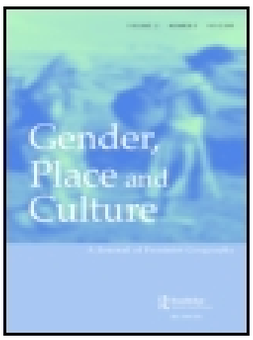

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Leaky bodies: masculinity and risk in the practice of cyanide fishing in Indonesia

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ABSTRACT

Dive fishing with cyanide is known as a risky fishing practice, as it pushes or lures divers to the limits of what their bodies can take. Its association with physical danger is linked to a culture of machismo and a coming-of-age process in which young men prove their bravery and become part of a shared manhood. What often remains implicit in the understanding of risk-seeking activities is the notion of body and masculinity that such practices entail and produce. Understanding risk and how it relates to masculinity in native terms requires conceptual tools to think beyond the self-contained body that navigates an external environment. Based on long-term ethnographic fieldwork in Indonesia, this article explores cyanide dive fishing in the context of risky practice in relation to the body as contingent, permeable and leaky. Drawing from situated narratives and post-human phenomenology, the article makes room for masculinities beyond the self-contained man by describing dive fishing as a transformative process of becoming fluid to a submerged world of currents and spirits. By showing how this process brings bodies to or beyond their threshold of endurance, the article sheds light on the situated vulnerabilities of dive fishers in an environment of exploitation.

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Dive fishing; feminist studies; fluid body; Indonesia; masculinity; risky practice

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 poles above the shoreline. At high tide, the seawater swirled below his house, lifting the canoe that Yusri used to go out at sea. While on the island, Yusri spent most of his time on his veranda, looking out overseas. Paralysed from the waist down, he was one of several people referred to as 'those affected by cramps' (I: *yang terkena kram*). On the island, *kram* was known as an affliction bothering and sometimes killing

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dive fishers who use the compressor system for deep dives off the coast of East Kalimantan. Although Yusri had suffered *kram*-induced pains since he started diving in 2006, it hit him with sudden ferocity in 2008:

> We were out at the Big Reef, using cyanide (I: *bius*). 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]. I can't use these anymore, all spirit is sucked out. From the waist down, I don't feel anything. For eight months I had to use a catheter to urinate. I can still eat, but defecating is a disaster. I don't feel it leaving my body. It just runs down on the floor. On the land, my body is locked. There's no happiness when you're like that. But thank God I can still dive. I still fish. I can still provide for my family. As soon as I'm in the water, I move. (25 November 2012)

As I sat with Yusri, watching the rising tide, he recalled how he had come to the island in search for a way to earn a living, attracted by tales of fortune and adventure. He was a teenager then, without formal education and living in a poor coastal village in Sulawesi, across the Strait of Makassar. 'There was nothing for me there' Yusri explained his move. He told me that to become a man, he had to wander and explore opportunities, earn prestige and prove himself worthy as a husband, to find a wife. Sarang Island was known in the wider maritime region as a place where a lot of money can be earned by dive fishing, using cyanide. However, most dive fishers I met during fieldwork had ended up indebted and suffering from severe bodily ailments.

With cyanide fishing, divers use a sodium cyanide (NaCN) solution to catch fish alive from coral reefs. Fishers squirt the solution from a plastic bottle into the coral structures, to catch fish that hide in it. The cyanide stuns the fish, making it easier to catch. As cyanide solution is deadly toxic to smaller marine animals and coral reefs, its use is infamous as a destructive and illegal fishing practice, causing severe reef degradation (Erdmann and Pet-Soede 1997; Petrossian 2015). Although officially banned, it is still widely practiced throughout Southeast Asia. In Eastern Kalimantan, the practice supplies the lucrative international trade of live reef fish, particularly coral trout and groupers that end up as luxury seafood in booming Asian cities (Fabinyi 2016).

Where most studies of cyanide fishing focus on its ecologically destructive effects, a few have reflected on its risky nature for fishers themselves (Fabinyi 2007; Johannes and Riepen 1995; Lowe 2002). This risk has been discussed in terms of the asymmetric and violent nature of the live reef fish trade, sustained in the exploitation of scarce resources and the recruitment of men into patron-client relationships. Attracted by the prospect of quick money,

and a culture of masculine pride around cyanide fishing, young men at the rural margins of Indonesian society come to work for well-connected fish bosses, who supply them with boats, cyanide and credit loans, as well as protection from marine police (Adhuri 1998; Halim 2002; Lowe 2000, 2002). In the process, most fishers end up indebted and unfree as they compete to provide fish for an insatiable global seafood market (Fabinyi 2013; Warren-Rhodes, Sadovy, and Cesar 2003).

Acknowledging these precarious conditions of cyanide fishing, this article shifts focus to the experience of risk by cyanide fishers themselves, in their embodied practice of compressor diving. Compressor diving – in which air is pumped through hosepipes to divers below the water surface – is associated with the frequent occurrence of dive accidents and complications related to decompression sickness causing high incidence of chronic injury and death (Halim 2002; Lowe 2002; Mallon Andrews 2021). Not all cyanide fishing involves compressor diving, and compressors have been used for fishing that does not involve cyanide, such as collecting sea cucumbers (Adhuri 2013). However, it is particularly in combination with the use of cyanide that compressor diving has evolved into a deadly practice. As shallower reefs are depleted and degraded, cyanide fishers dive deeper and longer to find target fish, increasing the incidence of diving injuries. In this interlinking between environmental and human health, cyanide fishing not only poisons reefs but also affects and injures diving bodies as they move through differently pressured environments (Mallon Andrews 2021). Due to the practice's illegal nature and informal organization, accidents and deaths related to cyanide fishing are usually not reported, leading to structural invisibility in official health and fisheries statistics.

Following the narratives and practices of dive fishers and their close relatives in Indonesia, I aim to put centre stage here the agency and embodied experience of dive fishers as they submit themselves to this dangerous practice. I deliberately hold off arguments of victimization or criminalization, to explore what kinds of risks, bodies and masculinities are involved in cyanide- and compressor dive fishing from a situated perspective. Yusri's story at the beginning shows dive fishing as an embodied practice of moving underwater, in a partially uncontrolled engagement with other agencies, such as fish, currents and spirits. Such engagement affects diving bodies – up to the point of changing if and how they feel. It may excite feelings of delight but also suck power out of a diver's legs.

I bring the case of cyanide dive fishing into conversation with the study of risky work in relation to the masculine body as an unstable and contingent composition (Deleuze 1988 [1970]). Feminist posthuman approaches (Åsberg 2018; Haraway 2016; Neimanis 2016) have advanced a notion of the body-self as inherently affective, relational, and leaky. Rethinking the diving body as leaky allows for exploring ethnographically how the practice of

doing dangerous work reassembles masculine bodies and selves, with enabling and disabling effects. This shows dive fishing as a masculine performance that involves an embodied process of becoming porous to, and fluid with, a submerged world of material and spiritual agencies, bringing bodies to or beyond their threshold of endurance.

Risk, masculinity and leaky bodies

Sea fishing is generally known as a dangerous profession, associated with health and safety risks reflecting uncertain regulatory and environmental circumstances in which fishers need to get the job done (Power 2008). In this, dive fishing is shown to be a particularly risky and physically tough practice, often carried out without proper training or equipment, in hazardous working conditions (Mallon Andrews 2021; Marschke, Campbell, and Armitage 2020).

Although fisheries literature has discussed risk mostly as an objective condition, to be scientifically determined, some studies have highlighted fishers' different experiences of risk, and how this informs what fishers actually do at sea (Pollnac, Poggie, and Cabral 1998; Tingley et al. 2010). In this context, Power's study with fish harvesters in Newfoundland and Labrador has shown how experience of risk by fishermen is not only dynamic and culturally embedded, but also gendered along situated practices and expectations that shape what it takes and means to be a man (Power 2008).

In line with this, anthropological studies of compressor diving with cyanide have indicated how the practice is intimately related to the masculine qualities locally ascribed to those who dare and endure (Fabinyi 2007). Once recruited, cyanide fishers work for well-connected bosses, which gives them access to fashionable cloths, expensive cigarettes, strong liquor, as well as better chances to marry (Lowe 2006; Pauwelussen 2015). Fabinyi relates the practice to a masculine coming of age transition for young men at the margins of society. His ethnographic work with cyanide fishers in the Philippines shows that risk-taking may actually be part of the practice's appeal; a way to display strength and bravery, and solidify a sense of shared manhood with peer groups (Fabinyi 2007, 517). More than a restrictive modality, risk in dangerous work may also involve a productive and transformative side in the articulation of masculinity.

Yet, while dive fishing appears as a quintessential case of macho-type masculinity, founded on the celebration of strength, mastery and the heroic, an appreciation of fishing masculinities related to risk-taking needs to go beyond a hegemonic figure of the 'hard-bodied self-contained man'. Looking beyond the continued presence of hegemonic masculinities (Connell 1995) in rural and risky occupations such as fishing, there have been suggestions to consider the different kinds of masculinities that are produced and (re)

shaped in practice (Gustavsson and Riley 2020). Such approach sees masculinity in fishing not as a fixed identity in a set body, but as provisional and subject to change and redefinition (Bull 2009, 461). As such, 'being male' is configured in certain social and cultural settings, producing multiple forms of masculinity reflecting different embodied practices (Connell and Messerschmidt 2005, 5; Gustavsson and Riley 2020, 198). From this angle, I want to problematize the common association of fluidity with femininity in contrast to stable and contained masculine modalities.

Recognizing the potential fluidity of masculinities allows for a closer look at the embodied and transformative process of risk-taking in relation to being and becoming a man. This is echoed by Desmond's ethnography of wildland firefighting, which shows how becoming a firefighter involves a transformative process through which young men engage with, and become acclimated to, the hazards of wildfire. Essentially, he shows, this requires corporeal learning and transformation (Desmond 2006). Perhaps, then, the transformative capacity of risk-taking in the process of 'becoming man' can be situated in the push or lure towards (and sometimes beyond) the limits of what bodies and selves can take, while also transforming these in the process. This also suggests a certain fluidity of masculine bodies and selves in the space between gaining control and losing it.

Exploring this dynamic in the context of dive fishing in Indonesia requires reflection on what a body-self is, and what it can do (Deleuze 1992 [1968]), taking in situated notions of being and becoming a (masculine) body or self. Accounts of risk and masculinity in fisheries practice are often underpinned by a humanist Western metaphysics that sustains the notion of a material body contained in its skin, housing an individual self. In contrast, sea people indigenous to Southeast Asian waters sustain relational and assembled notions of the body-self, taking part in a world that issues forth in the continuous interrelation of bodies and agencies – human, spiritual and otherwise (Pauwelussen 2017; forthcoming). Such ontologics of the body affect how one understands and experiences health risk and safety, as it informs basic understanding of 'what is exposed to what'.

To think with masculinity and risk in terms of those 'taking it', I consider bodies as metastable entities; porous, leaky and relationally constituted, which corresponds with posthuman feminist theory (Neimanis 2016, 40–41). Conceptualising body-selves as emergent and relational entities stimulates thinking beyond the idea of a self-contained body that navigates an external environment, to focus on the process of *becoming with* through which bodies and selves are entangled in a worldly and gendered 'ongoingness' (Åsberg 2018, 190; Haraway 2016; Lock 2017).

Particularly in its conversation with phenomenology, feminist scholars have contributed to an understanding of bodies and selves as assembled, environmentally situated and contingently becoming through affective

entanglement with a material world (Ahmed 2006; Neimanis 2016; Weiss 1999). Whereas phenomenology is historically focused on a human-centered embodiment; Neimanis' (2016) work on 'bodies of water' shows how a post-human feminist phenomenology cultivates ways of imagining lived experience as decentered and transcorporally implicated, without necessarily taking the human out of the picture. From this perspective, instead of asking what a body or body-self is, the more interesting question is how it becomes, or ceases to be.

In relation to cyanide fishing, such questioning allows for an exploration of risk as situated around the threshold of endurance beyond which a body-self disassembles in its material and affective engagement with others (Deleuze 1988 [1970], 19; Neimanis 2016, 44), and as I show, masculinity as (re)shaped in the exploration of this boundary space. Consequently, fishers' masculinity is not given, but varies through the spaces in which it is performed (Bull 2009).

Methodological reflection

For this article I draw from over a decade of ethnographic engagement with fishing communities and sea people in the Makassar Strait region, a maritime space between the landmasses of Kalimantan and Sulawesi. In 2011–2013 I stayed in the region for eighteen months, during which I used Sarang Island as a home based from where I accompanied fishers, traders and travelers out to sea. While maritime communities in the Makassar Strait region constitute a dynamic mix of cultural, linguistic and ancestral affiliations, the majority of people I met identified as Bajau or Mandar, ethnic-linguistic groups known for their sea-based livelihoods (Pauwelussen 2015, 2017). Speaking Indonesian, I have acquired a basic understanding of local languages of Bajau and Mandar throughout the research.

While the research was set up as an anthropology of human-sea relations rather than cyanide fishing in particular, the practice gradually caught my attention as my interlocutors repeatedly pointed it out as a matter of concern. For months, I merely listened and observed, as some people confided me with stories of diving and cyanide, while others took care to keep practices hidden. Gradually, I gained trust as a relative outsider living and travelling in the region to learn and write, not to criminalize their practices. It was only after I was adopted as 'fictive kin' into the extended family of a prominent fish boss that divers and their families really opened up, and I was allowed access to the 'backstage' (Goffman 1959) of cyanide fishing operations. Names of places and people are pseudonyms, or deliberately left vague.

My gender has affected my interaction with dive fishers – all men. In contrast to Fabinyi (2007), I was excluded from post-dive drinking parties,

or joining dives with men outside the intimate circle of my host families. However, being a woman was also an asset in gaining trust among fishers, through my friendship and adoptive kinship with female relatives. This enhanced the openness and informality of the interviews conducted, and may account for fishers showing a more fragile version of themselves too. Women first introduced me to cyanide and dive fishing, alternating tales of brave and prosperous divers with expressions of sorrow for kin whose lives or limbs were lost to the currents and sea spirits. I was also introduced to their husbands, brothers and sons, who took me along diving trips. Whereas compressor diving was considered a men's job, too dangerous for women, my ambiguous positionality as female outsider and licensed scuba diver made my participation publicly accepted.

Immersed in the situated practices of doing ethnographic fieldwork, I have felt an ethical tension between merely observing human and environmental exploitation, and taking a position. I have prioritized understanding over intervention, which is a methodological as well as an ethical decision. Still, on explicit request of some divers, I have organized informal meetings to discuss possibilities for safe ascending during dives. I have joined several dives myself using the compressor system, limited to shallow waters (<8 m). While these trips were invaluable to learn about diving practice, I have neither observed nor documented the use of cyanide, for the divers' and my own safety.

Moving bodies underwater

From Sarang Island, I often watched the daily departure of diving crew at dawn. Rumbling sounds would arise as groups of small, motorized boats slid from the shoreline into the sea, each carrying three to four men wearing balaclavas and black tights. Soon the boats dispersed, heading for coral reefs. Before take-off, these diving crews were supplied with fuel, cyanide and diving equipment by their boss. It was only after almost a year, and probably my fifth prolonged stay on the island, that I was invited to come along with the nephews of my friend Alisha, whom I was staying with at the time. The first thing that struck me was the vigilant orchestration of men, machine and air flows that compressor diving entails:

> A bright orange air compressor is attached to a wooden plateau in our boat. This roaring machine compresses and pushes air down one or two plastic tubes that the divers use to breathe underwater by clenching the end of the tube between their teeth, or by attaching a regulator mouthpiece to it. As we approach the reef, two of the men start preparing their dive. They wrap the tube once around their waist to decrease the change of losing it during the dive. The men use a diving mask, flippers, and a weight belt, to ease their descent, movement and navigation underwater (Fieldnotes, September 2012).

'Diving is teamwork', said one of the divers, as he saw me taking notes. Indeed, as I observed them preparing, it was clear how trust and taking care were central to their diving practice. While one man was diving, another was looking after the air compressor and the plastic tube, which connects to the diver below. The compressor engine has to be kept running to provide air to the diver. For this, the operator needs to keep track of the engine's fuel consumption. 'We need to take care', one dive fisher commented, 'we depend on each other for our safety'. He pointed out how 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 while he is down at the reef (Figure 1).

Diving with an air compressor is also a skilled practice. There was considerable variation in the depth and duration of the dives. Some divers told me – often proudly – that they could go 30-40 meters deep. At this depth, hunting for fish 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]' explained a cyanide fisher. The 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 cyanide can. Once stunned, or 'drunk', the fishes are caught in a net. As one fisher explained:

Figure 1. A fisher keeps the oxygen tube under a little strain, safeguarding the air flow between the air compressor and the diver below the water surface. Photo by the author.

> 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 seduce the fish, to make it drunk [makes a gesture of squirting the cyanide from an imaginary bottle]. Confused, it will come out of hiding, and I can catch it. (14 January 2013)

Vital to becoming a skilled cyanide fisher is learning how to coordinate one's flow and movement underwater. One fisher compared the sensation of navigating different currents with the way seagulls must feel, surfing on the thermal winds. Unskilled divers were said to be easily exhausted because they have yet to learn how to align their body to the water, which involves sensing direction, turbulence and temperature of currents to move effectively.

This learning process of the diving body is also transformative. By moving underwater, the human land-based sensorium, including sight, touch, heat and pressure, adjusts and reorganizes to the aquatic environment (Allen-Collinson and Hockey 2011). Merchant describes how dive students go through an embodied process of learning how to perceive differently. This is a process that can generate strong emotions of excitement but also of repulsion or fear (Merchant 2011). In Ota's study of underwater spear gun fishing this learning process, by which the submerged body learns to align to the motion of water and fish, is described as 'becoming fluid' (Ota 2006) (Figure 2).

This skill and transformation of 'becoming fluid' was something dive fishers discussed as an empowering process. This indicates that while risky, dive fishing is also an enabling practice. 'Some people think it's easy, but it can take months or years of practice to become a good compressor diver'

Figure 2. Becoming a skilled dive fisher involves a learning process of aligning to the flow and movement of the water. Photo by the author.

said former cyanide fisher Pata. 'Once they have become good at it, they want to continue. They build a reputation as successful fishers, they show they have stamina'. Over the course of research, men and women frequently commented on these diving skills of successful fishers, praising their bravery and strong physical appearance, sometimes narrating heroic tales of exceptionally strong divers and the hefty groupers they brough home from the underwater world surrounding the island.

This resonates with earlier accounts of the macho culture in which cyanide fishing sustains, and through with men solidify a sense of shared manhood, as well as their own strength vis-à-vis others, expressed in the physical challenge of defying cold, exhaustion and predatory fish, but also in avoiding law enforcement (Halim 2002; Fabinyi 2007). However, this strength has a leaky side to it. The transformative capacity of dive fishing requires an ability of becoming fluid, affective and attentive in the careful orchestration of muscles, bodies, tubes and flows, which partly destabilizes the hegemonic masculinity of the composed rock-solid man (Connell and Messerschmidt 2005). Moreover, the trans-corporal leakiness implied in diving produces strong bodies but also cramped ones.

Cramped and leaky bodies

During one of my stays on Sarang Island, a cyanide fisher died. His cousin Alisha, who was also my host at the time, was devastated. A week after the event, she told me:

> Over the last years, he had four accidents. The first and the second time he felt unwell; he was confused because of a lack of blood. 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 realized 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. (23 September 2012)

Perceptions of health risks are situated in different knowledge systems (Good 1994) in which people use different narratives to make sense of wounds and disability reflecting social realities in which they manifest (Ralph 2012). Divers and their relatives often used the term *kram* – traced to the Dutch *kramp* (cramp) – to refer to a loosely defined set of symptoms incurred while diving, which manifest in the diver's body after he has resurfaced. Although scientific knowledge relates the ailments associated with *kram* to decompression illness or 'the bends' (Bühlmann 2013), applying this diagnosis contains a risk of closing off experiences of *kram* that are not contained by it; different processes of becoming affected while diving. In some narratives,

kram was explained as the *force* that affects the diver's body, making it contract, disintegrate, leaving it uncontrollable, deformed or paralyzed. In other accounts, it was described as the effect of other agencies such as cold currents, but also sea spirits, infecting the diver's body while underwater and making it susceptible to becoming 'cramped'.

Without formal training or safety instruction, most cyanide fishers learned diving in practice, under mentorship by a senior crewmember, often the skipper of the boat. Fragments of knowledge regarding safe ascending circulated informally. For example, Yusri explained the importance of slowing down ascent to synergize the process of bodily expansion and blood flows without rupturing veins (Figure 3):

> 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 ascend, the opposite happens: the body expands and the power of the blood flow increases. That's why we should ascend slowly, to give our body time to expand; or the blood breaks through the veins. (25 November 2012)

During my stay, divers sometimes returned to the island with blood running from eyes, mouth or nose. Throwing up blood was generally taken as a serious condition, as this was frequently followed by loss of consciousness or death. Another blood-related ailment that resurfaced during conversations was the 'lack of blood' that frequently bothers divers, resembling the sensation of 'breathing dirty oxygen' or 'dirty air'. As one diver said:

> Sometimes we feel drunk from diving. Because the air we breathe from the tube is not good. We feel it coming while in the water, as an increasing pressure on our heads. After we ascend, we throw up. (25 September 2012)

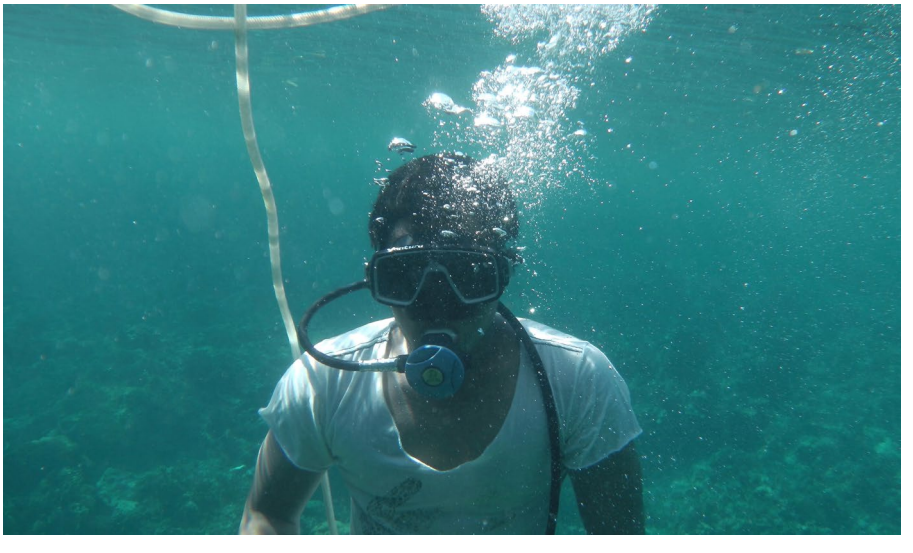

Figure 3. A dive fisher ascends to the boat. Photo by the author.

Although a rapid ascent was seen as risky and weakening the body, the *kram* itself was explained as waterborne: '*Kram* is something we get from the deep water. It's while down there that we are exposed to it', said Pata. Notorious are the 'cold currents' (*arus dingin*) that catch divers by surprise. Yusri elaborated:

> When we are caught by a cold current… Usually, it can be seen as a ball of water swirling and going round. Often, 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 go down in the water, our pores open. Our skin becomes porous. If we stay down too long… the cold enters. (25 September 2012)

Another diver explained the difficulty of keeping his body warm in deep waters by moving, but without becoming exhausted. Such navigation requires a thermal sensitivity to find warmer sea currents and stay out of cold ones. As the diver's body becomes increasingly permeable while submerged, the cold also penetrates the diver's body, potentially modifying it.

In local narrative, being caught by a cold current often manifests in bodies being 'locked' and 'cramped' after a dive. The inability to urinate after diving was considered a typical forebode of *kram*, which had to be treated with 'hot' fluids such as carbonated soft drinks and beer to make him relieve and set free toxic currents residing in his body. In severe cases of *kram*, the body's holding back of urine was reversed in the uncontrollable release of body fluids (urine, feces) in the affected body later on. Here, we see that the becoming fluid, affective and leaky of the diving body is not just an enabling but also a risky and potentially disabling capacity. The reorganization of the body's affective and leaky capacity translates here as a dangerous reassembling process of intercorporeal flows, as diving bodies become cramped and leaky in exposure to a largely unpredictable environment. To understand what the body 'becomes leaky to' in native terms requires a careful consideration of what this 'environment' is composed of.

Spirit-environment

Conversations about *kram* commonly referred to spiritual agency of underwater beings in the shape or capacity of cold currents, fish or sounds. One recurring story pictured a big spirit-grouper that deliberately confused divers to lure them into a cave. In such stories, spirit, fish and current were usually not distinguished as separate elements, but described as 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', said Pata. A spiritual leader explained:

> The sea spirits can pose a real danger to the diver. They can hypnotize 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. (22 September 2012)

While the spirits of the open and deep sea were usually ascribed a female nature, seductive to the male diver, in line with Spyer's account of underwater spirit wives (Spyer 1997), sea and land spirits, ghosts and ancestral beings were also identified as male, gender-neutral or ambiguously gendered. The Bajau and Mandar sustain a relational understanding of reality in which human and spirit worlds are entangled below and above the water surface, in a syncretic relation to Islamic teachings. The diversity of ethnic and ancestral affiliations in the coastal area of East Kalimantan and the adjacent waters of the Makassar Strait and Sulawesi Sea has caused a plurality of partially overlapping spirits worlds and terminologies, the complexity of which exceeds the scope of this paper, as well as my ability to fully comprehend as a visiting outsider (but see Bottignolo 1995; Pauwelussen 2017; forthcoming; Zerner 2003). The main point here is that while the diving body is reshaped in an affective interrelation with its environment, this environment is itself gendered and constituted by a multiplicity of material and spiritual agencies and selves that may penetrate, strengthen or weaken divers' bodies. As currents, spirits can penetrate and cool down or heat up divers' bodies, manifesting a thermal affect that can take over the diver's body – like Yusri's sensation of having a burning body before paralysis. As a consequence, measures to counter or avoid *kram* also require the mediation of these embodied and gendered human-spirit relations.

In all cases of severe *kram* during my stay, one or more spiritual mediums were summoned, to find out what or who was bothering the diver and why. Once, a cyanide fisher felt unwell after coming back from a diving trip. He mentioned stomach ache, felt weak and dizzy, and his speech was impaired. An experienced Mandar spirit medium was called to the scene. I watched him attempting to identify and address the spirit controlling the diver's body. While closely observing the diver's posture and moves, he whispered sharply: 'Who are you? What do you want?' After a moment of silence, he bellowed out: 'Make yourself known!' In the end, he gave up, saying he was not acquainted with the spirit, who turned out to be a Bajau ancestor instead. Granny Juhaira was called for, who tended Bajau ancestral relations. Accompanied by the rhythm of drums, Juhaira danced and went into a trance-like state. In this state, she identified a disgruntled female ancestor who had taken control of the diver's body because she felt neglected. The next morning, the female-spirit was honoured with a ceremonial offering of betel leaves, cigarettes and yellow rice – after which the diver soon regained his speech and strength.

In another moment, a Mandar woman narrated a dive incident with her cousin back in 2006:

> When he came back to the island, he wasn't really awake. 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 someone had spoken to her with the words: '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 apologize and feed me'. After saying this, my aunty him right back to sleep. The next day, she couldn't recount the story, but I could, and I did. The boy apologized to the spirit and his family offered black glutinous rice with an egg on top, which they brought to the waterfront. Soon after, the boy regained his eyesight. (14 January 2012)

In this incident, the spirit moved into the diver's sensory faculties to 'make him see'. Feeling disturbed, the spirit disturbed the diver. Here, *kram* manifested as an intimate affective relation between diver and spirit in which the former's senses were momentarily taken over by the latter; this went on until the spirit was fed. Indeed, according to a Mandar spirit mediator, the affect of the sea spirits could best be understood as a form of eating. As I have elaborated elsewhere, female sea spirits were known in the region to 'eat' fisher's masculine power and strength – to take something back, when the fisher has been greedy, taking too much fish (Pauwelussen and Verschoor 2017). Here, a political economy of environmental exploitation translates into the entangled and gendered debt relations between humans and spirits (Spyer 1997). A disorder in human-spirit relations resonates in how the diver's body is brought into disarray, challenging its coherence.

The danger and delight of losing control

There was a recurring tension in conversations with dive fishers between the risk inherent to dive fishing and the thrills that the practice also generates. While the practice was often linked to excitement and joy, some expressed fear, sadness and distress. Pata, who had been diving and fishing with cyanide for years, decided to stop after several of his friends and family had died or become impaired. 'I never got used to the diving accidents', he said as he recalled the death of a close friend:

> He hadn't been down long when he resurfaced, calling us. He had seen a cave with many big fish, and had come up to tell us. I still remember his happy expression. He was so excited! He hadn't noticed yet the blood running from his nose. I knew these things happened, but still I was shocked looking at his face. He was a brother to me. He died from *kram* later. (14 January 2012)

Delighted with finding a big catch underwater, and eager to share it, the friend swam up to the surface too quickly. When cyanide fishers feel cold and tired from diving, and have a fortune of fish in their hands (Figure 4), 'they just want to go up to the boat immediately', said a skipper. The divers *know* it's dangerous, but at that moment they don't *care*, he explained; 'They feel a "kick" when they catch a valuable fish, they are too excited'.

Particularly the younger divers related cyanide fishing to excitement involved with doing dangerous work. The very riskiness of deep diving with cyanide was expressed publicly as a source of pride to those who dare, proving their bravery to peers, parents, bosses or prospective wives. This was frequently echoed in women's conversations, commenting on the stamina and success of their male peers. However, in informal conversations with me or in the private sphere of the household, stories of loss and fear surfaced, as divers expressed sorrow for their hurting bodies, and women mourned the loss of their husbands and sons.

Whereas many young dive fishers showed off their muscular torsos, walking around the village in the afternoon sun, often boozy from the beer they received as a premium for a good catch, others – whose posture or ability to move was impaired by *kram* – did not. Some of them, like Yusri, moved along backroads and stayed away of public places and events, as the wounds of *kram* signaled ignominy rather than honor (cf Ralph 2012). In dive fishing with cyanide, bodies 'become' but also reassemble, making dive fishing an enabling and a disabling practice, with frequent fatal effects.

My host and friend Alisha pointed out the resemblance of cyanide fishing with gambling, as well as the different reasons divers have to continue:

> It's a combination of things. Some people, like Yusri [who was paralyzed from the waist down]: they continue because diving is the only way they can still provide for their family. Others continue because they are indebted to their boss. But many guys who start diving actually *like* doing it. They actually like the risk too. It's often

Figure 4. Coral trout groupers in a holding pen. Photo by the author.

> a bit of all these things. I think it is very important to understand their mind-set. *They are not in control*. It's like *gambling* [I: *berjudi*]. (23 Sept 2012)

In an extreme environment in which divers need to get the job done, their risk as well as success is influenced by agencies and factors beyond their control; fish, spirits, currents, as well as marked demands. There is always the chance of catching a fortune, even though many cyanide fishers become injured and increasingly indebted to their fish patrons. Alisha's point of gambling and men not being in control is also reflected in the association of cyanide fishing with the consumption of alcohol and other stimulants such as methamphetamine (*sabu-sabu*), a privilege for divers who work for well-connected patrons. A fish transporter explained how methamphetamine was popular among divers because it temporarily erases the pain, fear and exhaustion that the practice generates. Anti-motion sickness pills and muscle relaxants were also consumed in high doses both as a form of recreation and to suppress the dizziness, headaches and balancing problems associated with *kram*.

The association of cyanide fishing with gambling, thrill-seeking and deliberately affecting oneself with risky substances resembles other examples about the use of inhalants (Gigengack 2014), drugs and drinking parties (Nooteboom 2015) and high-risk occupations like firefighting (Desmond 2006) through which young men (re)shape masculinities in challenging the physical limits of the body-self. In these cases, fear and excitement interrelate in situations of partially losing oneself in the exploration of the boundaries between consuming or being consumed, becoming stimulated, invigorated, overpowered or paralysed by currents, drugs, excitement, or spirits.

Discussion and conclusion

The destructive and exploitative nature of compressor dive fishing is apparent, particularly when cyanide is involved. Political economic analysis has rightfully pointed out the structural social and environmental injustice that this kind of fisheries pertains, in which the sky-high value attributed to live fish contrast with the expendability of divers' lives (Adhuri 1998; Fabinyi 2013; Lowe 2000). As submerged ecologies around the world are put under increasing strain, bodies of dive fishers are also submitted to increasingly precarious conditions as fishing practice moves into deeper and riskier waters (Mallon Andrews 2021; Marschke, Campbell, and Armitage 2020).

Acknowledging the significance of these precarious circumstances, this article also intervenes in the debate by exploring the boundary space between agency and lack thereof, control and losing it in the way dive fishers in Indonesia continue their practice in this environment of exploitation. Narratives of dive fishers show how cyanide fishing also sustains in the thrill of diving, becoming fluid and seeking the margins of bodily thresholds that feeds on,

and produces, feelings of both fear and excitement. It generates flows of power and bodily fluids, but also sucks them away. Dive fishers continue not only despite known risks, but also because of it, proving their bravery in defying and navigating cold currents, exhaustion and sea spirits. This sheds light on the enabling as well as disabling nature of risky practice, reflecting situated understandings of health, embodiment and manhood. In their search for trophy fish, divers risk becoming impaired, transformed or even paralysed by the fumes, currents and pressure that deep diving exposes them to. While this resonates with Ralph's (2012) account of enabling disability of ex-gang members, the physical impairment of *kram* is a loss, not a trophy; a cramped condition in which the body becomes too leaky.

Still, the porosity of the divers' body is significant for understanding the body-self in relation to its environment, particularly in relation to risk. How then does the body-self become leaky in the experiences and narratives of dive fishing, and what does it become leaky to? The occurrence of *kram* comes with fluid substances penetrating or spilling out of the fisher's body, such as blood, currents, air flow, and spiritual agencies. Diving involves a process of merging, resisting and transforming of bodies and selves; of divers and fish, becoming drunk, inspirited and affected as they spill, move through and are overcome by drugs, currents, spirits and cyanide. This shows that what may be referred to as 'marine environment' is itself understood as a multiplicity of body-selves. This adds a post-human perspective to Mallon Andrews' observation that dive fishing injuries reveal 'a world in which environmental harms are also the harms of the body', as 'boundaries between bodies and environments are increasingly blurred' (Mallon Andrews 2021, 5). *Kram*, as the primary risk associated with cyanide fishing, indeed connotes more than an affected human body: it effectively becomes the expression of a stagnation or disarray when divers go beyond the limits of what their bodies can take, while also 'taking too much' from more-than-human others. Their bodily disarray partially translates to disorder and debt in the gendered relations between humans and sea spirits, who may consume a diver's vitality.

According to Weiss (1999, 166–167), it may be precisely the indeterminacy of embodiment that allows for a more or less coherent sense of selfhood to develop. While feminist-posthuman discussions about the body and selfhood as decentered and fluid have given due attention to how bodies-selves *become with* a more-than-human nature, the case of cyanide dive fishing show that in the process of becoming, bodies also disassemble and cease to be. Transcorporal flows can be life-affirming, but also 'unwelcome, or unstoppable incursions' tearing a body or self beyond its threshold of endurance (Neimanis 2016, 29). In the process of becoming a 'real man' through an engagement with dangerous work, there is a risk of falling apart. And as the case of cyanide fishers shows, men may explore, shy away from, or gamble with this tension.

The case gives food for thought on how masculinity is considered, particularly in relation to fishing as a risky, skilled and embodied practice. The performance of masculinity in cyanide fishing is not only the becoming of a strong self-contained body-self, but is also located in the becoming fluid of the diving bodies; the transformation of bodily and sensory modalities required to not just move in, but also become part of, a body of water, which includes mediating affective relations with spiritual and piscine agencies (cf also Ota 2006). Importantly, this is a process of transformation rather than mere adaptation, in which the diving body becomes 'skilled and powerful' only by becoming fluid; pouring itself into a body of water that it also becomes leaky to, physically and emotionally affected and potentially reassembled. The ethnography thereby also challenges a recurring conceptualization in feminist theory of fluid as a feminine embodiment, sustaining a dualism between the leaky, fluctuating feminine versus a rigid and solidified masculine modality (cf. Connell 1995; Neimanis 2016). While existing understandings of masculinity in fisheries 'tend to focus on the moment when men as most male' (Bull 2009, 445), ethnography of the enactment of masculinity in fishing practice shows that there is a 'cadence' (Ibid) to it, as watery spaces make room for multiple masculinities beyond a hegemonic version of the self-contained man in control.

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