fixed notions of social-environmental relations, and issues of morality (legality) are approached only from a land- and State-based perspective. The solution to the ‘participation problem’ will not lie in finding (more) ways to incorporate Bajau (or other mobile maritime people) into conservation schemes. The shift has to take place in conservation discourse itself. Marine conservation research needs to start thinking about how conservation can re-invent itself to better relate to the mobility and performance of maritime worlds.

This chapter’s main goal was to provide some empirical grounding to show the relevancy and urgency of such a paradigmatic shift in conservation thinking. One significant contribution of a relational approach to marine conservation lies in its ability to redress the hegemony of place-based approaches, as it allows for taking into account the ways in which maritime relations of affection and interest take shape and condition the way conservation is or can be effectuated. A relational turn in conservation is therefore a necessary step towards bringing into interaction the world of conservation and the world of trade in maritime Indonesia.



Chapter 4

Amphibious encounters

Coral and people in conservation outreach in Indonesia

This chapter has been accepted for publication as:

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Content has been slightly edited to make the chapter fit into the rest of the thesis.

< 4.1 Coral (one version)

The nature of coral and people in conservation

The conservation officer of the regional fisheries department addresses the workshop participants, firmly stating: “The collection of coral for the construction of houses on Kangean Island is a criminal activity; this cannot be tolerated”.

Police captain A (from Kangean Island) reacts: “You insinuate that on my island people mine coral? But that island is *made* of coral! People live on it! The coral they collect comes from the forest, not from the sea! How would I know they have built their house on coral from the reef or on coral stone from up the hill?”

Village fisheries officer: “Eh, so it comes down to distinguishing between stone and coral, or... whether the stone was already dead or still living during extraction?”

Surveillance officer of the fisheries department: “*Both* are coral. But *living* coral we only find in the sea, not in the forest. And our national law forbids taking any living coral from the sea...”

Police captain A: “But if I catch people with dead coral, how should I know if it was alive when they took it? Do the surveillance underwater?”

Local facilitator Rifal: “Sir, on my island Sarang all house foundations are made of coral, and it all comes from the reef. Heck, I’m Bajau, my own house is built on coral!”

Police captain B [raising his voice]: “But what is coral anyway? We keep on going back to law this and that, but if we don’t know what coral is, how are we supposed to link it to these laws?”

Surveillance officer: “I know it is a living organism. Let me look up a definition. Maybe our friends from TNC can help us out here?” [Starts scrolling on his laptop]

Police captain B grabs the laptop and reads out: “Ah! Here we have the 2001 Decree of the Minister of the Environment about coral reefs ... It says: ‘Coral

reefs are a set of rocks and/or an ecosystem built mainly by lime-producing marine organisms, together with the biota that live on the seabed as well as other organisms that live freely in the surrounding waters.’ People! Pay attention, this is our government speaking here! [Laughs from the audience]... What’s this about? This is about coral, and the coral is in the sea. It lives together with other biota, in the sea. Now, the coral we were talking about earlier... the one up the hill? Obviously that’s not the kind of coral we are talking about today.”

TNC’s head of monitoring (a marine biologist) stands up, walks to the speaker position, and ‘explains’ coral: “Okay, people... I understand it is a bit confusing. I’ll try and explain it in plain Indonesian. Just think of it this way: If you look under the water surface and you see stones... if they have a clear colour, then *that* is coral. In fact, corals are tiny animals. If you look closely, you’ll see tiny holes in the stone, that’s where they live. The coral stone itself is inanimate. The corals you see on your islands; that’s different. It’s the dead structure left after the animals have died. To be alive coral has to be coloured.” He opens a PowerPoint to show pictures of colourful coral reefs, and points out that *this* coral is an endangered ecosystem in need of protection.

Police captain B: “Thank you. This is what we need, a general definition of coral reefs. It is their nature and form that has to be socialised to the local community. Now... we go directly to the community to explain to them what coral reefs are. Make them understand that coral needs protection. It should not be destroyed just like that.”

Conservation officer: “We cannot be everywhere all the time to monitor if people take coral illegally, or throw bombs [blast fishing]. It is therefore expedient to do two things: We have to demarcate zones for coral protection. This way, the coral and the fishes are left undisturbed. Fish can multiply, and in the future fishers will reap the benefits. Second, we need conservation outreach to educate the community.” (Field notes, 8 February 2012)

The above discussion which took place during a conservation workshop in the capital of Berau district, Tanjung Redeb, is not unique. For over 2000 years, coral has troubled attempts to catch its nature in unequivocal terms. In *The Coral Reef Era: From Discovery to Decline* (2015), James Bowen narrates a history of scientific

investigation on coral, during which scholars struggled to unravel what coral ‘really is’. For example, when Aristotle (384–322 BC) tried to fit coral into his ‘ladder of nature’ (Lat. *scala naturae*) he wrote: “[I]t is impossible to draw a boundary and determine their category: stone, animal or plant” (Ibid: 4). Likewise, in the 16th century coral was indexed as being of a ‘third nature’: ‘zoophyte’ (from the Greek *zōon* (animal) and *phyton* (plant) (Ibid: 6). Whereas consensus was eventually reached that corals were living organisms, until the 18th century scholars debated whether they were aquatic plants or colonies of little insects (Ibid: 21-6). After the animal nature of coral was more or less settled, from 1900 onwards it dawned on coral researchers that this ‘animal that acts like a plant’ was in fact more than one, and less than two different organisms. The riddle of coral’s hybridity was further explored as an interdependent relationship between coral polyps and algae in the production of coral reef structures (Ibid: 85-6).

Towards the end of the 20th century, coral reefs have increasingly come to be considered ‘under threat’ from anthropogenic damage, such as pollution, mining and destructive fishing (Ibid: 149-50). With the invention of the ‘ecosystem’ in the early 20th century, coral reefs became regarded as ‘complex ecological assemblages’ (Ibid: 91-2), shifting the focus to interrelations between various elements (such as light, carbonic acid, water, algae) in the formation of coral reefs. Later, coral reefs came to be seen as habitats for diverse marine life, or ‘biodiversity’. This paved the way for a new series of conservation studies.

Bowen’s fascinating book shows how coral – existing as in-between matter or being – has time and again slipped through established scientific categories. Although the book aims to narrate how the progressive accumulation of scientific knowledge has gradually brought the sciences closer to deciphering the ‘true nature’ of coral, in effect its chapters portray coral as a being of multiple, ‘true natures’.

In conservation policies, the nature of coral as an ecosystem endangered by human activity has come to prevail (Bryant et al. 1998). These policies are often based on neo-Malthusian understandings of people as rapacious wrongdoers (Terborgh 1999) whose activities inevitably lead to Hardin’s (1968) ‘tragedy of the commons’. The typical reaction to the news that conservation of endangered coral is failing has been to demarcate ‘no-take zones’ and impose fines on trespassers. In recent years, however, the idea that local users of endangered resources should be harnessed in coral conservation has taken hold in conservation arenas. Increasingly, ‘people’ are

seen not only as the source of, but also as the solution to the degradation of coral reefs (Glaser et al. 2010). Simultaneously ‘noble savages’ and ‘environmental scoundrels’, sea-people such as the Bajau of Southeast Asia fulfill ambiguous roles in coral conservation plans that attempt to restrict their activities and recruit them as the natural guardians of their environment (Clifton and Majors 2012; Djohani 1996; Afiff and Lowe 2007). This is primarily done through ‘outreach’ – whereby conservation projects attempt to educate ‘local’ people and convert them to enlightened conservationists.

In this chapter we describe an outreach project in Indonesia where the multiple natures of coral and people meet. Taking the workshop in Tanjung Redeb (Berau, East Kalimantan) as a starting point, we describe how the idea of endangered coral travelled seawards to the amphibious world of the Bajau people, for whom coral is of a very different nature. In particular, we follow the work of a Bajau man recruited by TNC, who moved between worlds to translate and bring together the different natures of coral and people. Drawing from this ethnographic case, we focus on the ontological ambiguity of both coral and people.

Mobilising the concept of amphibiousness to engage this ambiguity and fluidity, we describe the moving land-water interface as the actual living environment for both coral and people. Amphibiousness refers to the ability to move in and relate different worlds that do not add up, yet partly flow into each other. In this sense, amphibiousness is of practical and political relevance for conservation outreach as it creates room for collaboration without requiring or imposing consensus about the ‘true nature’ of coral, people, or reality.

Amphibiousness is good to think with, we argue, because it entails viewing ambiguity as a positive, productive capacity. It allows for thinking and writing of ambiguity as a ‘useful complication’ of thinking along different currents. For this reason it is relevant to the on-going discussions on ontological multiplicity that have proliferated at the intersection between STS and anthropology (e.g. Bonelli 2015; Jensen and Morita 2015; Mol 2002; Verran 2001). While these studies generally describe reality as fluid, performative and multiple, as De la Cadena (De la Cadena et al. 2015: 462-466) recently pointed out, the turn to ontology can paradoxically evoke new reifications of worlds and realities as given and coherent.²⁹ The notion of

²⁹ Strathern has made a similar point in her critique of Actor Network Theory (Strathern 1999, chapter 6). See also Gad and Jensen (2010) for a discussion of this issue.

amphibiousness offers a distinct take on these discussions, because it makes it possible to ‘capture’ flows and movements between worlds, ontologies or natures, without ‘distorting’ these into coherence (see Law 2004: 2).

Engaging with the practices and narratives of TNC onshore as well as with the Bajau people offshore, the first author’s own ethnographic practice was in fact also amphibious, flowing between these worlds. Often, it was not clear where one world ended and another began, a situation that repeatedly led to confusion and challenged the attempt to find coherence. This situation not only spurred reflection but also called for the repeated explanation and discussion of her intentions, assumptions and loyalties in the field.

In the following section, we elaborate on amphibiousness, describing it as a condition to live with, and a concept to think with, and relating the concept to the discussion of ontological multiplicity. Subsequently, we follow how ‘endangered coral’ travelled seawards from TNC to the Bajau, where it was resisted. We then examine Bajau discussions about blast fishing, revealing a relational cosmology where coral embodies ambiguous, different natures, before turning to a community facilitator’s attempt to translate the different natures of coral and people in the outreach program. We conclude by considering our ethnographic case as illustrative of a practice and politics of ontological translation in amphibious encounters.

Ebb and flow

Coral reefs are generally considered a quintessential marine life form, yet their land-building ability (producing limestone structures) inspired Charles Darwin to think up his ‘coral theory’ on the formation of atolls and reefs as emerging or submerging land forms (Bowen 2015: 40-1). Coral reefs are thus part of, and productive of, amphibious environments in which land overgrows sea while sea overflows land.

Contrary to coral, people are generally assumed to be terrestrial beings (Smitt 2015 [1942]; Ten Bos 2009). This usually implicit but common assumption has perhaps more to do with a certain land bias in Western science (including maritime studies) than with the human condition as such (St. Martin and Hall-Arber 2008; Steinberg 2013). Particularly in Southeast Asia, with its many archipelagic regions, many people live in changing land-water environments (Chou 2006). For example, the Bajau have been described as inherently amphibious (Downey 2011), moving in

and between aquatic and terrestrial environments. As described in Chapter 1, Bajau ethnolinguistic boundaries are fluid, mixing and merging with other languages, ethnicities and religious practices (Gaynor 2010). ‘Bajauness’ is importantly bound up with a mobile and sea-based lifestyle, and the association of living on the margins of terrestrial societies (Lowe 2003; Stacey 2007).

Both coral and the Bajau can thus be characterised as amphibious beings. The notion of amphibiousness helps to consider how things, materials, beings and practices are part of, and productive of, land-sea interfaces, worlds that flow into one another (Morita and Jensen forthcoming), while also undoing the separation of land and water in modern thinking. Amphibious environments are thus simultaneously abstractions to think with, and things in the world to live with (after Helmreich 2011: 138).

The conservation of coastal and offshore areas, including coral reefs, is conventionally managed through what Jensen (forthcoming) refers to as “terrestrial solutions” (also Visser and Adhuri 2010). Models and policies that were originally designed for terrestrial conservation (nature parks) have been extended to coastal and marine environments. Nowadays, marine conservation programs are effectuated primarily by the creation of marine protected areas, and similar spatial forms of demarcation. Yet, the emphasis on demarcation in terrestrial conservation is at odds with the openness and dynamic connectivity of marine environments (Carr et al. 2003). The material fluidity of the sea complicates the spatial control schemes of land-based policies, since fences and marks do not hold their ground in the flows of marine and intertidal life (Bear and Eden 2008; Steinberg and Peters 2015).

This also applies to the disparity between protected areas and the mobility and fluidity of human associations in marine environments (see Chapter 3; Gunawan and Visser 2012). To make marine conservation more seaworthy, conservation organisations have placed increasing emphasis on outreach programs that involve ‘local’³⁰ people in marine conservation plans and practices. ‘Outreach’ refers to the activity of ‘reaching out’ by an organisation to a group of people, providing them with services (training, education, skills) that they are assumed to lack. In conservation policies, outreach is described as a transfer of (science-based) knowledge, in order to make people receptive to conservation interventions (IUCN-WCPA 2008).

³⁰ The common use of the adjective ‘local’ in outreach policy actually indicates a land bias, as seafaring people are often no more local than those who organise the outreach.

Undergirding outreach policies is thus a 'deficit model' (Wynne 1991) that assumes that people's failure to support and participate in a proposed intervention, is due to a lack of knowledge or environmental ethics, which will be provided by the conservation program.

Yet these marine conservation outreach programs often fail (Christie 2004; Glaser et al. 2010; Walley 2004). Clifton and Majors (2012) relate the failure to involve the Bajau in conservation projects to their fundamentally different worldview, including concepts of time and causality that are at odds with conservation values and practices. Recognition of these differences is necessary to identify a common ground for collaboration (Ibid: 723). Their argument bears similarity to recent anthropology studies that have described ontological disjunctures between development and conservation programs and local ways of performing life (Blaser 2014; Howit and Suchet-Pearson 2003). These studies argue that the world-making practices and narratives of local or indigenous peoples are often radically different from Euro-American knowledge traditions. Indigenous ontologies, for example, have been described as relational, performative theories of existence, in which agency is extended to non-human actors such as spirits, animals, things (Blaser 2009; Kohn 2013; Viveiros de Castro 1998). When ontologies or worlds meet, their differences and mutual interactions may lead to ontological disjunctures or disorders (Bonelli 2013), or to the transformation of the political arena, as exemplified by the arrival of Tirakuna 'earth beings' on the scene of Peruvian politics (De la Cadena 2010). The political argument is that social justice requires ontological difference to be taken seriously, instead of being explained away as lesser versions of science's authoritative insight in what is 'really real'.

The notion of ontological multiplicity is thus important because it provides an effective stimulant for openness to what differs, a commitment to take seriously the theories of existence of Others, and to learn from these forms of world making. In effect, at issue is provincialising western science by showing that it is one of more possible ways to perform the world.

Even so, understanding ontology as alterity carries a certain risk of essentialism (Venkatesan 2010). Importantly, defining 'indigenous' peoples as belonging to a certain geographical place can lead to a reification of land-based and spatially defined ways of being, thus downplaying others that are more mobile, dispersed and amphibious. Although people may indeed perform and experience

strong communal relations to land or language, a link between indigeneity and ontological self-determination (Viveiros de Castro 2003) becomes problematic in a context of ethnic and linguistic fluidity and invention, as is the case in Indonesia's maelstrom of different languages, ethnicities and pulsating spatialities of maritime worlds (Nolde 2009; Tagliacozzo 2009). Indeed, as the case of the Bajau will exemplify, shared worlds are not necessarily place-, or land-based at all.

Moreover, as Jensen (2014) has pointed out, conservationists, CEO's of mining companies, and governmental departments have ontologies too (for varied cases of ontological otherness close to home see Law and Lien 2013, Mol 2002, Thompson 2002). Rather than emphasising alterity, ontology can thus also be mobilised as a heuristic tool for studying how 'reality' is continuously enacted and transformed in practice. How this is done is an empirical question that, due to the open-endedness of enactment, can never be settled definitively. To stay with this ambiguity and incoherence, without 'fixing it' is a challenge for both conceptual work and for ethnographic practice (Law 2004).

In the following, we use the concept of amphibiousness to keep the ambiguity of ontological multiplicity alive and productive. Amphibiousness tags notions of ambiguity, the capacity to go with different flows, living on both sides of a difference, and enacting mixed or multiple ways of being. In the case of the Bajau and coral conservation, we show that thinking with amphibiousness is less about moving between two different worlds than about navigating the shifting interface through which these worlds partly flow into one another.

In the next section we describe one such flow. We trace how 'endangered coral', provisionally settled in the conservation workshop, spilled out of the workshop and moved seawards in the attempt to convert blast fishing Bajau into coral conservationists.

'Endangered coral' travels seawards

The conservation workshop organised by TNC Berau in 2012 was part of a reorientation within TNC's Indonesian branch to increase the involvement of local people in their regional conservation practices. The Berau coastal area has been one of the target areas to make this happen. It encloses the delta of the Berau River, with its mangrove forests and coastal villages as well as several islands, reefs and atolls

further offshore. Berau's coastal waters have attracted international interest as a site in need of protection, because it is situated in the middle of what is known as the Coral Triangle; a marine space of exceptional coral biodiversity (Hoeksema 2004; Wilson et al. 2010). Of major concern for TNC Berau has been the continuing practice of blast fishing: fishers throw homemade bombs on coral reefs, so they can catch a lot of fish in a relatively short time. The practice is banned in Indonesia for its destructive effect on the coral reef structure.

TNC Indonesia had been involved with the protection of the Berau Delta since at least 2003, initially in a partnership with WWF-Indonesia. Their conservation plans, such as the designation of a marine protected area, banning the collection of coral and turtle eggs, and setting up marine patrolling units, were met with considerable resistance. Particularly the Bajau, who form a major part of Berau's coastal and island population, have at times stalled conservation initiatives by protest and non-compliance.

With TNC's reorientation to community-based conservation, the idea was that a more participatory approach would enable local people in the coastal area to become the guardians of their own marine environment. Ideally, resistance would thereby be turned into collaboration (Kusumawati and Visser 2014; Soekirman et al. 2009). Importantly, local people would not be forced but attracted to participate in conservation practices. TNC Berau's outreach was set up around the idea that, by educating and training local people, they would come to understand the value and necessity of protecting coral reefs. Going beyond making them receptive to conservation, the project would make local people want to protect coral amongst themselves, in a way similar to the 'regulation from the inside' described by Agrawal (2005).³¹ In this outreach process the role of TNC was that of 'facilitator', as explained by the head of monitoring:

If we jump in to make the organisation [for conservation], and start with throwing in money and facilities, then the organisation won't last long. Instead, *they* should start it. Our job is to plant the seeds of conservation. And then we come in as trainers. We facilitate the process. We give them information, which

³¹ Which, in turn, is based on Foucault's notion of 'governmentality' and the 'conduct of conduct' (Foucault 1994 [1982]).

allows them to think in terms of conservation. (TNC Berau head of monitoring, 30 January 2012)

This quote illustrates TNC's idea of outreach as a way to support villagers in turning themselves into conservation-minded people. In order to participate, a transfer of knowledge and skills was considered necessary. As noted, this approach is based on the assumption that local people, like the Bajau, lack things (knowledge, skills, awareness), and that their misbehaviour (blast fishing, coral mining) is mainly caused by this ignorance.³² Local government staff was often quite explicit in linking the resistance of Bajau to conservation plans to their lack of education.³³ As a (non-Bajau) secretary of a predominantly Bajau village put it:

It all comes down to increasing the understanding of the local people here. If you don't, conservation is bound to fail. TNC and the government have to intervene here to raise people's awareness of the positive aspects of taking care of their environment, so their catch increases in a sustainable way. (Village secretary, 19 January 2012)

TNC Berau's outreach program was indeed set up to provide local people with the knowledge and skills needed to understand and accept the notion of 'endangered coral' as a matter of fact, and adjust their practices accordingly. Also, this understanding was needed to solicit local feedback on the practicalities of creating no-take zones for coral protection.

In several villages, TNC recruited local facilitators (*fasilitator lokal*, or 'FASLOK') as on-site extensions of TNC's outreach. These local facilitators were trained and mobilised as mediators between the local population and TNC staff. Their main task was to disseminate conservation plans among the village population and to organise community-based conservation groups. As one of TNC's outreach staff indicated, community facilitators were essential for translating conservation to the village setting, and to do so in a locally appropriate way.

³² Here we primarily allude to how this 'deficit model' is reflected in organisational policies rather than in the opinions of individual staff members. We do not doubt the sincerity and dedication of the individual TNC outreach staff in their attempts to improve the local situation for as many people as possible, and also the high regard they often expressed for particular local/Bajau individuals.

³³ The Bajau have often been portrayed in Indonesian society as marginal and uneducated people, who resort to destructive fishing out of poverty and ignorance (Clifton and Mayors 2012).

One of the community facilitators, Rifal, was recruited from Sarang Island, known as a Bajau enclave and a blast fishing stronghold. Rifal, an ex-blastfisher, was offered the job in 2010, when TNC's outreach team had visited Sarang Island. It was a 'good match', he said:

In 2010, the conservation people noticed me. Whenever they visited the island, I facilitated their stay as much as I could. I thought: they have a similar goal [of stopping blast fishing]. They asked: 'Rifal, do you want to become a FASLOK?' I had no idea what that was, a 'FASLOK', but I thought if it is about assisting them, I will do it. So there was a match, I was recruited. They invited me to come to Tanjung [Redeb]. I received training there, they taught me about conservation, coral, protected areas. And from that moment, I became truly at *war* with illegal fishing. (Rifal, 23 February 2012)

On Sarang Island, Rifal subsequently engaged in 'outreach': translating what he had learnt to the community. One of his primary tasks was to create support for a planned no-take zone on an adjacent coral reef:

TNC determines a no-take zone by detecting the right part of the reef to close off – one that meets their requirements of a good and healthy reef. It has to be a place where lots of fish reproduce. But they also think that the people here should have a say in this, otherwise they won't accept it. So that's where *I* come in: I consult with the people here what is a good piece of coral according to *them*. (Rifal, 20 September 2012)

To consult his fellow Bajau about what a 'good piece of coral' consisted of, Rifal had to generate support for the idea of creating no-take zones in the first place. And to generate such support, he first had to provide community members with information to understand what this was all about. According to Rifal, it was difficult to convince people about the nature of coral – that is, the version he had learned from TNC:

I explain that those colours are tiny animals living in the coral structure. But I don't have tools to prove it to them. I would need a microscope ... They just don't accept it. They see stones in different colours, not animals. (Rifal, 29 February 2012)

At other times, Rifal said it was difficult to make his fellow Bajau *believe* in conservation, or to even generate interest in it. “The Bajau are hard-headed people”, he once said, illustrating this with his repeated attempts to convert Zamhudi, a blast fisher and village elder:

I explain [to him]: “If you destroy the coral, the fishes will go. It’s their homes you destroy”. He really wants to believe that it [coral] grows back. He believes what he is used to and calls it culture. He says it is up to God and goes on bombing the coral all over. I said: “Isn’t it true that you now have to go further to find fish? We all experience this. Will there still be fish for our children?” I can explain things, but it doesn’t reach his head. (Rifal, 21 February 2012)

Reflecting on his outreach work, Rifal also mentioned how he had to proceed tactfully in his village:

My approach has to be informal and relaxed. I just can’t call meetings and transfer the knowledge just like that. I have to go slowly, step by step. I walk past [someone], sit and talk, and if I feel he/she is open to it, I explain some things about coral and why we need conservation. The people here are easily bored with the conservation issue. They are suspicious. When they hear a word like ‘zoning’ they think of prohibitions forced upon them. I have to move slowly and choose my words carefully to not scare them away. So, for example, I tell them conservation is about taking care of the coral. (Rifal, 29 February 2012)

In the course of 2012, Rifal encountered increasing Bajau resistance. At the same time, support from TNC dwindled. Although Rifal had managed to gather a modest following (mostly family), who openly supported his efforts, many people on Sarang Island expressed suspicion or even outright hostility. During the research, many people (informally) expressed their concern that Rifal supported foreign conservationists’ interests at the expense of theirs. Interestingly, resistance came not only from blast fishers, but also from Bajau people who wanted blast fishing to stop. As we show next, blast fishing was disputed, but not in conservationist terms.

Amphibious coral in a relational world

During fieldwork on Sarang Island, the practice of blast fishing was frequently debated, though in informal settings only. Those in favour referred to the practice as generating wealth and distributive capacity in the Bajau community. Opponents regarded the practice as too violent, causing disorder in the relations between people, spirits, coral and fish; causing the latter to disappear and spirits to become vengeful. According to Umar, a spirit medium and fisherman, the practice was so greedy and violent that its destabilising effects were beyond mediation:

The practice of blast fishing is out of balance. Too much is taken by force. As a consequence, the spirits are affecting the Bajau more, making them sick, possessed. This cannot be settled with a ritual. (Umar, 20 February 2013)

Similar to what is described in other Bajau studies (Bottignolo 1995; Sather 1997), the Bajau on Sarang Island acknowledge various beings (such as spirits, fish, ancestors, currents and the moon) as actively participating in producing the world and affecting the course of events in life (Chapter 5). Any thing, place or flow can be animated, and certain objects or places (such as large or odd-shaped coral formations or the collision of different water flows) are known as homes of particularly forceful spiritual presences. These are referred to as *penjaga* (caretaker), *penhuni* (inhabitant) or with the more general notion of *hantu laut* (sea spirit).

It is generally agreed on Sarang Island that one should behave well when fishing on coral reefs. According to Umar, it is very important to acknowledge the presence of spirits and to behave respectfully when fishing in their 'home' – which he thought to be incompatible with blast fishing. Blast fisher Zamhudi (who worked as a blast fisher but was also a village elder and spirit medium on Sarang Island) however claimed blast fishing is not a problem, as long as the practice is conducted respectfully and in line with community values:

Blast fishing is not a problem as long as we ask for permission from the *penjaga* (guardians, caretakers). Yes, we have to acknowledge them. The important thing is that [fishers] go fishing in agreement. They have to conduct their fishing in line with the community. [One should] behave well: announce oneself, say a prayer, work together, and proceed with respect for those being(s) there. (Zamhudi, 20 February 2012)

A central issue in discussions of blast fishing was the trope of giving and taking, associated with greed (bad) or generosity (good). A woman who regularly collected shellfish on coral reefs at low tide pointed out:

If we are lucky we catch a lot of fish in one place, but if we are greedy and take all, then another time something is taken back. If we return to that place, or a friend or kin... we can get into trouble; [there will be] no fish, bad weather, or worse: sometimes boats capsize, or people disappear. The *penghuni* (inhabitant) is behind that. (Alisha, 14 January 2013)

This was echoed by Umar, who said:

If one sees a school of fish encircling one, then this is the fishes' guardian (*penjaga*). Watch out then! Don't make loud noises! Don't throw bombs! Don't take the fish! The fish become one as they are mastered by the guardian. As soon as the guardian gives in and disappears in the crowd, the fish is given. We may take it then. If not, don't bother the fish while under the guardian's influence. This brings forth disease, or disappearance. If people take from the sea what isn't given, they can be pulled to the sea. (Umar, 20 February 2013)

Greedy conduct on the reef can thus be dangerous, as spirits can 'take back': pull people into the sea, withhold fish, or possess people. When such misfortune strikes, relational balance is restored by mediation (e.g. attending to the spirit's wish and arranging an offering or ceremony). Umar was one of the few 'smart persons' (*orang pintar*) on the island skilled in translating the wishes of different kinds of spirits:

If someone falls ill on the coral, or after fishing, it's my job to find out who is affecting him. Is it a displeased guardian? Or is an ancestor asking for attention? I closely observe the person. His body is affected by the spirit. I ask what must be settled or what he or she wants in order to leave the body. (Umar, 20 February 2013)

Whereas Umar linked blast fishing to greedy conduct, others explained this differently. According to Zamhudi, blast fishing was not a matter of greed but instead

a matter of ‘taking what was given’ as it was always done after acknowledging and offering to the spirits. It would be disrespectful not to take what was given in return. A fish trader involved in trading blasted fish (see Chapter 3) further emphasised this line of argument by linking blast fishing to tradition and the distribution of wealth (being generous):

This blast fishing is a traditional fishing method of the Bajau. They are very skilled in this. It’s their livelihood. My father worked as a blast fisher for a long time, and he always encountered fish. The Bajau in this area have been blast fishing for over 50 years now, and still there is so much fish! For the people here this is proof that blast fishing is only destructive in the short term. As long as you keep to your social duties and distribute your wealth, fish will not disappear. (Langkah, 17 June 2012)

The trader’s mention of ‘social duties’ referred to the partial distribution of the blasted fish among the fishers and the fishers’ families. Blast fishing was acceptable as long as relations of reciprocity and redistribution with spiritual *and* human beings were respected. The trader emphasised her own role in the Bajau community as a well-doer as she enabled people to work, redistributed part of her profit among the community’s poor (for example by handing out cash), and was actively involved (also by donation) with the yearly ceremonial festivities to honour the ancestors. Instead of a greedy practice blast fishing could thus also be considered a generous practice, a positive influence that generates abundance to be distributed within the community (see Clifton and Majors 2012).

It should be mentioned that blast fishers in Berau are usually involved in a patron-client relationship³⁴ (see also Chapter 3) which limits their ability to change their practice or speak up against it. In discussions of the ‘goods’ and ‘bads’ of blast fishing, however, these patron-client relationships are also linked to discussions of respectful, greedy, or generous behaviour in relation to people, coral, and spirits. A ‘greedy’ boss was associated with exploitation (of both people and coral), thus turning blast fishing into a violent, greedy and dangerous practice. A ‘good’ patron however was considered someone who redistributes his or her profit in cash or kind among the

³⁴ Operational costs are extracted from the fishers’ profit, as are the costs of anything bought on credit. The patron also ensures the security of his or her fishermen paying off security forces in case of arrest.

fishers, the wider community, and the ancestral and spiritual relations. When linked to the generation of distributed wealth, blast fishing was portrayed as productive.

In addition, some Bajau were of the opinion that as long as social duties and balances were taken care of, the momentary disappearance of coral and fish meant that they were simply elsewhere. As Zamhudi explained:

Coral is an intersection where people and fish come together. People travel, and so do fish. We depend on God to bring them [fish] towards us. It's a matter of fate/luck (*rejekti*) if we meet. There's continuous increase and decrease, coming and going with the tides and the moon. The coral and the fish, they are like us. We are all children of God. We die, but also revive through offspring. (Zamhudi, 20 February 2012)

Here Zamhudi situated the effects of blast fishing on fish and coral in a thoroughly relational and intertidal world in which fish, coral, people and spirits move, meet and reproduce life. In Bajau practice, people do not manage the sea but can affect relational balances through reciprocal exchanges with people and spirits in order to increase (or decrease) chances of temporary (fishing) advantage (e.g. through blast fishing). As examples of relational practices people mentioned working together, praying, behaving respectfully towards spirits, sharing fish, giving away profit and offering ritual food to ancestors.

Whereas Bajau ontology can be described, as some have done (Bottignolo 1995; Nimmo 1990), as a coherent cosmological framework, it is by no means a closed system (Jensen 2015) in which controversies are settled. On the contrary, discussion with Bajau about coral, spirits, people and blast fishing appeared rife with ambiguity.³⁵ Although it was agreed that there were spirits who had to be respected there was no closure on how exactly the spirits should be respected – including, as we have seen, whether blast fishing was compatible with this obligation or not. Also, it was generally assumed that the world was relational and required constant balancing by reciprocal exchanges; however, the disturbance of these relations – a dangerous condition – could be linked either to the greediness of blast fishers who ‘took by force’

³⁵ During fieldwork such ambiguity never seemed to trouble the Bajau. Moreover, the researcher's expression of confusion, and attempts to find closure in conversations, was frequently met with amusement and the expression of: “Confused? That's just how it is” (*Bingung kah? Begitu saja*).

or to blast fishers insulting spirits by *not* taking from the coral what was given in agreement.

Furthermore, it is significant that, among the Bajau in Sarang, coral (*karang*) did not acquire a definitive form. During fieldwork, coral was commonly referred to as ‘home’ or ‘dwelling place’ for the Bajau, but also for fish and spirits. At other times the coral reef was a ‘garden’ that Bajau women tend to when reef gleaning or setting lobster traps. Coral was also an ‘intersection’ of the trails of different moving agencies such as seafaring people, currents, pelagic fish, and roaming spirits. In all these discussions no one showed interest in settling what coral ‘really is’ – leaving it an amphibious convergence of worlds of spirits, people and fish. When Rifal explained that coral were tiny animals making up an ecosystem many people simply added this to their flexible repertoire of talking about coral. So what happened with his task to plug in ‘endangered coral’ in this relational world of the Bajau?

Amphibious translation

Considering the difference between Bajau and conservationist notions of coral, Rifal’s receptiveness to conservation ideas may appear peculiar. Especially because he had been practicing blast fishing for years. How come this ex-blast fishing Bajau man was so swiftly recruited and trained as a translator of ‘endangered coral’? When asked this question, Rifal narrated how he had stopped blast fishing, even before he was recruited as community facilitator by TNC.

The last time I used fish bombs was in the beginning of 2009. I had been blast fishing with my brother, since... 2001. Yes, that long! And the result was pretty good. After a year of practice, I became good at my job. In a couple of days, I could earn up to 5 million [IDR].³⁶ That was a lot of money! But the fish became fewer. In the last year, we had to make a great effort to find fish. Sometimes we stayed at the coral for three days and still our catch was insufficient. The fish didn’t come. At the end, the most we got in a week was 1 million. So I started thinking: how can this be? Normally, when I look around the coral, there are many fish.

³⁶ At the time, 1 USD was worth (more or less) 9,400 Indonesian Rupiah (IDR), so this amount is around \$532.

I stopped using bombs and started collecting sea cucumbers. I earned less, yet enough to buy food, and to save some. In my heart I was happy. I had work that didn't require big capital investment. I just bought kerosene for the light and cigarettes to accompany me to sea. I can buy this [points to his smartphone], I can travel, visit my family in Malaysia... How come that when I used bombs, I had so much fish, but I was never able to save money for my family? It only made me indebted! One is drawn towards blast fishing because of the big catches. But after years of blast fishing, I was still living in a shack.

I addressed other people and said: It's like this. If we continue like this [using bombs], no matter how much money the practice generates... it runs itself down. One cannot save that kind of money. It disappears without evidence. This Friday we get our money for the fish, next Friday the money is gone. Among the Bajau here we say it is 'hot money' (*uang panas*), because it was taken by force. If we take a lot of fish like that we do not receive a lot of money. That's because the fish, their spirit, is aggrieved. The money disappears, like a ghost. That's what I think. I tell them [that]. I warn them. Some people believe me, some don't. (Rifal, 23 February 2012)

Although skilled in blast fishing, Rifal had become critical of the practice. In this conversation, he linked blast fishing to relational imbalance, which aggrieved spirits and increased debt. As a result, profit evaporated as ghostlike 'hot money' because it had been acquired the wrong way.

One could argue that Rifal already was a man of two worlds. On the one hand, he saw himself as 'typically Bajau'. He took part in ceremonies, spoke the language, and was aware of the importance of balanced relations between humans and spirits, and had been blast fishing with kin. On the other hand he had received formal schooling in Malaysia, spoke fluent Indonesian/Malay, and had years of experience working as a clerk for the Malaysian government. This made his recruitment by TNC a 'good match', as he said.

His smart and witty character appeared additionally advantageous, making him skilled in building relations for the benefit of himself and his family. While his commitment to stop blast fishing and his interest in advancing coral protection seemed genuine, it was no secret that the FASLOK job provided him with a monthly salary of one million IDR, as well as with openings to contacts in business and government in town.

Nevertheless, in 2012 TNC's outreach staff – ordered by their headquarters to cut expenses – decided to let go of Rifal as local facilitator. Progress in outreach on Sarang Island was perceived as slow, and TNC's remaining resources would be refocused to coastal villages on the mainland. Rifal reflected on this decision:

TNC told me that there wasn't enough progress here. *I* wasn't making enough progress. In a way I can understand that. Resistance is high here. But I also feel we haven't discussed enough yet. We just started! (Rifal, 20 September 2012)

It initially appeared that Rifal would be an 'ideal candidate' for translating conservation ideas to his Bajau community, and for creating a dialogue between TNC's and the Bajau's incongruent versions of human-coral relations. Rifal had hoped that TNC's support could help 'make a fist' against blast fishing. However, as he pointed out, 'powerful forces' kept the status quo. As Rifal tried to turn people into conservationists, his attempts were stalled by the resistance of people, spirits and patron-client relations.

As many fishers and traders on Sarang were involved in fishing practices that were officially banned, they had no interest in an increased interference from conservationists and government officials. This resistance was not, as was believed in policy circles, a simple matter of wanting to continue blast fishing, as those opposed to this practice also resisted Rifal's conservationist overtures. Reflecting on this resistance Rifal once pointed out that the problem lay not in the transfer of knowledge – the Bajau on Sarang welcomed coral as tiny animals in their repertoire – but in a logical disparity. While the Bajau were open to accept different explanations of what coral is, creating a no-take zone was not logical, and potentially dangerous as it would stand in the way of the relational work needed to take care of human-coral-spirit relations. It might lead to misfortune or even disaster.

Moreover, the idea of managing or even dominating coral and restricting access to others was incompatible with the Bajau notion of a relational world in which the power of people is distributed and subject to fate or 'up to God' (Bottignolo 1995; Clifton and Majors 2012). In this world, taking care of coral instead translates as tending relations: the continuous performance of reciprocal exchanges between people and spirits, which includes giving and taking on and from the reef.

Given Rifal's difficulty (and ultimate failure) to enrol the Bajau in conservation, it is interesting to note that both Bajau and conservationists, in their different ways, saw coral reefs as animated dwelling places for life. Actually, Rifal pointed this out during an informal conversation. Here we may be witness to a conceptual convergence of two different ontological currents, or flows, and their associated coral care practices. Yet even if the commonalities in coral as dwelling place of life are significant, they were neither made explicit nor further reflected upon in the outreach process.

As illustrated in the following excerpt from an interview with a non-Bajau outreach specialist, this insight is not necessarily alien to TNC staff:

I have grown sceptical of all this marine protected area talk. It looks so nice from the outside, but it is just maps and drawings and reports. It is an outer shell. Nothing changes within. Protected areas are of no real significance for the people living there. They don't care about zones and borders. After endless talking and planning, when we enter the implementation phase, that's where it gets stuck. The planners forget that reality is very different here. If we wish to do something real, our work should directly concern fishers. (TNC outreach specialist, 15 February 2012)

Here we see that ambiguity was not alien to TNC staff who also moved in different worlds. Given this outreach specialist's experience in different marine conservation projects in Indonesia, his ambiguity might have opened up for a discussion on how to 'do something real' when 'realities' are different. However, he thought the organisation would not be receptive to such internal reflection. Soon after the interview, he embarked on another career path.

Conclusion

We started with a conservation workshop in Berau that brought together conservation officers from the regional fisheries and forestry department, police captains, TNC staffers and village representatives from coastal and island villages to discuss strategies to jointly protect the Berau Delta (including its coral reefs).

Discussing coral conservation appeared complex because the nature of coral turned out to be not only amphibious but also ambiguous. Different versions of coral

did not add up. TNC's marine biologist provided an authoritative, scientific explanation of what coral is, and how it can be known, using his expertise and pictures. This definition of coral's nature as endangered ecosystem was accepted as a basis to inform – educate – other people (the Bajau, those who damage or live on coral) who were assumed to lack this knowledge. Such outreach was considered expedient to convert 'ransacking bandits' into coral protectors.

The workshop discussion illustrates attempts to turn ambiguous and amphibious corals – shifting between different natures and environments – into a single object. In the synchronising practice of the workshop coral's multiple natures were rendered as a coherent object that can be acted upon. As we have shown however the fixation of coral as endangered ecosystem is temporary and situational. It is temporary because the scientific version of coral, mobilised to bring closure, is itself contingent on a particular history of knowledge practices that place coral and people on either side of the nature/culture divide characteristic of modern thinking. It is situational since outside the workshop coral still flows into different natures and practices.

Outside the workshop setting, in Bajau practices, corals are dwelling places, gardens, construction material, and hotspots of spiritual and piscine agency. Even so, Rifal's insistence that on his island people *live on* coral was not taken up in the discussion of what coral 'really is'. Nevertheless, these other corals are as consequential as scientific ones. They inform decisions such as: 'do we throw a bomb at it?' And, if yes, on what conditions? The radical differences in human-coral relations are bound to trouble attempts to move 'endangered coral' seawards by substituting this one coral for all the other coral natures and practices - which is the very purpose of the outreach intervention.

Our case thus demonstrates that conservation outreach involves much more than a transferral of knowledge of what coral 'really is'. Conservation science attempts to enact a singular reality, but in practice it deals with different realities that partially flow into one another, generating and generated by different kinds of human-coral relations. As the workshop showed, coral conservation outreach entails not just a movement of knowledge about coral (how to recognise it) but also the dissemination of a particular version or nature of coral (the endangered ecosystem). The move thus concerns an ontological transfer, and translation, as it attempts to

disseminate a particular notion of what coral is, its condition of being, and the practical reproduction of this condition.

As we have argued, both coral and (Bajau) people are amphibious beings moving in, and between, changeable land-water interfaces and fluid ontological constellations. The Berau case indicates that the failure of conservation organisations to reflect on ontological ambiguity concerning the nature of ‘coral’ and ‘people’ translates into a breakdown of outreach goals. Indeed, despite the rhetoric of a ‘bottom up’ approach, conservation outreach was organised as a one-way translation process. After all, Rifal’s task was to convince the Bajau of the need for no-take zones to protect endangered coral. It was not complemented by any attempt to convince TNC of the presence, and importance, of spirits in these no-take zones. That coral is a different ‘animal’ altogether for the Bajau was thus an insight that did not meaningfully affect TNC’s outreach policy.

To end on a more positive note, we would like to point to the productive possibilities inherent to our case. One reading of it is that conservation outreach involves continuous negotiations between different ‘worlds’ or ontological constellations over what is and what matters, and how it can be known. As they engage with one another, the world of TNC and the world of the Bajau become willingly or unwillingly sensitive to ontological differences that lead to a ‘dialogue of the deaf’. Yet, in this process difference appears as much within worlds as between them, as people and things are on the move, multiple and amphibiously in/between.

We maintain that a minimum requirement for successful conservation outreach is engaging with these differences explicitly and reflexively. This is what we refer to as an amphibious translation practice of moving in and between different worlds that flow into one another. As a condition to live with and a concept to think with, amphibiousness refers to moving and thinking along with different flows without requiring coherence.³⁷ Amphibious translation is thus akin to the method of ‘controlled equivocation’ that Viveiros de Castro (2004) has proposed as a means to reconceptualise comparison – anthropology’s primary analytic tool.

Being diplomatic, being open to the possibility to be ‘moved over’ (Kohn 2013) or, in our terms, being open to amphibiousness thus has practical and political value as it allows for the (cosmo)political task of reframing conservation outreach as a

³⁷ In this line of thinking, Helen Verran (2001) has similarly argued for the possibility of ontological translation between what she refers as ‘micro worlds’.

process involving ontological dialogue. Indeed, one may say that for conservation outreach to become seaworthy, it needs to cultivate an amphibious capacity, and engage with and relate ways of knowing and being that partly overflow one another, yet without a-priori assuming one to be superior. We therefore wish to stress ambiguity as a positive, productive capacity; a 'useful complication' that stimulates thinking and reflection. Amphibiousness helps sustain this ambiguity, and renders it productive.



Chapter 5

Cyanide delight

Affective relations of dive fishing in the Makassar Strait

This chapter has in a slightly edited form been submitted as:

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< 5.1 *Coral trout in a holding pen*

Introduction

Yusri's house was the last one at the eastern end of Sarang Island; a one-room hut made of wood and built on piles above the shore. At high tide, the seawater swirled below the house, lifting the canoe that Yusri used to go out at sea. While on land, Yusri spent most of his time on his veranda, looking out overseas. He was one of several paralysed people (*orang lumpuh*) on the island – also referred to as ‘those affected by cramps’ (*yang terkena kram*). On the island, *kram* was known as an affliction bothering and sometimes killing dive fishers in various, and often unpredictable, intensities. Although Yusri had suffered *kram*-induced pains since he started diving in 2006, it hit him with sudden ferocity in 2008. Sitting on the floor of his hut, flanked by two of his little kids, he narrated:

We were out at the Big Reef, using cyanide (*pakai potas*). While diving, I didn't feel it yet. I was focused on getting the fish. But back in the boat I threw up blood. There was this tingling sensation, like ants were all over me. My body started burning. I took off my clothes... tried to get up, but I couldn't. I grabbed my legs. My buddy tried to lift me up, but my feet – I took hold of my feet – they just folded below me. That's how it hit me, the *kram*. That time, it struck me here [slaps his legs]. Sucked all energy out, I can't use these anymore. From the waist down, I don't feel anything. For eight months I had to use a catheter to urinate. I can eat, but defecating is a disaster. I don't feel it leaving my body. It just runs down on the floor, in front of my kids... That makes me cry.

Yet, he added:

But thank God I can still dive. I still fish. It's a way of life. On the land, my body has no power, it is locked. There's no happiness when you're like that. But as soon as I'm in the water, I move. (Yusri, 25 November 2012)

Yusri had traversed the Makassar Strait from Palu (western Sulawesi) to Sarang Island in northeastern Kalimantan in 2006 because the latter was, and still is, renowned as a place where millions of Indonesian rupiahs can be quickly earned by hunting for large reef fish with cyanide.³⁸

³⁸ By the time of research, the live reef fish trade in the Makassar Strait was thriving. For example, fish transporters estimated that from one of the primary fieldwork sites (Sarang Island, with about 1,000

Cyanide fishers use a sodium cyanide (NaCN) solution and diving equipment to catch fish alive from coral reefs. The practice supplies the international trade of live reef fish, particularly groupers (family *Serranidae*), that end up as luxury seafood in Asian capital cities and primarily Hong Kong.³⁹

Cyanide fishing has attracted the interest of maritime anthropologists, particularly because of the practice's endurance in spite of being dangerous and internationally banned.⁴⁰ While the majority of literature on the topic is written from the point of view of resource management and conservation, a few ethnographic studies have shed light on the political-economic relations involved in cyanide fishing (Fabinyi 2013; Ferse et al. 2012; Lowe 2000). The latter have in common that they show in rich detail the structural conditions of patronage, quick money, a culture of masculinity and social-economic marginalisation; conditions that sustain cyanide fishing because they appeal to dive-fishers and, at the same time, keep them locked into a deadly and destructive practice.

Without denying the importance of these conditions, we contend that what has remained underexposed is how cyanide fishing is 'resilient', that is, why it subsists. Taking seriously Yusri's account above, one could state that diving with cyanide is a 'way of life' – one that cannot be captured by political-economic explanations alone. Yusri's story suggests cyanide fishers engage in diving as an embodied performance of moving and hunting underwater; a practice divers know affects them – up to the point of changing if and how they can feel. Dive fishers engage with a variety of beings and elements in movement, such as fish, currents, spirits and cyanide. This engagement excites feelings of delight, but also sucks feeling out of divers' legs. In other words, it is a sensational practice; it works not just through the senses but also generates bodily and emotional alteration. These affective relations that cyanide

registered inhabitants) an average of 2 to 3 tons live reef fish and 200 to 300 kilos of live lobster was exported per month, to Hong Kong and Singapore. None of these exports were reflected in the yearly statistics of the district's Fisheries department (own observation), illustrating the informal character of the trade.

³⁹ Cyanide fishing in the Asia-Pacific supplies different export fisheries, including also the trade in live lobsters and the export of small ornamental fish that end up in pet shops and aquaria in Europe and the USA (Ferse et al. 2012).

⁴⁰ Whereas there are different ways to catch groupers alive, including traps and angling, the majority of live reef fish exported to Hong Kong is caught by diving with cyanide (Mak et al. 2005; Pomeroy et al. 2008). Because the use of cyanide is illegal in most countries, it does not enter official statistics. Mak et al. (2005) estimate that of 70% to 90% of live reef fish in the Asia Pacific are caught with cyanide.

fishing involves and produces have mostly escaped scholarly attention. Yet taking these affective relations is crucial, we argue, to understand why cyanide fishers continue this risky practice.

In this chapter we describe cyanide dive fishing as an open-ended assembling of different bodies, elements and fluids that mutually affect one another. Deleuze's (based on Spinoza's) concept of affect refers to a body's capacity to affect or be affected in a process in which its own and others' capacities change (Deleuze 1988: 101; Deleuze and Guattari 2004[1980]: xvi, 441). An encounter is affective when it inspires, excites, impresses, moves or motivates (Archambault 2016: 249; Latour 2004: 205-213). Importantly, Deleuze's concept of body is not tied to the 'natural' or individual human body, and can be seen as a way to shift focus from human agency to embodiment as a site for productive relations. Bodies, whether human, animal or mineral, are always relationally constituted: as bodies affect one another in encounter they also modify one another. In the process, new relations and affects are produced (Deleuze 1988: 124).

Drawing inspiration from both ontological anthropology and the Deleuzian notions of body and affect, we approach cyanide fishing as a lively assemblage of relations in which human and non-human bodies and entities associate and affect each other, transforming themselves and each other in the process. Giving due notion to affective relations puts in focus dive fishing as a way of life. In particular, we wish to expose sensation and affective relations in order to get closer to cyanide fishing as a world-making practice that also, and essentially, involves joy, pain, heat, tingling sensations and fluids spilling out of bodies.

Below we situate our study in the anthropological literature on cyanide fishing in the Asia-Pacific region and draw our own approach that takes in affective relations in cyanide fishing as world making. Next we zoom in to our ethnographic case of cyanide fishing in the Makassar Strait. Particular attention is paid to how bodily and spiritual fluids affect each other in the reciprocal relationships of humans and spirits, producing both danger and delight. In conclusion we discuss the added value of including sensation and affect in a theoretical reflection on ontology and enactment.

Anthropology of diving and cyanide fishing

Cyanide fishing has been criminalised as a lethal and destructive practice in both ecological and humanitarian terms (Erdmann and Pet-Soede 1997; Johannes and Riepen 1995; Petrossian 2015). Yet, although officially illegal in most Southeast-Asian countries, it continues to flourish (Pomeroy et al. 2008), especially in Indonesian waters. While various policies have been designed to curb and criminalise the practice, anthropologists have stressed the importance of understanding why and how maritime practices labelled as illegal and destructive appear so resilient in the first place (Ammarell 2014; Fabinyi 2007).

Anthropological studies have often focused on the structural conditions of inequality, poverty and capitalist extraction that sustain cyanide fishing (Lowe 2000). Some point out how the increasing consumption of (fish) meat among Asia's growing class of (particularly Chinese) urban rich has stimulated the demand for imported luxury seafood (Fabinyi 2016; Warren-Rhodes et al. 2003). Halim's research in Indonesia furthermore shows that cyanide fishing attracts young men from poor families who desire to earn 'quick' cash money in what appears as a simple and effective fishing technique (Halim 2002). The ability to buy consumer goods (a smartphone, a motorbike, a television set) provides status and allows young men to marry, even though most end up indebted to a fish patron who provides them with credit. As fishers become entangled in relations of debt, loyalty and interdependency with entrepreneurial patrons who run the live reef fish business, options to step out are limited (Fabinyi 2013; Ferse et al. 2012). Similar to other cases of illegal fishing and trade in the Makassar Strait, cyanide fishing is organised along asymmetric patron-client relations (Gunawan and Visser 2012) and often secured by governmental and security agents (Adhuri 1998; Idrus 2009; Kusumawati and Visser 2016).

Importantly, cyanide fishers themselves appear to acknowledge both advantages and disadvantages of their fishing practice. For example, in the Togean Islands in the Gulf of Tomini of northeastern Sulawesi they see it as a positive development, bringing prosperity to a formerly backward region (Lowe 2000). Likewise, live reef fish trade in East Kalimantan has helped increase the flow of goods, credit, and people to and from isolated coastal and island villages (Pauwelussen 2016). Lowe furthermore notes how illegal fishing activity also appeals to young men because it comes with the delights of smoking expensive cigarettes and

wearing fashionable new cloths (Lowe 2006: 144). Fabinyi's (2007) research in the Philippines also shows that the practice of cyanide fishing itself is desired by young men, as it provides them with status. He relates the risky and physically demanding practice of diving and using cyanide to a culture of masculinity and coming of age.

Existing anthropological literature about cyanide fishing, and illegal fishing in general, has mostly applied a political economy approach to explain why such practices continue despite being dangerous and destructive. While this has generated insights in structural conditions of inequality and the economic incentives that stimulate cyanide fishing, much less attention is given to how cyanide fishers continue to engage in the practice as a way of life – by which they become bodily and emotionally entangled with, and affected by, a variety of beings and elements.

Ontologically attuned anthropology has proven productive in the exploration of how aquatic or piscine realities are shaped through the assembling and disassembling relations between humans and other elements and agents involving (and enacting) for example fish (Blanco et al. 2015; Law and Lien 2013), waves (Anderson 2012), delta infrastructures (Morita and Jensen forthcoming) or sea spirits (chapter 4). However, we also note that ontological anthropology “evokes ‘reality’ better than other things deserving our attention” (Mol 2014: 3) like fear, excitement, and the body that enjoys and suffers. Thus, although enactments of aquatic realities are ascribed to the relations between all kinds of human, animal, material, and semiotic components, somehow emotions, passions, and sensory and bodily modifications remain underexposed as productive elements in world-shaping processes.

Studies of underwater practice indicate the relevance of including embodiment and affective relations in the study of how these worlds are enacted. Literature about being and moving underwater has described diving as an embodied and transformative practice. Allen-Collinson and Hockey (2010) show how the practice of diving reorganises the human land-based sensorium to the aquatic environment, including sight, touch, heat and pressure. Merchant describes how dive students go through an embodied process of learning how to perceive differently – a process that generates emotions of excitement, repulsion or fear (Merchant 2011). This learning process is also transformative. Ota's study of underwater spear gun fishing shows that the practice requires a learning process of ‘becoming fluid’ by which the fishing body

learns to align to the motion of water and fish (Ota 2006). Underwater transformation may also involve a technological restructuring, as is shown by Helmreich's (2007) ethnographic essay on the transduction of submarine sound.

We argue that an relational ontological approach in ethnography can be advanced by paying attention to the enactment of sensuous and sensational worlds; that is, by taking inspiration from the different sensations in the performance of realities. The Deleuzian notion of affect allows for inclusion of the active capacity of sensation as more than a sensory impression, and permits to take into account how bodies are also expressive, permeable, leaking and partly flowing into one another. The added value of the notion of affect is that it brings into the discussion the continuous change and transformation of affective agencies. We now move to the Makassar Strait to describe the practice of cyanide fishing as an assembling of bodies, tubes, and fluids.

5.2 A dive fisher checking the air compressor



Cyanide fishing as assemblage of relations

In the Makassar Strait region, cyanide fishing is a common fishing practice. On the islands, one can observe the daily departure of diving crew in the morning. Rumbling sounds arise as small, motorized boats slide from the shoreline into the sea, carrying young men in black tights. Soon the boats disperse into different directions, heading for coral reefs.

Cyanide fishers usually go diving in groups of three or four men. These diving crews are supplied with a boat, cyanide, fuel, and diving equipment by their boss to hunt for large reef fish, particularly coral trout (*Plectropomus leopardus*, locally known as *ikan sunu*). An air compressor is attached to a wooden plateau within each boat. These roaring machines compress and push air down one or two plastic tubes that divers use to breathe underwater by clenching the end of the tube between their teeth. Before diving, fishers wrap the tube once around their waist to decrease the change of losing it during the hunt. Most fishers use a mask, flippers and a weight belt to ease their descent, movement and navigation underwater.

There is considerable variation in the depth and duration of the dives. Many fishers boasted they regularly dived to a depth of 30 meters, and some reported depths of 40 meters or more. Some cyanide fishers limit their dives to shallower water – particularly the older or physically disabled divers like Yusri who explained the deep water is too cold for his body.

Although cyanide fishers normally dive and hunt alone (while the others stay in the boat), deep diving with an air compressor depends on group work. The teamwork supporting the diver has to be vigilantly coordinated. While one man is diving another is looking after the air compressor and the plastic tube which connects to the diver. The compressor engine has to be kept running to provide air to the diver. For this the operator keeps track of the engine's fuel consumption. Furthermore, the long plastic tube disappearing into the water should be kept under a little strain. If loose, it can entangle with the reef or fold, obstructing the diver's movements or, worse, the airflow. The tube is also used to send messages from the boat down to the diver by giving short pulls to signal an approaching storm or a patrolling unit. Clearly, the practice of cyanide fishing involves the assembling of different material elements – such as engines, tubes, a boat – and the orchestration of different elements in motion, such as fuel, air, and messages.

Cyanide fishing also involves and enacts intimate fish-fisher relations in which fishers, and those taking care of the groupers after capture actively engage with how the fish moves, looks, eats, and feels. As with the practice of diving, most cyanide fishers learn about groupers through their fishing practice and the sharing of knowledge with buddies. They receive a little instruction from bosses or traders regarding the market value of different grouper species and sizes, but how to track, approach, catch and care for these fishes is a skill to be acquired in practice through engagement with the fish and by learning from more experienced fishers.

Cyanide fishers know groupers as animals with temperament; when threatened, the fish become timid and hide in coral crevices. Here the divers cannot reach them – but the fluid cyanide can. One cyanide fisher said:

I check their hiding places. When I see the fish, I try to get close. I approach from above; the fish is not aware. These are shy fishes. If we chase them, they are likely to hide in the coral. So I need the cyanide to make the fish drunk [makes a gesture of squirting the cyanide from an imaginary bottle]. Confused, it will come out of hiding, and I can catch it. (Fieldnotes, January 2013)

On the boat, the ‘drunk’ fishes are usually kept in a covered container filled with water. At the end of each fishing trip the groupers are brought to an offshore fish cage (*karamba*) where the fishers receive a receipt for their fishes – provided these have not died from cyanide poisoning. At the fish cage, the fisher and fish part ways.

5.3 A caretaker at a fish holding pen



A more intimate relation develops between the fish and the caretaker staying on the fish cage. Most fish cages have a hut built on top in which one or more caretakers watch and care for the fish on a daily and nightly basis. Amir, who at the time of research lived and worked on such a fish cage, characterised the fishes under his care as strong yet vulnerable: sturdy animals – but susceptible to parasites, stress and disease. A range of care practices such as feeding, injecting, cleaning, and attentive observation revolve around making and keeping individual fishes healthy and viable. Also, fishes regarded to be too sick to survive are taken out before these infect others. The grouping of the fishes in different cages requires attentiveness to their individual differences:

If different fishes can be combined depends on their size and on their personal preferences. They cannot differ too much in size, as the bigger ones may eat the smaller ones. The brown-marbled grouper (*kerapu tiger*) does not mind the mud and weed. But the coral trout (*kerapu sunu*) does not like it, so for some of my guests [pointing to the coral trout] I have to keep the cage clean. (Amir, 7 September 2012)

When new fishes arrive at the cage – often still intoxicated – they are carefully touched and observed by the caretakers. At this stage, the fishes' liveliness is decisive as to whether they are accepted and kept in the holding pen or left out to die. The caretakers read the fishes' condition by closely observing their colour and behaviour.

I look at how it moves. If cyanide is used, the fish is drunk and weak. Also, I inspect the eyes and I look behind the gills. A healthy fish has red gills. If the gills are bleak, it means they are not feeling well. If a fish stops moving, and just stares with cloudy eyes, it will die. (Amir, 22 September 2012)

Unviable fish are thus separated from the den, left to suffocate, and thrown into the sea. Guarding the thin line between alive and dead fish is indeed one of the main tasks of the caretakers. Every afternoon, fishes are scooped out of their den and touched by the caretaker who inspects their eyes and skin, removes itching parasites, and injects vitamins into their heads to boost their body sizes. Sometimes, antibiotics are given. "Over time, the cyanide leaves the body of the fish. They need time to sober

up and grow strong before being exported. I can see it as they regain their appetite, and if they enjoy to go swimming again”, Amir added (*idem*).

Cyanide fishing brings fish bodies under influence of vitalizing flows of vitamins and devitalizing flows of antibiotics – risking corporal disintegration. The modulation of these flows is a crucial part of fishers’ and caretakers’ affective practices in cyanide fishing. We now turn to the fishers’ bodies, which appear to be as permeable and affective as those of the fish they catch.

Bodies and fluids

Coordination of flow and movement is central to cyanide fishing practice. The diving requires exceptional muscle coordination to move underwater and approach prey: “Deep down there, life slows down. Fishes go about slowly, but the diver’s body too. One must learn how to adjust to this slowness, yet strike at the right time [to catch the fish]” (Pata, 14 January, 2013). According to another fisher, unskilled divers are easily exhausted because they have yet to learn how to manage their energy while underwater. This also involves sensing direction, turbulence and temperature of currents to move effectively.

Among maritime people in the Makassar Strait, diving and cyanide fishing is commonly considered a dangerous practice. It is associated with the frequent occurrence of different incidents leading to a variety of temporary or permanent ailments, sometimes even leading to death. For example, during field research on Sarang Island, a cyanide fisher died after coming back from a diving trip. One evening, a week after his death, some of his neighbours discussed the incident during an informal chat. A woman narrated:

Over the last years, he has had at least four accidents [while diving]. The first and the second time he felt unwell; he was confused because of a lack of blood (*kurang darah*). When his buddies brought him back to the island he wasn’t responsive. However, he recovered. The third time, it was the *kram*. After diving, he lost control over his left leg. From then on, he passed by our house limping. He took a few weeks rest to recover. The fourth time, that was last week... he resurfaced with blood running from his nose... and mouth. In the boat, he was still awake. His buddies realised it was the *kram* again, and made

him drink beer. By the time they arrived at the island, he wasn't awake anymore. He died that same night. (Alisha, 23 September 2012)

Discussing diving-related injuries or deaths, people often use the term *kram* to refer to a loosely defined set of symptoms incurred while diving, which manifest in the diver's body after he has resurfaced.⁴¹ *Kram* tags different processes of becoming affected while diving. In some narratives, *kram* is explained as the *force* (source or process) that affects the diver's body, making it contract, disintegrate, leaving it uncontrollable, deformed or paralysed. In other accounts, it is described as the effect of other agencies – such as cold currents and spirits – infecting the diver's body while underwater and making it susceptible to becoming 'cramped'.

Whether force, process or affect, in local narrative the occurrence of *kram* and other diving-related complications always comes together with fluid substances or media penetrating or spilling out of the fisher's body, such as blood, currents, air flow and spirits. The most common of these fluidities are the circulation and flow of blood, seawater, air/oxygen and spirits.

Divers sometimes resurface with blood running from eyes, mouth or nose. Throwing up blood is generally taken as a serious condition, as this is often followed by loss of consciousness or death. It is common knowledge that the spilling of blood is caused by the rupture of veins. Yusri gave an explanation of how the veins rupture:

Our body, when it descends: it becomes smaller, and everything slows down. We know this, because before we go down, we tie a weight belt around our waist. We tie it tightly, but when we are deep down, it has become looser. When we ascent, the opposite happens: the body expands and the power of the blood flow increases. That's why we should ascent slowly, to give our body time to expand; otherwise the blood breaks through the veins, and flows out of our nose or mouth. (Yusri, 25 November 2012)

According to Yusri, the velocity of the blood increases during ascent (while the body expands). Slowing down the ascent is important to synergise this process of expansion and blood flow without rupturing veins. Yet, a slow ascent cannot avert all

⁴¹ *Kram* is associated with different ailments, such as confusion, unexpected bleeding, paralysis or the alteration of a diver's face. In western knowledge traditions a similar set of symptoms is associated with decompression disease (Divers Alert Network 2004).

blood-related ailments, as there is also the 'lack of blood' that frequently bothers divers. This lack of blood among divers resembles the sensation of 'breathing dirty oxygen' or 'dirty air'⁴²:

Sometimes we feel drunk from diving. Because the air we breathe from the tube is not good. The tube is rarely cleaned. We feel drunk from the dirt we inhale. It's only after we surface that we have to throw up. But usually, we already feel it coming while in the water, as an increasing pressure on our heads. As soon as I feel this I quickly swim up to the boat. (Yusri 25 September 2012)

Sometimes ascending quickly is a matter of survival, particularly when the diver can no longer breathe underwater. Occasionally, the tubes snap or fold while the diver is in the water, or the compressor malfunctions. In these cases, swimming to the surface immediately is the only chance for survival.

Although a rapid ascent is seen as risky and weakening the body, the *kram* itself is considered waterborne: "*Kram* is something we get from the deep water. It's while down there that we are exposed to it" (Pata 14 January 2013). Notorious are the 'cold currents' (*arus dingin* or *air dingin*) that may catch the diver by surprise. Yusri described how cold currents affect divers:

When we are caught by a cold current... Usually, people say, it can be seen as a sphere, a ball of water swirling and going round and round. But mostly it gets us by surprise, when we are focused on the fish. Once it does, we cannot escape it. It stays with us. When we divers go down in the water, our pores open. Our skin becomes porous. If we stay down too long... the cold enters, through our skin. (Yusri, 25 September 2012)

Divers have to endure the feeling of cooling down in deep waters, and actively keep their body warm by moving, yet without becoming exhausted.⁴³ Rather than finding their way to warmer streams they have to keep out of cold currents. Their diving practice thus involves thermal navigation, stimulating a thermal sensitivity when affected by flows of colder and warmer sea currents. As the diver's body becomes

⁴² Because the compressor's engine runs on petroleum, fumes often mix with the air that is pressed down the tube.

⁴³ While diving, most cyanide fishers do not wear wetsuits but ordinary tights, shirts and socks to cover their skin.

increasingly permeable while submerged, the cold also penetrates the diver's body, potentially modifying it.

A common modification of divers' bodies is referred to as rheumatism (*rematik*) by which the body's joints become increasingly stiff and painful. No clear distinction is made with *kram*, and sometimes the terms are interchanged, though mostly *rematik* pain and stiffness is referred to as a chronic, painful and slowly increasing effect of taking the cold of the deep sea along to the land, while *kram* is used to explain the sudden, intense and uncontrollable nature of post-diving bodily disorder.

The inability to urinate after diving is considered a typical forebode of *kram*. Interestingly, the body's holding back of fluids is reversed in the flow of body fluids in the affected body, as Yusri's narration in Section 1 shows. During fieldwork several islanders pointed out that a diver with signs of *kram* should be coerced to drink carbonated soft drinks (particularly Sprite was mentioned) or beer, to make him relieve himself as soon as possible and set free the toxic fluids or gasses residing in his body.

The occurrence of *kram* is commonly associated with spiritual agency – particularly of sea guardians and ancestral spirits.⁴⁴ Several places are known dwellings of guardian sea spirits that appear as currents, sparkles, sounds or fish. For example, one underwater cave off the coast of the Berau regency is known as a dwelling place of an exceptionally strong sea spirit appearing as a hefty grouper or shark that deliberately confuses divers, and lures them into the cave. Yet, spirits are not necessarily place-bound. Also the cold currents are related to the affective potential of sea spirits. Importantly, spirit, fish and current are not clearly distinguished as separate elements, but rather described as different, mutually affecting manifestations of spiritual agency: “While diving, we are not protected against the cold currents, and sometimes we become exhausted. That's when one becomes susceptible to be possessed by sea spirits” (Pata, 14 January 2013). Or, as an Islamic teacher explained:

⁴⁴ In the Makassar Strait, maritime people refer to a variety of spiritual and supernatural beings, among others demons, ghosts, guardian spirits, ancestors, and deities. Different spiritual, ethnic and religious traditions have mixed and cross-fertilised, making a clear categorization of spiritual agencies impossible and irrelevant.

The sea spirits can pose a real danger to the diver. They can hypnotise or disorient him, and lure him away to deep places with cold currents. When the diver resurfaces, his body is cooled and weakened. It may be affected by a spell, or possessed by a spirit. (Masrif, 22 September 2012)

Whereas spirits can take divers into dangerous flows, these very flows or currents are also considered animated and sometimes referred to as yet another way spirits make themselves knowable or ‘feelable’ to the divers. As currents, spirits can penetrate and cool down or heat up divers’ bodies. The cold or heat as a thermal affect is then a manifestation of spiritual influence or agency taking possession over the diver’s body – like Yusri’s sensation of having a burning body before he became paralysed. As a consequence, measures to counter or avoid *kram* are often carried out as a mediation with spirits.

In most cases of sudden *kram* setting in one or more spiritual healers or mediums are summoned to find out who is bothering the diver and why. For example, on 26 September 2012, a cyanide fisher felt unwell after coming back from a diving trip. He mentioned stomachache, felt weak and dizzy, and his speech was impaired. Umar, an experienced spirit medium (*dukun*) was summoned. Upon arrival Umar tried to identify and address the spirit controlling the diver’s body by closely observing the man’s posture and moves and whispering questions: “Who are you? What do you want?” After a moment of silence, he bellowed out: “Make yourself known!” In the end, Umar discontinued his attempts because, as he said, he was not acquainted with the spirit. Granny Juhaira was called for instead. This old woman was one of the local spiritual leaders, and in charge of tending ancestral relations. Accompanied by the rhythm of drums, Juhaira danced and went into a trance-like state. In this state, she identified a disgruntled ancestor spirit that had taken control of the diver’s body because it felt neglected. The next morning, this ancestral spirit was honoured with a ceremonial offering of betel leaves, cigarettes and yellow rice – after which the diver soon regained his speech and strength (observations and interviews, 26 September 2012).

The above episode illustrates how *kram* is sometimes brought about by neglected ancestors. Similarly, a woman narrated an incident with a diver back in 2006:

When he came back to the island, he wasn't really conscious. He couldn't open his eyes, and he couldn't speak. The subsequent night, at two in the morning, my aunty sat upright next to me. In a dreamy voice she said that a spirit had spoken to her in her dream, and said: "It's me who's bothering him. I only do this to open his eyes, to make him see. He disturbed me without acknowledging me. He should apologise and feed me." After saying this, my aunty felt right back to sleep. The next day, she couldn't recount the story, but I could, and I did. The boy apologised to the spirit and his family offered black glutinous rice with an egg on top, which they brought to the waterfront. Soon after the offering, the boy regained his eyesight. (Alisha, 14 January 2012)

Interestingly, in this story the spirit moved into the diver's body and sensory faculties to 'make him see'. The spirit felt disturbed and hence disturbed the diver. Here *kram* becomes a highly intimate affective relation between diver and spirit in which the diver's senses are momentarily possessed, or consumed by the spirit; this goes on until the spirit is given due attention and is fed. Indeed, according to Alisha's husband, an Islamic teacher (Masrif, 22 September 2012), the affect of the sea spirit is best seen as a form of eating. The spirit 'eats' or 'consumes' the fisher's power or energy – possibly to take something back, for example when the fisher has been greedy while underwater. A disorder in human-spirit relations is partly manifested in how the diver's body is brought into disarray. In accordance with this, one fisher stressed that divers only start feeling the effects of such disorder when they have already left the sea spirits' underwater home (Juda, 7 December 2012). Restoring the relationship with the spirit(s) is thus essential for the affected fisher to recover.

This association of *kram* with affective and reciprocal relationships with spirits was also brought up as explanation of why divers with complications are rarely brought to a doctor or hospital on the mainland.⁴⁵ Spells and spirit possession related to diving and fishing have to be addressed and solved at or near the intersection between the spirit's underwater home and the diver's home on the island. Treatment of divers through mediation with spirits and offerings are therefore often carried out on or near the shoreline. Whereas taking a diver with *kram* to the mainland carries

⁴⁵ In the research sites, people (including fish bosses) also pointed out that those in charge of the life reef fisheries discouraged the consultation with medical practitioners on the mainland, as this would bring unwanted attention to a business that is partly illegal according to official regulations.

the risk of worsening his condition and obstructing negotiation with the residing spirit.

In this section we have shown how cyanide fishing is an assemblage of relations in which bodies affect and are affected by elements in flow. While the fish is intoxicated by the cyanide, the fisher's body may become impaired, transformed or even paralysed by the fumes, currents and pressure that deep diving exposes him to. Divers counter the influence of cold currents by drinking alcoholic or carbonated spirits, while sea spirits affect divers' weakened bodies. *Kram*, as the primary danger associated with cyanide fishing, thus connotes more than an affected human body: it effectively becomes the expression of permeability as a form of sustained interdependency in/of all elements assembled in cyanide fishing.

5.4 Diving with an air compressor



Danger and delight

The known risk inherent to the cyanide fishing practice infuses feelings of both danger and delight that are reproduced in relations and practices. For Pata, who had been diving and fishing with cyanide for years, fear of losing his vitality, and sorrow for the misfortune of others close to him, finally gained the upper hand over his

enjoyment of cyanide fishing. He decided to stop after several of his friends and kin had died or become crippled. “I never got used to the diving accidents”, he said as he recalled the death of a close friend and diving buddy:

When I started diving, my friend had just gone down into the water. After a couple of minutes he resurfaced. He called us, said he had seen a cave with many big fish, and so he had come up to warn us. I still remember his happy expression. He was so excited! I think he hadn't noticed yet the blood running from his nose and mouth. I knew this happened frequently, but still I was shocked looking at his face, he was a brother to me. He died from *kram* later. (Pata, 14 January 2012)

Apart from the sorrow and distress for losing his close friend to a dangerous practice, this interview fragment also indicates another sensation: excitement. Delighted with finding a big catch underwater, and eager to share it, his friend swam up to the surface too quickly.

Cyanide fishers do not take such risk because they lack knowledge of the consequences of their actions. According to a fish cage caretaker the issue was not so much if they knew, but if they cared at the moment they were down in the water. When cyanide fishers feel cold and tired from diving, and have a fortune of fish in their hands, “they just want to go up to the boat immediately” (Amir, 18 September 2012). Similarly, Yusri conceded: “It's when I'm excited by having caught a big fish... I go up [to the surface]. I know I shouldn't, but at that moment I just want to go up as fast as possible” (Yusri, 25 September 2012).

Without downplaying social-economic conditions, the thrilling experience of cyanide fishing moves beyond the economic in explaining its appeal. Alisha provided a to-the-point reflection on the mixed motivations to engage in cyanide fishing:

It's a combination of things. Some people, like Yusri: they continue because they really wish to leave their children something before they die. They can also feel forced to pay back their debt [to their boss]. Many young guys who start diving actually *like* doing it. I think they like the risk too. It's often a bit of all these things. I think it is very important to understand their mind-set. They are not in control. It is a gamble. (Alisha, 23 September 2012)

According to her, men start or continue fishing underwater with cyanide not only because they are caught in a patron-client dependency and want the money, but also because they enjoy doing it.

Pata indeed recalled how he and his buddies experienced a ‘kick’ when diving or catching an exceptionally big or valuable fish. Another fisher compared the thrill he felt when diving deep – the hunting in differently moving water currents – with the way seagulls must feel, surfing on the thermal winds. Cyanide fishing was also described as a skilled practice. “Some people think it’s easy. But it can take months or years of practice to actually become a skilled diver” (Pata, 14 January 2013). He added: “Once they have become good at it, they want to continue doing it. They build a reputation”. This reputation of being a good cyanide fisher – a skilled diver and successful hunter – is something to feel proud of; this may also involve pride in physical appearance, as the underwater hunting strengthens and transforms fishers’ bodies. Yet, although many young dive fishers happily showed (off) their muscular torsos, others – whose posture or ability to move was impaired by *kram* – did not. Some of them, like Yusri, were known to rather stay away of public places and events.

In conversations particularly the younger fishers related their enjoyment of cyanide fishing to the excitement and sensation involved with doing dangerous work. They engage in cyanide fishing not only despite known risks, but also *because* of known risks. The very riskiness of deep diving with cyanide is a source of pride to those who dare, especially for those who feel they have to prove their bravery to peers, parents or prospective wives.⁴⁶

The risk-seeking of cyanide fishing is not only in the physical challenge of defying cold, exhaustion, predatory fish, and spirits but also in its association with gambling: there is always the chance of catching a fortune, even if most cyanide fishers become increasingly indebted. Bravery and bragging are not far away either, for example in association with the consumption of alcohol and other stimulants.⁴⁷ One of the latter, methamphetamine (*sabu-sabu*), is illegally imported from Malaysian Borneo and is widely consumed in East Kalimantan’s coastal area. Those willing to informally discuss its consumption pointed out that particularly young men

⁴⁶ Older cyanide fishers referred to risk and discomfort as motivation for limiting their practice to shallower dives, or alternating diving with other ways of making a living.

⁴⁷ Since alcoholic drinks are officially banned in the research sites, this is a privilege for those working for well-connected bosses and traders, who import beer and liquor from Malaysian Borneo (Chapter 3).

with risky and physically demanding jobs such as cyanide fishing use – and have become addicted to – the drug. One of its regular users (and importers) was a captain who alternated the transport of fish to Tawau (Malaysian Borneo) with diving. Joining him on his way to Malaysia, he talked openly about his and others' use of the drug: "It is wonderful stuff. It feels good. It gives power. I use it for the travels. I can go on all night, without sleep or food. Basically, it gives stamina" (Osman, 23 June 2012). He explained how methamphetamine was popular among divers because it (temporarily) erases the sensation of pain, exhaustion and fear that the practice generates.

Similar stories were told in another cyanide fishing stronghold in the Makassar Strait: the Masalima Archipelago. Here, groups of daring young men experiment with various (mixes of) cheap and readily available medicines taken in several times the maximum daily prescription dose at once. These medicines/drugs are consumed both as a form of recreation and to suppress the dizziness, headaches and balancing problems associated with diving and *kram*.⁴⁸ The drugs stimulate a relation of excitement and enjoyment between young men and cyanide fishing.⁴⁹

The practice of cyanide fishing thus sustains in affective relations that produce both fear and delight. In this, cyanide fishing does not stand alone. The association of cyanide fishing with gambling, thrill-seeking and deliberately affecting oneself with risky substances resembles other examples from 'terrestrial' literature about the use of inhalants (Gigengack 2014), drugs and drinking parties (Nooteboom 2014) and thrilling, high-risk occupations like firefighting (Desmond 2006). In all these examples sensations of fear and delight interrelate in situations of partially losing oneself in the exploration of the boundaries between consuming or being consumed, becoming moved or paralysed, stimulated or overpowered by the influence of drugs, excitement, adrenaline, or spirits.

⁴⁸ Particularly popular was the consumption of Antimo, Dextro and double L (or 'LL'). Antimo (dimethydrinate 50 mg) is an anti-motion sickness medicine that is cheap and widely available without prescription. Divers use Antimo to combat diving-related dizziness and balancing problems. Equally cheap and readily available at the time was a cough repressant sold under the name Dextro (dextromethorpan and paracetamol), of which 30 to 40 pills at once were reportedly taken as a drug. Finally, Double L (trihexypenidyl hcl), a muscle relaxant, was also mentioned to bring about a strong sense of joy and euphoria.

⁴⁹ In other cases, exemplified by Yusri and Pata, excitement and enjoyment are partly overcome by the fear, sorrow, discomfort or paralysis produced through years of practice.

Conclusion

Although officially illegal, the practice of cyanide fishing thrives in Indonesia. From there, it supplies the international live reef fish trade to Asian capital cities. Much has been written about the destructive effects of cyanide on coral environments, and the political-economic conditions of inequality that sustain the practice. Much less attention has gone to the practice itself and the affective relations that it involves and generates, involving sensations of danger as well as delight. Our ethnography adds insight to what and who moves and motivates cyanide fishing beyond economic incentives.

We have described cyanide fishing as a practice that involves and is sustained in the ongoing assembling of relations between various bodies and elements in movement, such as fishers, fish, messages, sensations, boats and compressors, oxygen flowing through plastic tubes, thermal currents, spirits, and ancestors. Understanding the affective relations of cyanide fishing helps to provide an answer to the question why such often-lethal practices sustain in the first place. Such understanding may also be a necessary step in any attempt to engage with illegal and environmentally destructive practices, – instead of ‘jumping to intervention’ based on one-sided notions of cyanide fishers as either victims or perpetrators of illegal practice.

We share with recent ontological currents in anthropological debate the commitment to take others’ propositions seriously, without reducing these to a Euro-American notion of what is ‘really real’. In our exploration of cyanide fishing we feel that in order to do this affective relations need to be included in an ‘ontology’ of cyanide fishing. In cyanide fishing as a world making performance, sensations of fear, joy, thrill and heat are more than mere effects of diving practice: they appear as affects, as active elements in the assembling and mutual interdependency of relations. They help understand cyanide fishing as an enduring practice, sustained as sensuous world making.

Some of Deleuze’s concepts (e.g. ‘assemblage’) have made their way into anthropological analysis (Escobar 2008; Jensen and Rødje 2010; Li 2007) – including those focused on aquatic and fish(ing) realities (Anderson 2012; Bear 2012; Blanco et al. 2015). However, as Müller and Schurr (2016) point out, ‘assemblage’ is often used to denote an already ‘stabilised’ and coherent grouping of different bodies – thus passing over the vibrant, vital and affective quality of the entities that together

compose an assemblage and thus are at the root of (de)stabilisation). A more thorough engagement with the notion of affect allows for a closer look on the transformational potential of all manner of entities as they encounter, move, touch, penetrate and modify one another.

In our case, cyanide fishing involves a continuous process of merging, resisting and transforming of affecting and affected bodies of fish and fishers, but also of spirits, currents, drugs, antibiotics. In the process bodies transform, merge, or contain each other as substances, sensations, currents, and fluids flow between them. The bodies themselves are permeable, leak substance and are unstable. In other words, bodies are not just assembled and connected; they are also partly infused, penetrated, inspirited, and consumed (in the sense of digestion as well as destruction).

Although the destructive and crippling side of the cyanide fishing lifeworld is apparent, the related element of enjoyment is essential to understand the continuation of the diving practice. Particularly the young and unmarried fishers engage in cyanide fishing not only despite known risks, but also because of known risks. The risk-seeking of cyanide fishing is not only in the physical challenge of defying cold currents, exhaustion, predatory fish, and spirits but also in the teamwork with their buddies on the boat and the reputation of being a good diver. Cyanide fishers thus experience both danger and delight, as the thrill of diving and seeking the margins of bodily sensation feeds on, and produces, feelings of both fear and enjoyment. It generates flows of energy and bodily fluids, but also sucks them away. It are these affective relations that help us understand how cyanide fishing assemblage persists.



Chapter 6

Discussion and conclusion

< 6.1 *A man sleeping on board the 'kapal loding' from Masalima to Sarang Island*

Introduction

This concluding chapter brings together the insights generated by my ethnographic fieldwork and analysis as an iterative process. The leading research question for my research was: How to grasp flow conceptually and methodologically in relation to the multiple ways maritime worlds are performed in Indonesia? This research question formed the undercurrent to the guiding questions that I developed throughout the research process and that are discussed in the different chapters.

With flow I have referred to the fluctuations of and between bodies, things and worlds in the making. My interest was in exploring and experimenting with ways to apprehend this flow without fixating its vital mobility. The theoretical and ontological presupposition of this thesis is that reality is potentially multiple and fluid. Multiplicity means that different versions of the real (what is true, what acts, matters, moves and affects, and how) are continuously being performed, or ‘enacted’ in STS terms. Different versions or enactments are ontologically different if the principles that define them relate to one another but cannot be contained into one encompassing picture or narrative. At the same time, because the world is continuously being performed in relations and translations, differences are relational too. This is where fluidity comes in. Because realities, the world, or ‘life’ are relationally constituted, ontological differences are never absolute: they are permeable, fluid.

I contend that the claim of ontological multiplicity is of a heuristic and political relevance to social science, and anthropology in particular. This is because it allows us to engage with radical difference – or the real on different terms – instead of explaining it away in our own terms. Engaging with alterity is important because it opens one up to see the realities that systematically escape our (scholarly) attention, yet affect the world nonetheless. This requires translation or the practice of relating different worlds, reals, repertoires or ways of life and bringing them into interaction – which is a process of, and a condition for, dialogue.

My primary research question pertains to the sub-discipline of maritime anthropology. However, I have argued that the way human-marine relations are usually approached in maritime anthropology does not provide the necessary room and conceptual basis to deal with multiplicity and radical otherness. My primary objective has been to enrich the anthropological study of human-marine relations

with conceptual and methodological tools to engage more fully with the multiplicity of the maritime. In Chapter 1 I have argued that a relational ontological approach is useful to engage with multiplicity and radical otherness.

I have experimented with and employed different currents in ontologically attuned social science theory. They share a common commitment to anti-essentialism and a 'baroque' notion of complexity as a situation in which things relate but do not add up (Law and Mol 2002). Taking baroque complexity as a basic starting position has enabled me to follow different performances of human-marine relations in the Makassar Strait and explore how different maritime worlds come to be and matter. The research chapters each contribute to a specific aspect of human-marine relations as seen from an ontological perspective.

Chapter 3 draws on the case study of Langkah, the mobile Bajau tradeswoman, to show how maritime people perform informal networks of exchanges and interdependencies across the sea. The chapter sheds light on a world that often escapes the attention of maritime research and policy making both in terms of scale and complexity. There is a persisting disparity between the relational performance of this sea-based Bajau world and the way in which it is captured and approached in maritime governance, including conservation policy and practice.

Chapter 4 shifts the focus from disparity to a situation in which ontological difference between the world of the Bajau and the world of marine conservation are simultaneously radically different and partially flowing into one another. I have illustrated this by following the practices in which the 'true' natures of coral and people are discussed, settled and mediated in the process of conservation outreach. This chapter makes room for ontological fluidity in and between different worlds as they relate and partially interact with one another.

In Chapter 5 the focus is turned to fluidity within worlds rather than between them. It foregrounds affective relations as constitutive to world making by showing how cyanide fishing involves and assembles bodies, fluids, spirits and currents that flow into one another, producing sensations of both fear and enjoyment. Together these chapters provide the ethnographic fluctuations of/in an ontological approach to human-marine relations.

To work with flow I have found the concept of amphibiousness particularly productive. In correspondence to Jensen and Morita's (2015) work on amphibious

environments, the concept connects with the shifting land-sea interface in which the Bajau and other sea people dwell. Amphibiousness also captures my anthropological engagement with flow, multiplicity and otherness by way of moving between worlds in order to explore the moving interface between realities or ways of life that partly intermingle. Furthermore, amphibiousness links to my interest in extending world making with the affective relations of performing life, due to the concept's connotation with an embodied and sensory immersion in different worlds. Finally, I apply the concept of amphibiousness to the shifting interface between immersion in fieldwork and recapitulation in analysis.

Amphibiousness as method or methodological disposition refers to the practice of moving in and between different, partially connected worlds. This includes the simultaneously different but interrelated worlds of the researcher and of the interlocutors in their encounters during fieldwork – sometimes converging, sometimes clashing or creating turbulence. These moments of turbulence may, as I have elaborated in Chapter 2, be expressed in logical, emotional or bodily confusion.

Although ontological currents in anthropology have discussed and proposed different ways to deal with multiplicity and alterity conceptually, much less effort has been spent on describing the methodological consequences of such an approach. Chapter 2 is an attempt to do so. The chapter elaborates the ontological approach by focusing on how flow, multiplicity and otherness in human-environment relations can be grasped and translated in anthropological methodology. Chapter 2 thus considers ethnography itself as a project of world-making and translating, and shows ways in which ethnography can become (more) amphibious.

My commitment to a baroque complexity also made me reconsider the organisation of the PhD research. My PhD project proceeded iteratively, so no overarching coherence was assumed beforehand. Such iterative and reflexive approach allows room for a gradual weaving of relations of and between fieldwork and analysis. The consequence is that the theoretical and conceptual undercurrent my research has taken during this process is shaped in and through the fluctuation of the research practice and its translation in ethnography (Chapter 3, Chapter 4 and Chapter 5).

Below, I further discuss how my amphibious project – including an amphibious methodology – adds to the anthropological study of human-marine relations. I subsequently link and situate my PhD research in current theoretical

discussions around ontology and alterity in anthropology, followed by a reflection on anthropological method. Finally I will address the societal and political relevance of a relational ontological approach to maritime issues of conservation and development.

Anthropology of human-marine relations

My ethnographic study of sea people is obviously linked to earlier anthropological studies of human-marine relations, commonly referred to as maritime anthropology. I have drawn inspiration from maritime anthropology while I have also become critical to the way in which it has developed as a sub-discipline.

As I have shown in Chapter 1, maritime anthropology has been strongly influenced by the legacy of human ecology with a focus on environmental adaptation and neo-institutionalism, concentrating around management of marine resources and sustainable livelihoods. Also, maritime anthropology has been preoccupied with the study of fisherfolk, and mostly those (assumed to be) organised in coastal (land-based) communities. Although there is nothing wrong with these approaches by themselves, other kinds of maritime relations and world-making have slipped away or remained out of focus due to their continued dominance. This has led to an impoverishment of maritime anthropology. I will explain how this happens, and draw on my own research to indicate how maritime anthropology can be enriched by new line(s) of inquiry that open up to multiplicity and alterity.

My primary concern lies in the prominence of deductive research, in which reality is contained in pre-defined models and categorisation, coupled with a general emphasis on applied research rather than theory-building. Particularly in the last couple of decades maritime studies have been heavily influenced by the structural-functionalist underpinning of human ecology, commons studies and sustainable livelihood approaches. As my literature review in Chapter 1 has shown, these trends have clearly infused the course of anthropological research on human-marine relations.

A first problem inherent to an overly deductive approach is that pre-defining and categorising the world before research inhibits a necessary reflection on the relevancy and consequences of using particular categories while it also compromises the openness to learn other ways of ordering the world. As a result maritime research often uses frameworks that highlight the ordering of maritime worlds into

local/global, legal/illegal, formal/informal, nature/culture, and land/sea dichotomies, even though these may be fundamentally at odds with the world-making practices they are applied to. An example of this is that anthropological studies of marine conservation have often categorised people by spatial and administrative boundaries, and defined them as local communities. In Chapter 3 I have argued that such emphasis on administratively and locally contained communities comes at the expense of valuable insights in forms of community along shifting kinship and business relations beyond place-based notions of communal life.

I have shown the added value of an explorative approach to the social as associations (Latour 2005) for maritime research. Such a relational and performative approach does not define community beforehand but explores how certain kinds of community are sustained in different situations, and who and what participates in this process. Along this line, I have followed and described Langkah's network as an effect of associational practice (or 'net-work') that – in its mobility and fluidity – eludes and partly undoes the communities that conservation policy attempts to enact.

So, instead of defining for our interlocutors what their world looks like and what motivates their actions, there is much to gain from tracing relations in an anti-essentialist way. Following people like Langkah the trader (Chapter 3), Rifal the community facilitator (Chapter 4), and Yusri the partly paralysed cyanide fisher (Chapter 5), provides the empirical surge that is needed to defend, crush or modify models and categories. A lack of such exploration leads to systematically missing crucial aspects of how maritime worlds 'work'.

A second issue to tackle is the structural land bias and land-sea dichotomy that runs through anthropology and social science in general. This includes the implicit assumption that people are terrestrial creatures, and that sea-dwelling is an anomaly (Ten Bos 2009; Corbin 1995; Smitt 2015). 'Landlocked' theories have long marginalised sea-based worlds from scholarly attention (Anderson 2012). The majority of maritime ethnographies remains tied to the land, and covers coastal rather than sea-based practices. However, as my chapters show, even if most people live on the land most of their life, living at sea and in intimate correspondence with the sea is part of the human repertoire of dwelling. As such, it deserves attention as part of the diverse ways people organise their way of life. If not maritime anthropologists, who then will address this land bias and explore the sea as a lived-in space? As I have argued in Chapter 4 on the amphibious nature of coral and people,

maritime anthropology in particular can redress the land-sea dichotomy that runs through western knowledge traditions.

There is much to gain here for anthropological research in terms of method. The land bias also shows in the tendency of anthropological fieldwork to remain land-based rather than leaving firm ground and engage in sea-dwelling. I have shown in Chapter 2 that joining people at sea – hard as it is – provides necessary insights in different ways of knowing, doing and feeling that are inaccessible from a land-based perspective. By following people across the sea I became aware of different modes of performing space (the mapping experiment), I realised the importance of the senses in environmental wayfaring (the haptic and olfactory navigation of seafarers), and I learned about how to become affected by a different reality, as I accidentally offended a sea spirit (the egg incident). Maritime anthropology should more fully engage in and with maritime worlds by following, in ethnographic detail, how people relate with human and non-human others in the performance of these worlds. Such ethnographic research cannot be restricted to land-based field sites and spatially contained communities. In order to learn about, with and from maritime interlocutors, anthropologists need to follow them, not only conceptually but also physically. This may necessitate a mobile fieldwork practice, as my research has shown.

Engaging more fully in maritime world-making also enables critical reflection on theory building. Such endeavour extends beyond thinking ‘with the sea’ as a metaphor. Rather, it means theorising from the fieldwork engagement in maritime worlds and the translation process that comes with ethnography. What can we learn from sea-based ways of life in terms of rethinking human-environment relations? Anthropological theorising from the sea as a mere metaphor or a social construct contains the risk of a mirror effect. The mirror effect as discussed by Howitt and Suchet-Pearson (2003) refers to the situation in which knowledge practices produce images of themselves through their process of self-legitimation rather than cultivating self-awareness. Theorising from the sea then reproduces a western bias, for example, as the sea becomes a metaphor of ‘wild’, ‘untamed’ nature, or water becomes a volatile assemblage of chemical (H₂O) elements (after Helmreich 2011). In fact, such mirror effect is a major downside of deductive approaches in anthropological research. The risk is that research leads to a reflection of how

academics organise maritime worlds instead of generating insight in the multiple relations through which maritime worlds are performed.

Obviously, reflection and deduction are always part of research processes, including my own. I argue here that experimentation and an openness to learn and conceptualise from fieldwork practice needs more attention to enrich anthropology's capacity to advance theory. In Chapter 4 I have elaborated on the concept of amphibiousness as it resonates well with my fieldwork experience. The concept of amphibiousness can be of both theoretical and methodological value to maritime anthropology as it draws attention to the shifting interface between land and sea – modalities that are different but also partly intermingling – while it also links up to the ways in which people – as amphibious beings – move and enact a land-sea interface. As such, amphibiousness is a conceptual tool to undo land-bias and redress the land-sea dichotomy.

Due to its adherence to universalism, another concern I have with maritime anthropology is how it deals with complexity. Structural functionalism and neo-institutionalism are quintessentially holistic approaches. As discussed in Chapter 1, this means that these approaches are based on the 'romantic' notion that complexity can (and should) ultimately be integrated into an overarching whole. In this line of thinking, models and categories should approach as adequately as possible this ultimately singular reality of the 'really real' world out there. In Chapter 4 I have shown how such adherence to one 'really real' leads to the assumption of facts – the true nature of coral and people – while in practice the settlement and coherence of the true nature of coral, people and their relation is a contingent and situational accomplishment. Making room for such ontological multiplicity requires a different way of apprehending and dealing with complexity – one that does not assume an overarching coherence of what is real but instead explores how reals and truths are continuously being performed and negotiated. Instead of problematic, such multiplicity provides scope for creativity, learning and dialogue because in practice, reals are fluid and can therefore affect each other. Such is the productive capacity of a baroque way of thinking complexity.

Taking in flow and ontological multiplicity will strengthen and enhance maritime anthropology as a knowledge practice that brings into view and interaction different ways of thinking, ordering and doing the relationship between people and the non-human beings they relate to. This brings me to the question of alterity in

maritime anthropology. Taking in ontological multiplicity presumes giving room to radical otherness, a difference that cannot be contained by the terms of the same or, in other words: a current with a different condition and definition of being. Giving room and engaging with such difference in maritime anthropology can connect critically with questions if and how life at sea poses or produces otherness and sameness in relation to the ontology we work in or with.

In Chapter 5 I have shown that taking seriously the Other in maritime anthropology is not limited to metaphysics. Taking seriously otherness also means trying to apprehend in an open-minded way what moves and motivates the Other. I have shown the theoretical relevance of such approach in the ethnography of cyanide fishers and their explanation of *kram* ('cramp') as a condition of the body leaking and absorbing fluids, emotions and spirits as it is affected by different kinds of agencies. Following the explanations and narratives of cyanide fishers, I have shown that this very process of becoming permeable produces sensations of both enjoyment and fear. These insights are highly relevant for understanding why a risky and destructive practice like cyanide fishing sustains.

It is clear that maritime anthropology can and should be more than 'an anthropology of fishing' (Acheson 1980), and that its relevance may be precisely in – as Bernard provocatively wrote – 'having nothing in common besides (sea) water' (In Acheson 1980, see Chapter 1). By this very commonality, maritime anthropology should cast its net wider to include the exploration of how forms of human and more-than-human lives are performed in an affective correspondence with the sea.

Although committed to stay close to the world, ethnography is never mere description or representation, but an intervention. A mode of storytelling that at best evokes a dialogue between different ways of being, ordering and performing the world. A dialogue in which theory helps to order and translate fieldwork insights, and fieldwork insights inspire and qualify theoretical growth. It matters which concepts are used, because they allow for different stories to be heard and written. Through its ethnographic methods, the potential of maritime anthropology lies in following and describing how certain maritime worlds come to be and to matter in a multiplicity of material and semiotic relations – and from this draw lessons regarding implications for management.

These questions are of an explorative and theoretical nature, and I have argued that to deal with them we need another way of thinking human-marine relations in maritime anthropology. However, I do acknowledge that there already are major and inspiring maritime anthropological works that do precisely this: explorative ethnographic research that generates significant insights in the performance of different maritime worlds (for example Van Ginkel 2009; Fabinyi 2009; Helmreich 2003, 2009; Lowe 2003, 2006; Pálsson 1994; Stacey 2007). My argument should thus be taken as an emphasis on the need to develop this line of explorative enquiry more thoroughly. Human-marine worlds as mobile and affective webs of relations remain remarkably understudied, as is their interference with maritime conservation and development schemes.

What to do with ontology?

The ontological turn has its roots in different traditions, and has evolved in a rather rhizomatic way as a product of a continuous cross-fertilisation between STS, anthropology, and philosophy. Yet, while the crowd of scholars sympathising and pursuing an ontologically-attuned anthropology grows, as a body of thought ontological anthropology is multiple, involving and producing different lines of debate.

A distinction can be made between the focus on enactment and the continuous production of multiplicity in practice (associated with STS), and the current revolving around alterity (the study of ontological difference). Although in practice these lines of thinking tend to interact, it is useful to point out their different uses of the term ontology. In enactment-oriented studies the term ontology is often used in relation to a reality claim: the claim that reality is relational, performative, and potentially multiple. Studies of alterity use the term ontology rather as a 'model'; as one of different theories of existence (Kohn 2015).

The term ontology is mobilised to show and argue that there are different theories of existence, and that we should take these seriously as other, indigenous, non-science based ontologies, instead of explaining them away as cultural (and distorted) perspectives of the 'one reality' that science is after. The ethnography of performing worlds differently inspires ways to think world-making differently,

especially in other ways of thinking, talking and doing human-nature relations. This in itself can be seen as a political act of (indigenous) emancipation.

This use of ontology has been met with scrutiny as becoming ‘just another word for culture’ (Venkatesan 2010). Indeed, there may be a risk of essentialism in the use of ontology as alterity. Especially when it becomes overly concerned with ‘indigenous’ peoples, and with a certain geographical place, reifying a land-based ethnicity, and downplaying other – more mobile and ethnically hybrid – ways of being. A link between indigeneity and ontological self-determination becomes problematic in a context of ethnic fluidity and invention, as is the case of Indonesia’s maritime worlds. Indeed, shared worlds as theories of existence are not necessarily place-based, or even land-based. If not critically reflected on, ontologically based explanations therefore run a risk of the propagation of ontological self-determination of the world’s indigenous peoples that happen to be politically well organised, pushing to the background the ontologies of those who do not fit current land-biased and political notions of indigeneity (Graeber 2015). Moreover, as Chapter 4 shows, in order to understand and possibly overcome disparities between different environmental ontologies, I had to take seriously both Bajau and conservationists’ theories of existence, and the kind of relations they presuppose, enact and sustain.

It seems that the use of ontology as alterity in anthropology is foremost an effective means to put certain issues on the table rather than a philosophical statement. What I take from it is an interest in an openness to that what differs, a commitment to take seriously others’ (scientific or non-scientific) theories of existence, world-making and the agencies that are involved in this, and to expose the politics and interests involved in the discursive and material suppression of radical difference by a hegemony of a ‘one-world world’ (Law 2015) in science and policymaking.

In this thesis I have applied both uses of ontology. I started with exploring what the world I studied was made of. How was it enacted? How did it hold together? It was a human world I first explored, as I let myself be informed and shown around by human guides. Ontological anthropology is, due to its ethnographic method, still primarily a study of what it means to be human and how humans relate and perform their world (Kohn 2015). And so, my first eye-opening journey was with a female trader (Chapter 3). I came to understand that the Bajau world was inherently relational, and cohered in movement and exchanges. It was only later that I came to

grasp the alterity of the world I immersed myself in, as I have explained in Chapter 2. I have also used ontology as a model in order to try to follow and understand my interlocutors' world-making practices and storytelling, without explaining them away. This proved productive: it permitted me to meet new agencies (spirits) and allowed for a productive kind of confusion in research encounter. Chapter 2 highlights how a commitment of not explaining away requires further listening, and possibly becoming confused as the scholar's own world-making practice is provoked by that of her interlocutors. As I intended to take seriously ontology as a 'model' or a 'theory of existence' of my interlocutors, I had a hard time finding one ontology. Different spiritual beliefs, different ethnicities, and even one person could express and enact more than one, depending on the moment and place. It was not clear where one ontology or world ended and another began. In particular this becomes apparent in Chapter 4 which follows the work of Rifaal, who translated different 'ontological models' which themselves appeared continuously under discussion. This brought me back to ontology as 'claim': the use of the term ontology to evoke the exploration of world-making practice. Thereby I could study how a being such as coral is enacted differently in different situations, becoming multiple.

Still, there was something missing. To understand what moved cyanide fishers in sustaining their way of life I encountered narratives that related to enactment and alterity, but also led me to the concept of affect to grasp the performance of life in all its sensuous, sensational, and embodied expression. If I take ontological anthropology as an ethnographically informed study of enactment and differing then I also need to explore how 'enactment' works and translates through the sensations and affective relations of my interlocutors. This means that I take seriously not only how they (en)act and move (Chapter 3 and Chapter 4), but also how they feel acted upon, affected, and moved (Chapter 5).

Productive interfaces of fieldwork and analysis

Prominent scholars in STS and anthropology have argued that we need new modes of knowing in order to grasp and express the fluidity and hybridity of nature-culture and human-environment relations (Haraway 2015; Tsing 2015). While I fully agree, I also think that this needs to be extended to critical reflection on and experimentation with how we – anthropologists – 'do' our knowing in ethnographic encounters and

translation practices. One way is making explicit the messy and experimental nature of social science methods as the productive capacity of anthropological fieldwork (Ingold 2011: 16; Law 2004).

I have argued that it is in confusion, incoherence and equivocation that we may catch some of the realities we are currently missing (Chapter 2). However, doing and celebrating experimentation and messiness in fieldwork is not enough – it needs to be extended further to an experimental and messy interface between fieldwork encounter and academic analysis. With amphibious ethnography I refer to the productive interface through which fieldwork and analysis interact with one another. The methodological consequence is a resistance to the common idea in academia that ‘good research’ proceeds by implementing a pre-defined and well thought-through research plan. I am not arguing that fieldworkers should not prepare well. Rather, I wish to emphasise the importance of going with the flow of fieldwork that affects both the empirical and the analytical voyage of the research process. This implies accepting a certain fluidity of research design, which I have made explicit in this thesis.

Initially, I did not go to Berau with a model of ‘baroque’ complexity. Based on my first experience of research in Berau for my Wageningen MSc degree, I could not proceed with the concepts and models I had supplied myself with. After doing my homework to acquire a basic understanding of relational ontological approaches, it was through the PhD fieldwork that I experienced first-hand the relevance of these approaches, which allowed me to theorise from the field back to anthropological literature.

With this moving to and fro the question surfaced what the methodological consequences are for an anthropologist who wishes to research in and translate a reality assumed to be inherently fluid, multiple and incoherent, while keeping its fleeting and relational nature. This again has important consequences for how the anthropologist deals with the realities encountered in fieldwork. In a ‘romantic’ approach, she/he immerses her/himself in fieldwork relations and is partially overrun by the diversity of fieldwork experiences. This diversity is ultimately brought back to an overarching whole that describes one reality. In a baroque approach this need to be done differently. Here, the anthropologist is required to become attentive to different realities that are in motion and in interaction with each another.

Becoming attentive is a crucial skill to be developed by submitting oneself to different ways of thinking, doing and feeling – and of cultivating a sensitivity for that.

The importance of iteration and sensitivity in anthropology is not new, and may even be considered as ‘stating the obvious’. However, I contend that its importance needs to be repeatedly stressed with solid methodological and empirical grounding. In the current academic climate, which stresses firm action and rapid conclusion and celebrates extroversion (selling yourself) it is my sincere fear that this goes at the expense of what I see as one of the primary strengths and values of anthropology and ethnographic research: an attentiveness to difference and a willingness to listen and learn from the Other.

Critical reflection on marine conservation and development

My own view on the role of anthropology in conservation and development studies is reflected in Brosius’ words who writes that “[w]hat-ever else anthropology is today, it is not about figuring out how to manage people better” (Brosius 2006: 684). Rather, I would follow Benedict’s dictum that anthropology is the study of human differences in order to make a world that is safe for such human differences (Benedict 1934).

Although my research was not set up as an applied study, it does have societal relevance by reflecting on the politics entailed in the foregrounding of certain human-marine relations in maritime studies and policies, and the rendering invisible of others. Maritime research infuses policies and interventions for marine governance and conservation, and ontological reflection may stimulate a reorientation in decision-making in marine conservation. The insight from my amphibious study may inform policies to organise human-marine relations in a way that acknowledges and is sensitive to the multiple interests, affects and realities involved. This is important because conservation science and discourse thus far cultivate an approach that cannot cope with the multiplicity and fluidity of everyday practice and relations in marine lived-in spaces.

Ontological reflection also provides a vital reflection on the nature-culture divide that runs through environmental anthropology. Critical political ecology and political economy approaches have addressed the structural inequalities and power relations in the ways human-environment relations are ordered and governed. While I acknowledge the importance and relevance of these approaches, and draw

inspiration from them, they often retain an assumption of the environment as of a singular nature. Conservation outreach has been considered ‘political’ because it prioritises Euro-American conservation claims over other peoples’ interests, in the process enforcing neo-liberal ways of organising and framing relations of access (Escobar 1998; Büscher et al. 2012). However, conservation outreach entails not just a politics of *who* has access, and on whose terms, but also a politics of *what*: defining what kinds of things do or can exist and what their conditions of existence are (Blaser 2014). It is also about what definition and performance of nature or environment prevails.

So, if conservation policies obscure different ways of performing human-marine relations, we are facing a situation of ontological asymmetry. One may say that this is just a matter of culture i.e. of different views and interests. Why then drag ontology into the discussion? Well, part of the ‘problem’ of how and why the world of seafaring, sea-dwelling practices and the world of conservation practice are so incommensurable is in the very object or what ‘it’ is people have different views of. The ‘its’ (community, coral, people, the Makassar Strait) are multiples.

This does not mean these ‘its’ (these different performances of coral, people, community or Makassar Strait) cannot meet. They may partially connect in the contingent and practical engagements in which different kinds of environmental relations are done; an example of this are the outreach practices narrated in Chapter 4. Reflecting on such multiplicity in practical encounters makes it possible to explore ways in which different worlds can interrelate and converge. Such exploration is greatly supported by amphibious ethnographic research.

The simplification and categorisation that feature in conservation policies often make sense for specific conservation and management purposes, as they enable the systematic representation and circulation of diverse forms of knowledge within a widespread convention regarding marine nature and governance. However, conservation plans and maps also systematically obscure and disregard other things. In the process of making systematic and transportable representations, what is rendered invisible and intangible are radically different ways of knowing and relating to the sea as well as ways to enact these relations in the reproduction of particular ways of life. Indeed: on conservation maps there is no place for the smell of the wind (Chapter 2). And in outreach practices, measurement and ecological data give

direction to ‘manage’ marine spaces in conservation, but they do not grasp the relation between people and spirits, which also affects Bajau marine life. Conservation policies thus exclude the performative equivalents of conservation maps and management plans, such as storytelling and (ritualised) practices (Zerner, 2003). Specific modes of expressing and embodying human-environment relations (e.g. in songs, poems or spirit possessions) function as powerful claims to a relational notion of (marine) territory – a notion that can be more forcefully argued for on the basis of particular logics and sensibilities. Such situational practices and performances should not be dissolved into the ‘universal’ logic of marine conservation.

Concepts and theories influence not only how we understand the world, but also how we act upon it. Attending to ontological politics is therefore also a matter of whose environmental stories we wish to listen to, validate, and act out. In the context of marine conservation this is about giving voice and room to different ways of thinking, doing and feeling the marine environment that may (seem to) be incommensurable with conservation practice.

Such endeavour begs for a reversal of conventional discursive hegemonic relationships by allowing multiplicity: trying to envisage ways to integrate conservation programs into the world-making practices and relations in which they operate – instead of adapting native ‘worldviews’ to a conservation paradigm (Echeverri, 2005; Holm, 2003). Making room for multiplicity requires thinking the world as relational and performative. And, as Ingold adds: “In such a world we can understand the nature of things only by attending to their relations (...), by telling their stories” (Ingold 2011: 160).

The importance of engaging more fully with the worlds of those resisting conservation and/or sustaining cyanide and blast fishing (Chapter 5) not only helps to understand what moves them, but also to explain why these practices are conscientiously continued, often to the despair of conservationists. Through amphibious ethnography we can gain insight in how and why particular maritime ways of life are sustained even though they are generally considered as destructive.

Amphibiousness is what is missing in the institutional infrastructure of a marine conservation policy that needs to travel seawards to engage more fully with the maritime world of sea people. Marine conservation and development thinking and practice becoming more amphibious means developing a relational

infrastructure that is, on the one hand, 'seaworthy' (see Jensen forthcoming; Jensen and Morita 2015) and, on the other hand, one that is able to move between and engage with different worlds and ways of life in order to bring about a 'resurgence of flows' (see Tsing 2015). This would generate an on-going ontological dialogue that should include different ways of thinking, doing and becoming affected.

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LIST OF ACRONYMS

ANT	Actor-Network Theory
Bestari	Berau Lestari
COREMAP	Coral Reef Rehabilitation and Management Project
CTI	Coral Triangle Initiative
INREF-RESCOPAR	Interdisciplinary Research and Education Fund - Rebuilding Resilience of Coastal Populations and Aquatic Resources
FASLOK	<i>Fasilitator Lokal</i> – Local Facilitator.
LIPI	Lembaga Ilmu Pengetahuan Indonesia – Indonesian Institute of Sciences
MPA	Marine Protected Area
NGO	Non-Governmental Organisation
RDS-MaCSI	Research and Development Centre for Marine, Coast and Small Islands
RISTEK	Ministry of Research, Technology and Higher Education
STS	Science and Technology Studies
TNC	The Nature Conservancy
UnHas	<i>Universitas Hasanuddin</i> – Hasanudding University
UnMul	<i>Universitas Mulawarman</i> – Mulawarman University
WWF	World Wide fund for Nature
ZMT	Zentrum für Marine Tropenökologie – Centre for Tropical Marine Ecology

SUMMARY

This thesis explores and engages with the multiplicity of the Makassar Strait maritime region in Indonesia as a complex and amphibious land-sea interface in which different performances of human-marine relations meet. During eighteen months of fieldwork (2011 – 2013) this region never figured as a passive ‘background’ for study, but rather as an active and moving world – or worlds – of relations to learn from and theorise about. The thesis engages with the continuous fluidity of being and moving in relation. Flow is both movement as a pattern of activity – the flowing – and that what flows; elements, matter and meaning in motion. The notion of worlds in flow has infused recent ontological debates in anthropological theory in which reality is assumed contingent, fluid and multiple – thereby revitalising the philosophical work of earlier thinkers, among whom Michel Serres and Gilles Deleuze.

Chapter 1 describes how this theoretical journey moved away from the more common institutional analyses in marine resource management where communities are the local, social instances of the wider and more integrated institutional system. Such analyses assume place-based, locally contained forms of cohesion and organisation that are untenable for many forms of maritime associations and collaboration (Pauwelussen 2016). Instead, their very complexity and uncertainty appears attractive. There is complexity if things relate but do not add up (Law and Mol 2002: 1). In ‘baroque’ complexity (Kwa 2002), the world is uncertain. Uncertainty is ontological rather than epistemological, and it therefore cannot be fixed with more knowledge. According to Serres (1995[1982]) dealing with this kind of complexity requires a new way of thinking of flow, fluctuation and turbulence. It insists on a sensuous materiality that is not confined to an individual entity but flows out, leaks, spills over, blurring distinctions between individual and environment. Such irregular fluctuations in the movement of matter are called turbulence. And it is this turbulence that matters, unsettling as it may be for the researcher.

This way of thinking complexity is central to literature revolving around the empirical study of relationality and ontological performativity. In the cross-fertilisation of Science and Technology Studies (STS), anthropology and philosophy, an assemblage of academic work has emerged that, despite differences, shares the

objective to follow, engage with and translate how, in practice, material and semiotic realities come to be and matter – instead of developing a way to ‘access reality better’. During the iterative process of fieldwork and theory development for this thesis, I have increasingly felt challenged, intrigued, and stimulated to join this debate on the basis of a new way of engaging with human-marine relations.

The research question: *How to grasp flow – the fluctuations of and between bodies, things or worlds in the making - conceptually and methodologically without reducing its vital mobility and fluidity?* is further elaborated in a methodological Chapter 2, and three research chapters (Chapter 3, Chapter 4, and Chapter 5) that each focus from a different angle on human-marine relations.

While ontological debates are mainly addressing theoretical innovation, the question how to engage with an ‘ontologically attuned environmental anthropology’ (Kohn 2015) in practice is much less discussed. Chapter 2 intends to fill this gap by answering the question how to grasp environmental alterity in and through ethnography. This question is central to the goal to apprehend multiplicity in motion; the fluctuations between different ways of living and thinking the marine or intertidal world that partly flow into one another, yet cannot be reduced to one another. This situation is referred to as amphibiousness.

Amphibious ethnography refers not only to the practical engagement in the fluid land-sea interface that the interlocutors inhabit, but also to the methodological practice of moving in and between different worlds that are partially connected. Chapter 2 highlights three ethnographic moments that disoriented, but at the same time induced the researcher to explore and learn a radically different way of seeing, performing and feeling the maritime world(s) of sea people. The narratives of affective navigation, the mapping experiment, and the egg incident all show that amphibious ethnography involves a deliberate movement in and between different worlds – that of the researcher and of the interlocutor – which generates a partial fusion or flow in between. Amphibious methodology entails more than learning how to see or think the environment differently; it requires learning to feel and engage with it differently too.

Chapter 3 is about Langkah, a highly mobile and energetic businesswoman involved in the international trade of marine products, including protected marine species and

ingredients to make (illegal) fish bombs. She was one of the most successful maritime traders in the region at the time of fieldwork, sustaining an extensive network of family and patron–client relationships in and beyond the coastal waters of Berau. In this chapter a performative approach is used showing Langkah’s network as a dynamic association enacted in practice and movement. Following her on her travels along the coast of northeastern Kalimantan made clear how she maintained her trade network as a tangle of lines constituted of and by movement. This network as associational and relational effect (Latour 2005) required her to be continuously on the move to associate with socially and spatially mobile actors and keep volatile relations aligned with her interests.

Meanwhile, her very mobility was at odds with MPA development and The Nature Conservancy’s conservation planning that is based on spatially fixed notions of social–environmental relations, and issues of morality (legality) that are approached only from a land- and State-based perspective. Chapter 3 thus serves to provide some empirical grounding to show the relevancy and urgency of a paradigmatic shift in conservation thinking, finding ways to engaging mobile maritime people like the Bajau. The solution to the ‘participation problem’ will not lie in finding (more) ways to incorporate Bajau (or other mobile maritime people) into conservation schemes. The shift has to take place in conservation discourse itself.

Chapter 4 describes a conservation outreach project that attempts to educate and convert local people into coral protectors. Both coral and the sea-dwelling Bajau people appear to be amphibious beings, moving between a changeable land-water interface, and between different, fluidly interwoven ontological constellations. Failure of conservation organisations to recognise the ontologically ambiguous nature of ‘coral’ and ‘people’ translates to a breakdown of outreach goals. The concept of amphibiousness is here mobilised to engage this ambiguity and fluidity, describing the moving land-water interface as the actual living environment for both coral and people.

The notion of amphibiousness has practical and political value, in particular for reconsidering outreach and how it may be reframed as a process involving ontological dialogue. For conservation outreach to become seaworthy, it needs to cultivate an amphibious capacity, capable of moving in-between and relating partly overflowing ways of knowing and being. Providing room for ambiguity, thinking with

amphibiousness furthermore encourages suspension of the (Western) tendency to explain the Other, to fix what does not add up. As such, it is of heuristic relevance for the on-going discussions of ontological multiplicity that have proliferated at the intersection between STS and anthropology.

Chapter 5 takes the study of cyanide fishing beyond political-economic explanations to include sensation and affect as vital elements of how the practice of cyanide dive fishing ‘works’ and sustains. Following Deleuze’s concept of affect (Deleuze 1988) the practice of cyanide dive fishing is here described as an assemblage of human and non-human bodies and fluids that mutually affect each other; a process that involves and produces both danger and delight. This approach is further inspired by the growing body of literature around the ‘ontological turn’ in anthropology (Holbraad et al. 2014; Kohn 2015). The chapter is another example of a mobile ethnography by which fishers, fish, traders and boat transports were followed across the sea. Cyanide fishing has attracted the interest of maritime anthropologists, particularly because of the practice’s endurance in spite of being dangerous and internationally banned. Several studies have shown the conditions that sustain cyanide fishing and keep them locked into a deadly and destructive practice.

This chapter contends that what has remained underexposed is how cyanide fishing continues as a way of life, involving and producing affective relations. Dive fishers engage with a variety of beings and elements in movement, such as fish, currents, spirits and cyanide, an engagement that does not leave them unaffected as they often develop *kram* (‘cramp’). Whether force, process or affect, in local narrative the occurrence of *kram* always comes together with fluid substances or media penetrating or spilling out of the fisher’s body.

But the cyanide fishing practice certainly also excites feelings of delight. Particularly the younger fishers related their enjoyment of cyanide fishing to the excitement and sensation involved with doing dangerous work. They engage in cyanide fishing not only despite known risks, but also because of known risks. The very riskiness of deep diving with cyanide is a source of pride to those who dare or feel they have to prove their bravery to peers, parents or prospective wives. In other words, it is a sensational practice; it works not just through the senses, but also generates bodily and emotional alteration.

Chapter 6 provides the discussion and conclusion to this thesis and brings together the insights generated by the ethnographic fieldwork and theoretical analysis as an iterative process. It is concluded how ontological multiplicity is of a heuristic and political relevance to social science, and anthropology in particular because it allows us to engage with radical difference – or the real on different terms – instead of explaining it away in our own terms. Engaging with alterity is important because it allows to see the realities that systematically escape our (scholarly) attention, yet affect the world nonetheless. This requires translation – the practice of relating different worlds, reals, repertoires or ways of life and bringing them into interaction – which is a process of, and a condition for, dialogue.

Central to the thesis is the concept of amphibiousness (Jensen and Morita 2015) to cover and focus on the shifting land-sea interface in which the Bajau and other sea people dwell. Amphibiousness also captures the anthropological engagement with flow, multiplicity and otherness by way of moving between worlds in order to explore the moving interface between worlds, realities or ways of life that partly interact. Amphibiousness also extends world making with the affective relations of performing life. Finally, the concept is applied to the shifting interface between immersion in fieldwork and recapitulation.

SAMENVATTING

Dit proefschrift richt zich op de meervoudigheid van de Straat van Makassar, een van de belangrijkste maritieme regio's van Indonesië, door deze te bestuderen als een complexe en amfibische interface tussen land en zee. Verschillende manifestaties van mens-zee relaties komen hier samen. Gedurende 18 maanden veldwerk (2011-2013) diende deze regio als een actieve en bewegende wereld van relaties om van te leren en over te theoretiseren. Het proefschrift richt zich theoretisch op stroming ('flow'), wat zowel beweging betekent als een patroon van activiteit als ook datgene wat stroomt; elementen, materie en betekenis in beweging. Het idee van de wereld of werelden 'in flow' is recentelijk het ontologische debat in de antropologie binnengedrongen. Realiteit wordt hierin gezien als onbepaald, stromend en meervoudig, waarmee het werk van eerdere denkers als Michel Serres en Gilles Deleuze wordt gerevitaliseerd.

Hoofdstuk 1 vertelt hoe de theoretische reis van het PhD onderzoek zich verwijderde van de meer gebruikelijke institutionele analyses in studies over het beheer van mariene hulpbronnen, waarin gemeenschappen gezien worden als de lokale sociale verschijningsvormen van en in een alomvattend institutioneel systeem. Zulke analyses gaan uit van op locatie gebaseerde (en tot een locatie beperkte) vormen van cohesie en organisatie en doen daarmee geen recht aan de veel opener en mobieler vormen van maritieme associaties en samenwerkingsverbanden.

Van complexiteit spreken we als zaken met elkaar te maken hebben, maar elkaar niet completeren, en daarmee ook niet tot elkaar gereduceerd kunnen worden. In deze notie van complexiteit is onzekerheid of onbepaaldheid niet alleen epistemologisch maar ook ontologisch, en kan daarom niet worden opgelost met meer kennis. Volgens de filosoof Serres vereist omgaan met dergelijke complexiteit een nieuw soort denken: denken in 'flow' ofwel stroming en turbulentie. Dit houdt tevens in dat men oog krijgt voor een zinnelijke en dynamische materialiteit die niet beperkt is tot van tevoren gedefinieerde entiteiten of lichamen maar een die uitvloeit, lekt, overstroomt en zo de grenzen doet vervagen tussen individu en omgeving. Het is deze turbulentie die wereld-vormend is, en daarom van belang (is) om te onderzoeken, hoe onzeker het de onderzoeker ook kan maken.

Een dergelijke manier van denken over complexiteit staat centraal in empirische

studies over relationaliteit en ontologische performativiteit. In de kruisbestuiving van Science and Technology Studies (STS), antropologie en filosofie is er een assemblage van academisch werk verschenen dat, ondanks onderlinge verschillen, tot doel heeft om na te gaan, een dialoog aan te gaan en te vertalen hoe in de praktijk materiële en semiotische werkelijkheden ontstaan en van belang zijn. Dit ontologische debat heeft mij gedurende het iteratieve proces van veldwerk en theorievorming voor dit proefschrift voortdurend uitgedaagd, geïntrigeerd en gestimuleerd om te komen tot een nieuwe manier van omgaan (zowel conceptueel als methodologisch) met mens-zee relaties.

De onderzoeksvraag is: *hoe kunnen de fluctuaties van en tussen lichamen, dingen en werelden in wording conceptueel en methodologisch begrepen worden zonder afbreuk te doen aan hun vitale mobiliteit en fluiditeit?* Die vraag wordt uitgewerkt in het methodologische tweede hoofdstuk en drie daaropvolgende onderzoekshoofdstukken, die zich elk richten op een andere invalshoek op mens-zee relaties.

Het ontologische debat gaat vooral over theoretische innovatie. De vraag hoe antropologisch onderzoek naar ontologische meervoudigheid praktisch vorm krijgt in methodologie wordt een stuk minder besproken. Hoofdstuk 2 beoogt dat hiaat aan te pakken door de vraag te beantwoorden hoe we in en door ethnografie inzicht kunnen krijgen in radicaal verschillende manieren waarop mensen hun omgeving ordenen en vorm geven. Deze vraag staat centraal in het streven naar het begrijpen van multipliciteit en fluiditeit in de continue reproductie van verschillende leefwerelden; de fluctuaties tussen verschillende manieren van beleven van en denken over mariene werelden, die deels in elkaar overvloeien, maar niet tot elkaar gereduceerd kunnen worden. In de thesis wordt deze situatie gekarakteriseerd als amfibisch.

Amfibische ethnografie verwijst niet alleen naar de praktische omgang met het fluïde land-zeegebied waarin de onderzoeksinformanten wonen, maar ook naar de methodologische praktijk van het reizen in en tussen verschillende werelden die deels verbonden zijn. Hoofdstuk 2 belicht drie ethnografische momenten die zorgden voor disoriëntatie, maar die de onderzoeker tegelijkertijd aanspoorden om verder te gaan en een radicaal nieuwe manier te ontwikkelen om de maritieme wereld(en) van de zeebewoners te zien en ervaren. De verhalen van affectieve/sensitieve navigatie, het experiment met kaarten maken van de Straat van Makassar en het 'ei-incident' tonen alle drie dat amfibische ethnografie een doelbewuste beweging kent in en tussen

verschillende werelden – die van de onderzoeker en die van haar informanten – waardoor een gedeeltelijke fusie of stroom tussen die twee ontstaat. Amfibische methodologie betekent meer dan leren hoe te zien of te denken over de mariene/maritieme omgeving; het vereist ook leren hoe dit te voelen en ermee in contact treden.

Hoofdstuk 3 gaat over Langkah, een zeer mobiele en energieke zakenvrouw die zich bezighoudt met de internationale handel in zee-producten, inclusief beschermde diersoorten en ingrediënten voor (illegale) visbommen. Ze was op het moment van het veldonderzoek een van de succesvolste maritieme handelaars in de regio, en onderhield een uitgebreid netwerk van familie- en patroon-cliëntrelaties in en buiten de kustregio van Berau. In dit hoofdstuk wordt een performatieve benadering gebruikt om Langkah's netwerk te laten zien als dynamische associatie, in stand gehouden middels continue beweging in zowel ruimtelijk als sociaal opzicht, en het voortdurend onderhouden van relaties met anderen. Door haar te volgen op haar reizen langs de kust van noordoost Kalimantan wordt duidelijk hoe ze haar handelsnetwerk onderhoudt als een verstrengeling van lijnen gevormd door haar beweging. Dit netwerk – dat kan worden gezien als een associatief en relationeel effect – vereiste wel dat ze constant onderweg is, om te associëren met beweeglijke actoren en instabiele relaties en te zorgen dat deze haar belangen bleven dienen.

Juist haar beweeglijkheid staat op gespannen voet met de ontwikkeling van een marien conservatiegebied en de natuurbeschermingsplannen van The Nature Conservancy, die gebaseerd zijn op ruimtelijk vastgepinde ideeën van de relatie tussen mens en milieu als ook met kwesties van moraliteit en wettelijkheid, die vooral gevormd worden vanuit een op het (vaste)land en op de overheid gebaseerd perspectief. Hoofdstuk 3 vormt de empirische basis om de relevantie en noodzaak te laten zien van een paradigmatische verschuiving in het denken over natuurbescherming. In het geval van het mariene park is het van belang om nieuwe manieren te vinden om een relatie aan te gaan met maritieme mensen als de Bajau. Een oplossing voor het 'participatieprobleem' kan niet gevonden worden door meer manieren te verzinnen om de Bajau (of andere mobiele maritieme groepen) in conservatieplannen in te passen, de verandering moet plaatsvinden in het conservatie discours zelf.

Hoofdstuk 4 beschrijft een marien conservatieproject dat als doel heeft lokale mensen te informeren en om te vormen tot beschermers van het koraal. Zowel het koraal als de zeevarende Bajau manifesteren zich als amfibische wezens die bewegen in een veranderlijk land-zee gebied en tussen verschillende, fluïde verweven ontologische stellingen. Het falen van milieuorganisaties om de ontologisch ambigue aard van 'koraal' en 'mensen' te onderkennen heeft tot gevolg dat hun toenaderingspogingen weinig resultaat hebben. Het concept 'amfibisch' wordt in dit hoofdstuk gebruikt om beter vat te krijgen op deze ambiguïteit en fluïditeit en het bewegende grensvlak van land en water te beschrijven als de levende omgeving voor zowel mensen als koraal.

Deze 'amfibische' aanpak heeft ook een praktische en politieke waarde. Het toont het belang aan van een nieuwe kijk op de 'outreach' van milieuorganisaties zoals TNC als een proces van ontologische dialoog. Om zeewaardig te worden, moet natuurbescherming amfibisch worden, kunnen bewegen tussen deels overlappende manieren van zijn en weten en in staat zijn om die met elkaar te verbinden. Door ruimte te maken voor ambiguïteit kunnen we bovendien afstand nemen van de (westerse) neiging om 'de ander' te verklaren en 'oplossingen' te zoeken voor 'wat er niet klopt'. Het loskomen van zulk interventionisme is bovendien heuristisch relevant voor de voortdurende discussie over ontologische verscheidenheid op het grensvlak tussen STS en antropologie.

In Hoofdstuk 5 gaat het onderzoek naar cyanidevisserij verder dan de gebruikelijke politiek-economische verklaringen door meer aandacht te besteden aan belevingen als sensatie en affect, om daarmee uit te leggen hoe zulke riskante praktijken 'werken' en blijven voortduren. Cyanidevisserij heeft de aandacht getrokken van maritieme antropologen, omdat deze praktijk blijft voortbestaan ondanks alle gevaar en illegaliteit. Er zijn verschillende onderzoeken verschenen over de dodelijke en vernietigende omstandigheden waarin die praktijk blijft bestaan, maar dit hoofdstuk betoogt dat er nog te weinig aandacht is geweest voor cyanidevisserij als een 'manier van leven', waarbij ook emoties en affectieve relaties een belangrijke rol spelen.

Dit hoofdstuk is een voorbeeld van een mobiele etnografie waarin vissers, vis, handelaars en scheepsladingen gevolgd worden over zee. Deleuze's concept van 'affect' en assemblage wordt hier gebruikt om de praktijk van cyanidevisserij te beschrijven als een assemblage van menselijke en niet-menselijke lichamen, elementen en vloeistoffen die elkaar wederzijds beïnvloeden; een proces dat draait

om zowel gevaar als genot. Vissers gaan een relatie aan met een verscheidenheid van wezens en elementen in beweging, zoals vissen, stromingen, geesten en cyanide. Als gevolg daarvan ontstaat vaak 'kramp' (*kram*). In lokale verhalen wordt *kram* altijd geassocieerd met vloeistoffen die in of uit het lichaam van de visser komen, in de vorm van kracht, als proces of affect van hun relaties.

Cyanide-visserij brengt ook gelukzalige gevoelens voort. Vooral de jongere vissers vertellen over de spanning en sensatie van hun gevaarlijke werk als iets prettigs: ze doen het niet alleen ondanks de risico's, maar ook juist vanwege de risico's. De risico's van duiken met cyanide maakt diegenen trots die voelen dat ze iets te bewijzen hebben, of indruk moeten maken op vrienden, ouders of potentiële partners. Het duiken met cyanide is, in andere woorden, een sensitieve en sensationele bezigheid: het is niet alleen een lichamelijke en zintuiglijke bezigheid, het heeft ook lichamelijke en emotionele transformaties tot gevolg.

Hoofdstuk 6 bevat de discussie en conclusie van het proefschrift en brengt de inzichten samen die voortkomen uit de wisselwerking tussen etnografisch veldwerk en theoretische analyse. Hierbij wordt aangegeven wat de heuristische en politieke relevantie is van ontologische multipliciteit voor de sociale wetenschappen, vooral voor de antropologie. Het maakt het mogelijk een relatie aan te gaan met en te luisteren naar iets wat radicaal verschilt, in plaats van dat verschil weg te verklaren. Omgaan met dergelijke verschillen is van belang, omdat het de realiteiten zichtbaar maakt die systematisch aan onze (academische) aandacht ontsnappen, maar die wél van invloed zijn op de wereld. Om dit te kunnen doen is 'translation' nodig: 'vertaling' in de zin van het met elkaar verbinden en in interactie brengen van de praktijk van verschillende werelden, werkelijkheden, repertoires of levenswijzen. Dit is een proces van – en een voorwaarde voor – dialoog.

Centraal in dit proefschrift staat het concept "amfibisch" om het veranderlijke grensgebied tussen land en zee te onderzoeken waarin de Bajau en andere zeevolken leven. Amfibisch omvat ook de antropologische relatie met 'flow', multipliciteit en anders zijn, en de noodzakelijke capaciteit van de antropoloog om te kunnen bewegen, zoals in dit geval, tussen land en zee om het veranderlijke grensgebied tussen werelden, werkelijkheden en levensstijlen te onderzoeken. Tenslotte is een amfibische instelling nodig om het beste te halen uit de veranderlijke interface tussen veldonderzoek, reflectie en theorievorming.

RINGKASAN

Tesis ini memaparkan dan berusaha untuk memahami tentang hubungan manusia dan laut dalam konteks kehidupan maritim yang beragam dan kompleks di wilayah Selat Makasar. Selama delapan belas bulan waktu penelitian lapangan (2011 – 2013), ruang ini bukanlah sebuah ‘latar belakang’ yang bersifat pasif. Namun, merupakan sebuah realitas yang aktif dan dinamis untuk dipelajari dan mengembangkan teori. Tesis ini menjelaskan tentang hubungan manusia yang selalu berubah dan bergerak. Perubahan tersebut bukan saja merupakan sebuah pola aktivitas (pergerakan, apa yang bergerak) namun juga merupakan pergerakan sebuah elemen, hal dan makna. Gagasan tentang dunia yang selalu berubah menjadi perdebatan ontologis dalam teori antropologi. Gagasan yang menghidupkan kembali hasil pemikiran Michel Serres dan Gilles Deleuze ini berpijak pada pendapat yang mengatakan bahwa realitas tersebut dianggap tidak tetap atau selalu bergerak dan beragam.

Bab 1 menjelaskan tentang perjalanan teori yang digunakan di dalam tesis ini. Teori ini mempertajam analisis kelembagaan yang lazim digunakan dalam menganalisa pengelolaan sumberdaya alam yang melihat bahwa masyarakat merupakan sebuah sistem kelembagaan setempat yang luas dan terpadu. Analisis ini berasumsi bahwa ikatan lokal dan organisasi lokal tidak dapat bertahan dalam asosiasi dan kolaborasi untuk mengelola wilayah laut (Pauwelussen 2016). Kompleksitas dan ketidakpastian tersebut menarik untuk dikaji. Kompleksitas akan terjadi jika berbagai hal saling terkait namun tidak dapat berpadu. (Law and Mol 2002: 1). Dalam kompleksitas ‘*baroque*’ (Kwa 2002) terdapat ketidakpastian di dunia. Ketidakpastian tersebut lebih bersifat ontologis daripada epistemologis, dan karenanya tidak dapat diperbaiki dengan menambahkan pengetahuan baru. Menurut Serres (1995[1982]), untuk berhadapan dengan kompleksitas semacam ini diperlukan cara berpikir yang baru dalam memahami perubahan, ketidakketetapan dan pergolakan yang dimaksud. Cara berpikir ini memberikan penekanan pada perwujudan materiil rasa yang tidak terbatas pada satu entitas individual, namun juga yang mengalir, merembes, meluap, mengaburkan batasan antara manusia dan alam lingkungannya. Gejala yang luar biasa ini dalam gerakan zat disebut sebagai *turbulence* (turbulensi). Dan turbulensi

inilah yang penting untuk dikaji meskipun fenomena ini membuat peneliti merasa tidak nyaman.

Cara berpikir tentang keberagaman semacam ini merupakan fokus dari literatur yang membahas kajian-kajian empiris tentang rasionalitas dan performativitas ontologis. Dari kajian multidisiplin Science and Technology Studies (STS), antropologi dan filosofi, muncul sebuah kumpulan kajian akademis yang, meskipun berbeda, memiliki tujuan untuk mengikuti, memahami dan menerjemahkan kebiasaan, wujud, dan realitas semiotis yang berkembang, alih-alih mengembangkan cara untuk ‘mencapai realitas secara lebih baik’. Selama proses kunjungan lapangan dan pengembangan teori untuk kepentingan tesis ini, saya seringkali merasa tertantang, tergelitik dan terdorong untuk bergabung dalam debat ini dengan menghadirkan cara baru untuk memahami hubungan manusia dan laut.

Bab 2 akan menjelaskan lebih jauh tentang metodologi penelitian berdasarkan pada pertanyaan penelitian: “Bagaimana memahami fluktuasi dari dan antara badan manusiawi dan kebendaan atau proses pembentukan dunia – secara konseptual dan metodologis tanpa mengurangi pemahaman tentang pentingnya mobilitas dan ketidakpastian dalam fluktuasi tersebut?” Bab 3, Bab 4 dan Bab 5 masing-masing akan membahas fokus yang berbeda tentang hubungan manusia dan laut.

Pada saat perdebatan ontologis hanya membahas tentang perkembangan teori, pertanyaan tentang bagaimana memahami ‘*ontologically attuned environmental anthropology*’ (Kohn 2015) dalam prakteknya kurang mendapat perhatian. Bab 2 bermaksud untuk menjembatani permasalahan ini dengan menjawab pertanyaan tentang bagaimana caranya untuk memahami perubahan lingkungan dalam dan melalui etnografi. Pertanyaan ini menjadi pertanyaan utama ketika kita ingin memahami keberagaman yang selalu bergerak; fluktuasi yang terjadi antara cara hidup dan cara berpikir yang berbeda dalam memahami laut atau dunia pasang surut yang saling terkait dan terikat satu sama lain. Situasi ini selanjutnya akan disebut sebagai *amphibiousness*.

Etnografi ‘*amfibi*’ tidak saja mengacu pada pemahaman praktis pada interaksi darat-laut dimana orang-orang yang saya temui tinggal, namun juga mengacu pada pemahaman metodologis tentang kebiasaan berpindah di antara dua dunia yang terhubung sebagian. Bab 2 menyoroti tiga situasi etnografis yang membingungkan, namun pada saat yang bersamaan membuat peneliti untuk menjelajah dan

mempelajari bagaimana melihat, melakukan dan merasakan dunia laut orang laut yang sangat berbeda. Narasi tentang navigasi, percobaan pemetaan, dan insiden telur, semuanya memperlihatkan bahwa etnografi *amphibious* melibatkan gerakan yang sengaja dilakukan untuk bergerak di antara dua ruang – antara peneliti dan orang yang ditemui – yang menghasilkan penyatuan sebagian atau pergerakan di antara dua dunia. Metodologi *amfibi* memerlukan lebih dari sebuah pembelajaran tentang bagaimana melihat dan berpikir tentang alam lingkungan dengan cara berbeda; metodologi ini memerlukan pembelajaran untuk merasa dan memahami dengan cara berbeda juga.

Bab 3 bercerita tentang Langkah, seorang perempuan pebisnis yang aktif dan energik. Bisnisnya bergerak dalam perdagangan internasional hasil laut, yang di dalamnya termasuk hasil laut yang dilindungi dan jual beli bahan-bahan bom ikan rakitan. Pada saat penelitian ini dilakukan, dia merupakan salah satu pedagang hasil laut yang sukses di daerahnya. Dia menopang jejaring keluarga yang luas dan ikatan patron-client tersebar di wilayah dan di luar wilayah perairan Berau. Di dalam bab ini, pendekatan performatif digunakan untuk memperlihatkan bahwa jejaring sosial Langkah merupakan sebuah ikatan yang dinamis yang terwujud dalam setiap tindakan dan gerakannya. Perjalanannya sepanjang pesisir utara Kalimantan bagian timur memperlihatkan kompleksitas kegiatan Langkah dalam memelihara jejaring bisnisnya. Jejaring ini seperti dampak hubungan asosiatif (Latour 2005) membuatnya terus menerus bergerak sehingga dia dapat terhubung secara sosial dan spasial dengan para aktor lainnya yang terus berpindah dan mempertahankan relasi-relasi yang satu tujuan dengannya.

Sementara itu, kegiatan Langkah yang selalu dinamis bertentangan dengan pembentukan MPA dan rencana pengelolaannya yang dikembangkan oleh The Nature Conservancy (TNC). Rencana pengelolaan tersebut melihat bahwa hubungan antara manusia dan alam terikat secara spasial dan melihat kondisi legal/ilegal berdasarkan pendekatan berbasis daratan dan aturan yang ditetapkan oleh negara. Bab 3 menyuguhkan landasan empiris untuk memperlihatkan relevansi dan urgensi untuk mengubah cara berpikir paradigmatis tentang konservasi sehingga bisa ditemukan cara untuk mengikutsertakan orang laut yang selalu bergerak seperti orang Bajau. Pemecahan terhadap ‘masalah partisipasi’ ini tidak terletak pada bagaimana cara mengikutsertakan orang Bajau (atau suku laut lainnya) dalam skema

konservasi. Perubahan justru perlu dilakukan terhadap wacana konservasi itu sendiri.

Bab 4 menjelaskan tentang program outreach konservasi yang bertujuan untuk mendidik dan mengubah masyarakat lokal sebagai pelindung terumbu karang. Terumbu karang dan orang Bajau yang hidup di laut merupakan makhluk amfibi yang selalu bergerak di antara daratan dan lautan, bergerak di antara konstelasi ontologis yang majemuk dan yang selalu berubah. Kegagalan organisasi konservasi untuk mengenali sifat taksa ontologis dari ‘terumbu karang’ dan ‘manusia’ terwujud pada macetnya program outreach. Konsep *amphibiousness* digunakan untuk memahami sifat taksa dan tidak pasti terumbu karang dan manusia, serta untuk menggambarkan tentang ruang pertemuan antara daratan dan lautan tempat terumbu karang hidup dan manusia tinggal.

Gagasan tentang sifat amfibus bernilai praktis dan politis, terutama untuk menilik kembali pendekatan yang digunakan dalam program outreach dan mencari cara untuk membingkainya menjadi sebagai sebuah proses yang perlu melibatkan dialog ontologis. Agar program outreach konservasi ini layak diterapkan di wilayah laut, pelaksanaan program ini perlu meningkatkan kemampuannya untuk merangkul berbagai tata cara untuk bergerak diantara pengetahuan dan hakikat. Dengan menyediakan ruang untuk ketaksaan dan ruang untuk perbedaan, kita tidak akan terjebak dalam pemikiran ala Barat dalam menjelaskan liyan atau berusaha untuk memperbaiki apa yang tidak sesuai berdasarkan pemikiran ala Barat tersebut. Dengan demikian, bagian ini bisa memberikan sumbangan pada wacana tentang keberagaman ontologis yang bermula dari titik simpang antara STS dan Antropologi.

Bab 5 mempelajari tentang kegiatan penangkapan ikan dengan menggunakan sianida. Bagian ini tidak saja membahas tentang sisi ekonomi politik, namun juga menggambarkan tentang sensasi dan pengaruh perilaku ini sebagai faktor utama untuk menjelaskan mengapa praktek ini tetap dilanjutkan dan dipertahankan. Berkiblat pada konsep Deleuze (1988) tentang *affect*, praktek penggunaan sianida dalam kegiatan penangkapan ikan dijelaskan sebagai *assemblage* (kumpulan) dari raga (human), benda (non-human) dan cairan yang saling mempengaruhi; sebuah proses yang melibatkan dan menghasilkan bahaya dan kesenangan pada saat yang bersamaan. Pendekatan ini kemudian dikembangkan dengan pengayaan literatur

yang mengkaji tentang *ontological turn* (perputaran ontologis) dalam antropologi (Holbraad et al. 2014; Kohn 2015). Bab ini merupakan contoh lain etnografi dinamis, dimana saya mengikuti nelayan, ikan, pedagang dan kapal pengangkut melintasi laut. Penggunaan sianida dalam kegiatan penangkapan telah menarik perhatian para ahli antropologi maritim, khususnya karena kegiatan ini bisa terus bertahan hingga saat ini meskipun berbahaya dan dilarang oleh dunia internasional. Beberapa penelitian telah dilakukan untuk mengkaji mengapa penggunaan sianida dalam penangkapan ikan tetap bertahan meskipun kegiatan ini merusak.

Bab ini berisi tentang hal-hal yang belum pernah terungkap tentang alasan mengapa penggunaan sianida tetap bertahan dalam perikanan tangkap sebagai bagian dari gaya hidup, melibatkan dan menghasilkan hubungan asosiatif. Nelayan penyelam berinteraksi dengan berbagai makhluk dan elemen dalam kegiatan ini, seperti misalnya ikan, arus air, roh atau hantu laut, dan sianida. Sebuah interaksi yang tidak berdiri sendiri karena sering berakibat pada kram yang mereka alami. Dalam narasi lokal, tidak peduli apakah kram merupakan sebuah kekuatan, proses atau pengaruh, ketika seseorang mengalami kram selalu dikaitkan dengan zat cair atau media yang masuk atau keluar dari badan nelayan.

Penggunaan sianida dalam perikanan tangkap juga membangkitkan rasa senang. Terutama bagi para nelayan muda yang mengasosiasikan kesenangan dalam penggunaan sianida untuk menangkap ikan dengan kehebohan dan sensasi karena terlibat dalam pekerjaan berbahaya. Ketika menggunakan sianida untuk menangkap ikan mereka tidak hanya sadar bahwa kegiatan tersebut beresiko, namun mereka justru melakukan kegiatan tersebut karena mereka tahu penggunaan sianida untuk menangkap ikan beresiko tinggi. Kegiatan menyelam dan menangkap ikan menggunakan sianida merupakan sumber kebanggaan bagi mereka yang berani atau bagi mereka yang ingin membuktikan keberanian mereka kepada kawan-kawan, orangtua, atau calon istri mereka. Dengan kata lain, kegiatan ini merupakan kegiatan sensasional; perasaan ini tidak saja bekerja lewat rasa, tapi juga menimbulkan perubahan ragawi dan emosional.

Bab 6 merupakan diskusi dan simpulan tesis ini dan menyatukan gagasan yang berasal dari penelitian etnografis dan analisa teoretis. Tesis ini menyimpulkan bahwa keberagaman ontologis memiliki relevansi politis dan heuristik dengan ilmu sosial dan khususnya dengan antropologi karena hal tersebut memungkinkan kita untuk

memahami perbedaan yang radikal – atau kenyataan dari pandangan yang berbeda – alih-alih menjelaskan sesuatu berdasarkan pemahaman kita. Penting untuk melibatkan diri dengan *alterity* karena hal tersebut memungkinkan kita untuk melihat berbagai realitas yang biasanya secara sistematis tidak terlalu diperhatikan oleh kaum terpelajar, namun mempengaruhi dunia. Untuk memahami hal ini diperlukan penerjemahan – suatu tindakan yang menghubungkan berbagai dunia dan realitas, repertoar atau gaya hidup yang berbeda dan membawa perbedaan tersebut dalam sebuah interaksi – yang merupakan sebuah proses dan syarat untuk terjadinya sebuah dialog.

Pusat dari tesis ini adalah konsep *amphibiousness* (Jensen and Morita 2015) yang digunakan untuk menjelaskan tentang tatapmuka darat-laut yang selalu dinamis, tempat dimana orang Bajau dan orang laut lainnya tinggal. Sifat amfibi juga menjelaskan pemahaman antropologis tentang aliran (flow – sesuatu yang mengalir), keberagaman dan liyan dengan cara selalu bergerak di antara ruang untuk menjelajah ruang tatapmuka (*interface*) yang selalu berpindah, realitas dan cara hidup yang selalu berinteraksi. Amphibiousness juga memperkaya proses pembentukan dunia lewat hubungan affektif dalam menjalankan kehidupan. Terakhir, konsep ini digunakan untuk memahami pergeseran tatapmuka (*interface*) yang terjadi antara masa pendalaman selama kerja lapangan dan masa analisa dan penulisan.

CURRICULUM VITAE

Annet Pauwelussen was born in Groningen, the Netherlands. She received her BA degree in Cultural Anthropology from Utrecht University in 2006. In 2008 she received her Master's degree in Cultural Anthropology and Development Sociology from Leiden University. To obtain her Master's degree she carried out fieldwork in Yogyakarta, Indonesia on the topic of environmental activism, with a focus on the controversy around the designation of the Merapi Volcano as a protected area.

In 2010, Annet received a second Masters degree (*cum laude*) in the interdisciplinary field of International Development Studies from Wageningen University. As part of this Master's program she worked as a research intern at the Asia Pacific Study Centre of the Gadjah Mada University in Yogyakarta, Indonesia, and carried out ethnographic research in East Kalimantan to explore the disjuncture between informal forms of social organisation among fisherfolk and regional marine conservation plans. An article based on her Master's thesis won the Best Student Paper Award at the 2013 MARE conference in Amsterdam.

With her PhD research proposal Annet secured a scholarship through the Open Round of the Wageningen School of Social Sciences in 2011, after which she carried out her PhD research project under the wings of the Rural Development Sociology group (later renamed Sociology of Development and Change). During the years 2011-2015 she increasingly became involved in teaching activities for this chair group, ranging from thesis supervision, course coordination, organising tutorials in ethnographic research methods and giving guest lectures on the topics such as community-based conservation, development policy and practice, and transboundary trade networks.

Currently Annet works as a lecturer at the department of Cultural Anthropology and Development Sociology at Leiden University, where she teaches courses in environmental anthropology and heritage protection.

Antoinette (Annet) P. Pauwelussen
Wageningen School of Social Sciences (WASS)
Completed Training and Supervision Plan



Name of the learning activity	Department/Insti- tute	Year	ECTS*
A) Project related competences			
Proposal writing	RDS	2011	4
<i>'Seeing from the sea: preliminary research findings'</i>	Murdoch University, Perth	2012	1
<i>'Seeing from the sea: Coastal networks and conservation in East Kalimantan, Indonesia'</i>	MARE Amsterdam	2013	1
<i>'Into the web of a Bajau businesswoman'</i>	EuroSEAS, Lisbon	2013	1
<i>Presenting outline PhD thesis 'Into the web of a Bajau businesswoman (as case study)'</i>	RDS/SDC	2014, 2016	1
<i>'The Cyanide trap: fishers and fish caught up in wrong worlds of poison and possession'</i>			
<i>'Seafaring as a storyline: an alternative mapping of the Makassar Strait, Indonesia'</i>	ICAS, Adelaide	2015	1
<i>'A methodological struggle to map 'other spaces' at sea in Indonesia'</i>	MARE Amsterdam EuroSEAS, Vienna	2015	1
<i>'Cyanide Delight: Affective Life-worlds of Dive Fishing in the Makassar Strait'</i>	WASS PhD day KITLV, Leiden University	2016	1
<i>'Uprooted bandits or aquatic noble savages? The plight of Indonesian sea-nomads who don't belong'</i>	PE-3C conference, Wageningen	2016	2
<i>'Coral Enactments: The Ontological Politics of Marine Conservation Outreach in Indonesia'</i>			
B) General research related competences			
Presentation skills	In'to languages	2011	1.1
Writing ethnographic and other qualitative interpretive research: An inductive learning approach	WASS	2012	3
Communication in interdisciplinary research	WGS	2013	1.1
Improve your writing	In'to languages	2013	1
Imaging science: video and audio content in scientific communication	WGS	2014	3
Writing grant proposals	In'to languages	2016	2

C) Career related competences/personal development

Competence assessment	WUR, MAAS	2011	0.3
Conference organizing and chairing panels for Southeast Asia Update	KITLV, RDS	2013	2
Attending the advanced research seminars of RDS/SDC	RDS/SDC	2011-2015	1
Effective behaviour in your professional surroundings	WGS	2013-2014	0.7
Organizing and chairing double-session panel "Nature in tension" for the PE-3C conference	PE-3C conference, WUR	2017	3
Teaching: tutorials, guest lectures, supervising BA thesis, supervising MA excursion and course coordination.	RDS/SDC	2013-2017	4
Total			35.2

*One credit according to ECTS is on average equivalent to 28 hours of study load

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