The importance of stories in wildlife management

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Summary   *Storytelling* shapes how we understand the world and act in it, including our interactions with nature. For instance, the oral stories Indigenous peoples around the world transmit from generation to generation about the sacred bond between humans and non-humans in the world establish a respectful relationship with ecosystems. However, we have yet to fully understand how stories shape conservation and restoration practices beyond Indigenous communities. In this article, I demonstrate the function of stories in impeding conservation and restoration as well as their potential in advancing conservation and restoration. I interviewed central stakeholders in Norway's wildlife management—activists, civil servants and parliamentarians—and interpreted their stories using narrative theory to analyse how their stories affected what they did in terms of wildlife management. Each cluster of stakeholders relies on different story sources for their work: activists invoke moral stories, civil servants convey scientific accounts and parliamentarians narrate episodes of power. By relying on these diverse sources of stories, I show that the three groups of stakeholders see the world as it relates to conservation and restoration differently from each other, diverge in their actions, and as a result fail to cooperate in wildlife management. The stories that stakeholders tell *are telling*. The policymaking implications of understanding the power of stories are significant: efficient conservation and restoration programmes require cooperation, but diverging narratives weaken the likelihood of this cooperation. Furthermore, while most governments around the world use international environmental treaties as the narrative source to guide their efforts in preventing the decimation of nature, none of the stakeholders in wildlife management I interviewed relied on this source in their storytelling. While my interviewees are Norwegian, my findings forefront the worldwide importance of stories in conservation and restoration practices.

Key words: *ecological restoration, international wildlife treaties, narrative analysis, qualitative methods, storytelling.*

Stories of Wildlife Management

'The clouds stand there, the spray of the whale creates the cloud. The whale thinks, I have made those clouds, I have created the Wulpunduna, Balalnuna, the clouds sitting on the water in the far distance, on the horizon', sing the Gumtj, original inhabitants of the North East Arnhem Land in Australia (Burarrwana *et al*. 2019). The song the Gumtj sing is titled 'Wuymirri' and forms part of a *songspiral*. Near the song's end, a tribute to the whale is sung: 'The whales breathe, they spout, spray as they rise to the surface; She breaches, lifting her heavy body out of the water with her power.' This song is one of many songspirals through which the Gumtj transmit their worldview from generation to generation. The song seeks to 'keep the real language alive' because for the community 'language is who you are' (Burarrwana *et al*. 2019).

Like many other Indigenous communities around the world, the Gumtj rely on oral tradition to transmit knowledge, including how they should relate with Country. A core message their songspirals convey is that 'to talk of Country means not just land, but also the waters, the people, the winds, animals, plants, stories, songs and feelings, everything that becomes together to make up place' (Burarrwana *et al*. 2019). The Gumtj are not alone in disseminating the message about the connection of all living and spiritual beings on earth. *The Seven Sisters Songline*, 'one of Australia's most significant foundational stories', teaches 'how to live with each other on this earth in a sustainable way; how to care for each other and share resources equitably' (Neale 2020). The narratives Australian and New Zealand Indigenous people convey through songs and other forms of storytelling inspire action. Their tributes and reverences to sea life lead them to protect marine beings from exploitation and abuse (Walters & Couper 2023).

For decades, social scientists have recognised the centrality of oral traditions in Indigenous communities and during the past decades Indigenous elders have reasserted the value of storytelling as a 'vessel for passing along teachings, medicines, and practices that can assist members of the collective' (Kovach 2009, p. 95). For the Māori in New Zealand, 'the story and the storyteller both serve to connect the past with the future, one generation with the other, and *the land with the people and the people with the story*' (Smith 2012, pp. 145–146; italics added). In many Indigenous stories, the non-human world is the protagonist. As Māori scholar Lee-Morgan (2019) remarks, stories teach us that 'we are all connected; *everything in the natural world is bound together*' (p. 156; italics added). Indigenous stories often teach that first, 'human well-being is dependent on, or influenced

by, the actions of nonhuman animals and the spirits of the jungle (plants and trees)', and second, that 'all components of nature, not only humans, have a mystical, deeply spiritual story to be told, which means that humans should consider them sacred' (Goyes *et al.* 2021, p. 477). The stories Indigenous peoples in Australia and New Zealand tell play an important role in the respect they have for the non-human components of nature.

While we often associate storytelling with Indigenous societies and cultures, we tend to forget the universal appeal of stories and the sliding scale of culture from Indigenous to contemporary. As Lisa Cron (2012) documents, humans are evolutionarily *wired for story*. The human brain was as focused on storytelling two thousand years ago as it is now. So, stories are as important in influencing the actions of non-Indigenous people as they are in shaping Indigenous cultures. 'Stories are the connective tissue of the human race', explains Pulitzer Prize winner Jacqui Banaszynski (2007, p. 5). The power of stories lies in their ability to guide human action. Therefore, we all (Indigenous or not) attend to and collect stories as a means of survival (Heath & Heath 2010; see more in 'The plot of our lives' below). Having come to understand this, social scientists have recently been drawn to stories to understand human behaviour.

In conservation and restoration sectors, storytelling has not yet been fully recognised as an important and effective technique for engaging behaviour-changing pathways (but see Robin *et al.* 2022, for a significant exception). Yet Redford *et al.* (2012) remind academics of the importance of stories in studying those sectors:

> The stories conservation practitioners have told to gain public support may be chosen for analysis rather than the science underlying them. Our reliance on storytelling is understandable because storytelling is an ancient human behaviour and a very effective way to engage an audience. We tell compelling stories about the impending loss of a species and the speed of ecosystem destruction. We tell success stories to inspire people to

replicate success. These stories, originally told by conservation practitioners, are written down and widely shared by public affairs, development, and communication scribes. As with court scribes of old, these scribes make the stories more engaging, more inspiring, and scarier—with the aim of engaging more donors and reaching a broader public. (p 757)

The overall knowledge about the power of stories contrasted to the latent awareness of their importance in the conservation and restoration sectors inspired me to study the stories offered by wildlife management stakeholders (activists, civil servants and parliamentarians) to test the relevance of storytelling for the field of conservation and restoration. I focused on the extent to which international environmental conventions are part of the repertoire of narratives held by wildlife management stakeholders because states have relied on these conventions to shape their environmental management action. In the past seven decades, more than two thousand treaties that pertain to wildlife (animals, plants and ecosystems) have been ratified (Brandi *et al.* 2019), yet this plethora of international wildlife treaties cannot automatically be equated with increased preservation of wildlife. From 1970 to 2016, 'between 17,000 and 100,000 species' have become extinct (Van Uhm 2016, p. 19), and there has been 'an overall decline of 68% in [wildlife] population sizes' (Grooten & Almond 2018, p. 6). Admittedly, we cannot expect wildlife treaties to stall such a mass extinction because much more than legal instruments are needed to address the multiple causes of environmental destruction. But might it be that the stories environmental conventions tell fail to shape the storytelling of management stakeholders?

In this article, based on empirical material, I suggest that creating a metanarrative for conservation and restoration that incorporates international wildlife treaties would help coordinate the efforts of the people involved in these activities (see also Tyrrell & Clark 2014).

The Plot of Our Lives

The *narrative turn* in the social sciences came about most strongly in the early 1980 s, when scholars began to explore in depth the centrality of stories in processes of individual cognition, building images of the self and community identity and behaviour (Maines 1993). Sociological interest in stories and storytelling was present before the advent of the narrative turn, mainly in the work of symbolic interactionists with an interest in 'how people gave accounts to avert threats to their self-image and status' and of ethnographers documenting 'how people used stories in conversation to maintain interactional order' (Polletta *et al.* 2011, p. 112). The narrative turn, however, paid serious attention to stories not as 'things people told' but as 'things that people lived' (Polletta *et al.* 2011, p. 112). Discourse analysts and their interest in uncovering how society, through language, builds the linguistic contexts in which people live (Gee 2014) significantly affected the narrative turn by suggesting that the discourses circulating in society become the fabric for the stories that individuals use for interpreting reality and inspiring their future behaviour.

Narrative analysis, as a valuable methodological and analytical perspective, has burgeoned in the social sciences during the last three decades and is also gaining traction in the physical sciences. In this context, the interdisciplinary sector of ecological management and restoration is increasingly embracing a narrative approach. Contemporary analyses include explorations of how stories are fundamental for co-producing networks of environmental governance and to inspire collaborative behaviour (Ingram *et al.* 2014), research on the value of stories in facilitating participatory environmental governance by bringing together disperse informal networks (Ingram *et al.* 2019), and studies of how community and political narratives about environmental resources can result in ineffective policies despite evidence that better options exist (Warner 2019).

But what is a story? And how can stories be useful for understanding human action? A story is a constructed work that

'creates a connection and has a meaning, gives the unmanageable a manageable form' (Andersen 2008, p. 125). Four elements underlie the structure of all stories: an *opening* that introduces what the story is about and who the characters are, a *challenge* that describes what the characters need to accomplish, an *action* that addresses the challenge, and a *resolution* that presents how the characters and their world have changed as a result of the action (Schimel 2012).

We all have a repertoire of stories —'autobiographical narratives' (Crossley 2000, p. 179)—through which we understand the world and ourselves. With our autobiographical stories, we 'follow events or experiences over time and make a point' (Presser & Sandberg 2015, p. 2). Stories are the vehicles by which humans *understand* and *act* upon experience and are, thus, 'fundamentally concerned with the self' (p. 7). Because we assign ourselves a role in the plot of our autobiographical narratives, we act in ways that make sense for the story we have constructed. Psychologists have long researched 'questions of how we comprehend and respond to narratives' (Comer & Taggart 2021, p. 148), finding that stories 'contain real-world knowledge we hold in memory—sometimes in a form called "scripts", for dealing with typical life situations' (p. 149). Several social sciences have exploited 'the capacity of stories to explain, guide, and arouse' (Fleetwood *et al.* 2019, p. 1). Analysing storytelling can help us elucidate human behaviour because stories point to how we provide a sense of coherence to our lives and how that sense of coherence directs, debilitates or even immobilises action. A narrative analysis can therefore shed light on issues of ecological management and aid in our understanding of the 'psychological aspects of human interaction with nature' (McDonald 2001, p. 1).

The Narrative Analysis Approach

Narrative analysis has three main traits: it is primarily focused on the individual's interpretation of events (the phenomenological underpinning of a story); it follows narrative sequences as an uneven continuum (exploiting the opening, challenge, action, resolution structure of stories); and it permits links to be established between personal events and broader structures. Among the elements of narrative analysis are 'temporal sequences…who the hero of the story is and who the antagonists and the hero's helpers are, and [it] tr[ies] to ascertain the main plot of the story, the possible subplots, and the elements of tension, conflict and resolution' (Brinkmann & Kvale 2015, p. 180). When analysing the narratives of my interviewees, I identified the plot and subplots of their stories; the hero, the hero's helper and the antagonist; and the tension and resolution in the story.

Master narratives (also called discourses) are an integral part of narrative analysis. They are 'deeply embedded in a culture [that] provides a pattern for cultural life and social structure, and creates a framework for communication about what people are expected to do in certain situations' (Halverson *et al.* 2011, p. 11). Also important for narrative analyses, yet less explored, are the gaps. *Gaps* are indicative of the weakness of contextual elements in a discursive community. Because individuals seldom come up with wholly unique stories but borrow elements from master narratives and the discursive community (Clark 2011), repeated gaps in individual narratives indicate that an element is not part of a discursive community. In other words, elements that are widespread in a discursive community often appear in individual stories, whereas elements that are rare (or non-existent) become gaps in individual stories. Identifying 'missing/muted/ silent positions in the data' allows the analyst to 'ask questions about what is missing' and 'understand…a situation in a deeper way' (Tøndel *et al.* 2020, p. 5) because silences are also fundamental in the construction of social discourses (Sundaram & Sauntson 2016).

Narrative Interviews

Between February and October 2021, I interviewed 15 core stakeholders in the management of Norwegian wildlife, five from each of three groups: First, members of the Energy and Environment Committee of Stortinget, the Norwegian parliament. Stortinget is the most important institution in Norway for wildlife management. These elected parliamentarians represent four political parties that have an interest in the preservation of the environment: Arbeiderpartiet (Labour Party), Miljøpartiet De Grønne (Green Party), Rødt (Red), and Venstre (Left). Second, civil servants of the Ministry of Climate and Environment, Norwegian Environmental Agency, Norwegian Scientific Committee for Food and Environment and Norwegian National Authority for Investigation and Prosecution of Economic and Environmental Crime. These are all government or government-funded organisations. Third, representatives of the principal nongovernmental organisations championing wildlife protection in Norway: Foreningen Våre Rovdyr (Union for our Predators), Green Peace Norway, NOAH and World Wildlife Fund Norway. Interviewing five individuals per group allowed me to collect narratives from the most important stakeholders in the design and implementation of wildlife management. In choosing the interviewees, I considered their proximity to and interest in environmental matters. My expectation was that they were in the best position to have relevant knowledge of the application of wildlife treaties in their spheres. The interviews were narrative, centred on 'the stories the subjects tell, on the plots and structures of their accounts' (Brinkmann & Kvale 2015, p. 178) and usually revolved around a 'generative narrative question' (Flick 2005, p. 97). In the interviews, I solicited participants' stories around the axes of personal identity, personal beliefs, professional practice (including anecdotes), interaction with international wildlife treaties and their views on the best way to manage wildlife.

The Norwegian Centre for Research Data, the national body responsible for privacy and the ethical approval of research activities, approved this project. I obtained the informed consent of all interviewees after explaining the purpose of the project to them. In the interviews, I reminded the participants that they did not have to answer any questions they did not want to. The interviews lasted

between one and three hours. A research assistant transcribed the interviews, which I then coded with eight codes useful for a narrative analysis: antagonist, gaps, hero, hero's helper, main plot, resolution, subplot and tension and conflict.

For the analysis, I present the narratives of the central stakeholders in the management of wildlife through four composite characters that distil the core narratives of the interviewees: Charlotte, the head of an NGO; Oliver, a staff member of a wildlife organisation; and Amelia and William, parliamentarians. I constructed two identities for this group because the interviews with parliamentarians offered two contrasting positions on the treaties. I arbitrarily assigned names to the composites and chose the gender of the character based on the majority gender of interviewees in the group. All the quotations from the interviews are translations of verbatim transcripts and are representative of the group. While there are minor differences in the narratives held by the interviewees in each group, I highlight commonalities that are relevant for the analysis. Another important caveat is that because wildlife crises continue to intensify, participants' narratives are unfinished: they point towards desired *resolutions* and the means to get there rather than to conclusions to their stories.

The Sámi people are the traditional custodians of the land on which I completed my study, and I pay my respects to their elders past, present and emerging.

Speaking on the Grounds of Justice and Morality

Nongovernmental organisations (Charlotte)

The *main plot* that contextualises Charlotte's work is that the world is in a grim state. Ecological devastation and the decimation of wildlife are everywhere: 'the planet and us, human beings, we have the climate crisis. Very much due to our…to the way we consume animals. The meat industry. And we have the nature crisis very much due to how we treat animals and nature'. Charlotte is the *hero* in her story; to do her job means she has

'to be a bit of an idealist really. And really want to fight for nature. I mean, I do not have this job for money or fame or power or any of those'.

In Charlotte's narrative, the subplot is Norway's *inadequate approach to wildlife*. She complains of 'the hunting that goes on everywhere and allows everybody to go into nature right now. Which is a very important thing in the country to allow everybody, it's actually a law that says that you are allowed to go everywhere in nature, and we are very proud of that law, but we want to say maybe now the time has come to look at that and change that because it is not healthy'. Wildlife culture creates *tension and conflict*, and she considers the country as the 'prime example on how this nonsensical way of thinking about nature [one in which people exploit wildlife] has just sort of infected everything in politics and management'. Her *antagonists* are common citizens: 'nobody wanted to touch this culture because "oh, we have to support the farmers and the farmers' sheep"', she complains. For Charlotte, the way to address people's stubbornness when it comes to culture is through reason and science (*resolution*); facts are her *helper*: 'we are more and more concerned about finding facts, fact-based work'.

Charlotte did not mention *wildlife treaties* when talking about her life and work —this remained a *gap*. So, I asked directly, and she replied bluntly: 'I rarely refer to them in my communications or in meetings or in advocacy work. I think we talk more from an ethical level'.

Civil servant (Oliver)

Oliver, like Charlotte, sees the interaction between humans and nature as vital for conservation (*main plot*), although more dispassionately: 'I think we are far from being able to put nature first. Which I think has to become the goal. You can see that in many like me, I work more, with kind of more nature types and ecosystems conservation…of single species, but I think it is a bit the same concept'. Oliver, like Charlotte in her story, is the *hero* in his story, which is characterised by professional commitment.

Oliver likes his job because it is 'scientifically interesting', and he works 'from a scientific standpoint. Unbiased and neutral'. He goes about his work in a way that is 'predictable and structured, and I think you need also to have some biological understanding to do this'.

In Oliver's story, the *subplot* is the contradictions inherent in his work. As a key example, he mentioned that 'contradictions are often, or can be created, by precisely the balancing act between protecting a species and local interests' or by 'the difficulty of balancing national interests, international interests, local interests, political interests'. *Tension and conflict* appear when some actors do not take Oliver's professional advice but act in line with their own interests. He explains: 'it is always the economy first: and then we produce reports, and they keep seeking until they find a report that says it is okay [to alter an ecosystem], and they believe it is okay to build'. The *antagonists* in Oliver's story are the people who prioritise money or individual interests over professional expertise, for example, 'the politicians [who] see that they can maybe gain some tax revenue from this and then it becomes really, really messy'. The *resolution* comes when Oliver's expertise is respected: 'it is not the lack of information, it is the respect for information'. And he emphasises that wildlife management 'has to be based on scientific findings'. A group that could be the antagonists, like politicians, become the *helpers* when they respect Oliver's expertise: 'we update our databases on knowledge about the subjects so that others can use the knowledge in their daily work'.

It would be a mistake to say that wildlife conventions are a *gap* in Oliver's repertoire of stories: he works in an institution that was established because of one such treaty. The conventions appear in Oliver's narrative only indirectly, however. As he said: 'in working with the convention it is of course the convention that is the minimum [standard]. But I don't really read the convention text because I don't have to, because the convention has been basically translated into national regulation'. Rather than wildlife

conventions shaping Oliver's expertise, it is his expertise that guides his action: 'I do not have them [treaties] very high on my mind at all….I use my scientific principles to produce reports rather than applying the principles of the treaty to my scientific activity'.

Parliamentarians (Amelia and William)

For Amelia, a politician who sits in parliament, the *main plot* is the worldwide environmental crisis, but she also acknowledges other social interests as important. Amelia told me: 'the biggest problem we are confronting is climate change and the destruction of nature. That is what we must fight: take care of much more nature, develop an economy within the boundaries of nature. And that must be done while simultaneously protecting and strengthening freedom and democracy'. Like Charlotte and Oliver, Amelia is the *hero* of her narrative: 'my motivation is to make a difference. That is a broad statement, but I really hope that my work can result in us having a better environmental policy, both locally and internationally'.

In Amelia's story, the *subplot* is the contrasting political positions among interested parties on the environmental issue: 'both sides are entrenched. On the one side they say, "we value this eagle" and the other side replies "shoot it, shoot it"'. In such a subplot, *tension and conflict* materialise in specific cases: 'there have been many land tenants who hunt, so they have an interest…and the same happens in the North, because they get compensation for the animals the carnivores injure. Therefore, they have an interest in maintaining a conflictual relationship with the carnivores'. The *antagonists* are 'those who lack political will to change direction', and Amelia identifies them as 'the farmers organisation and of course some political parties.' Structural changes in the national management of wildlife are the *resolution* Amelia believes will come: 'it has to do with both protecting wild zones from oil production but has to do also with protecting the woods'. Her *helpers* are the political parties closely aligned with hers:

'when it comes to climate and environmental questions and that kind of thing, it is the Green Party and the Socialist Left Party, the ones that are closer [to our way of thinking]'.

Wildlife treaties play only a minor role in Amelia's work; this would be a *gap* were it not for their strategic use: 'They are not arguments I use in my daily work because it is our ideology more than laws and rules that I use…so, yes, it is a strategic use of them, as an argument'.

For the most part, William's narrative parallels Amelia's except when it comes to the *subplot*. He is concerned about the disrespect of international conventions and national law: 'I think that the debate in our country is unclear because it does not follow our commitments. The problem lies in the politics that constantly challenge the legal framework; so we are on the boundary. The problem is that we have a majority of the parliament that all the time is on the boundary of what the legal framework and international conventions allow'. Consequently, William maintains his faith in the legal framework, which is the *resolution* of his story. He believes that 'we have the tools in the national legislation' and the legal system is the *helper*: 'high courts can clarify the law'. Wildlife treaties are not a *gap* in William's narrative: 'these are important. Even when politics are not shaped by them, I know that we have ratified them and the bureaucracy must work to create the basis to include them in the decisions ahead, to comply with these conventions and treaties…even when one is not clear about them in the daily work when we define policies'. While William is knowledgeable about the contents and particularities of wildlife treaties, he recognises their minimal impact in daily political practices. Furthermore, for every William who has wildlife treaties in his repertoire of narratives, there are three Amelias who do not.

Implications for managers

Research in the field of conservation and restoration shows that programmes need coordinated cooperation to be effective (Hames *et al.* 2014) and that narratives are crucial in determining whether

stakeholder networks in environmental management cooperate or not (Ingram *et al.* 2014, 2019), yet the stories held by the three main groups of management stakeholders I interviewed lead them to mistrust each other. NGOs blame parliamentarians for not caring about wildlife, and civil servants accuse NGOs of being too emotionally involved and parliamentarians for being too driven by economics. Parliamentarians think NGOs and civil servants fail to see the entire picture. Conservation and restoration scholars have also demonstrated that the success of conservation and restoration programmes lies in proper top-down management in addition to bottom-up initiatives (McDonald 2003). Yet, NGOs, civil servants and parliamentarians like Amelia do not include international environmental conventions in their repertoire of stories. The highest order of instruction for wildlife management remains unused because international conventions fail to penetrate the repertoire of stories of those in charge of applying them.

My study reveals that storytelling can actively sabotage the efficiency of conservation and restoration. What can be done about that? Gary Klein (1999) argues that storytelling is two-fold: 'Just as the story form helps us probe for the expertise, the story also helps to communicate the expertise' (p. 198). While in this article I used stories to probe the expertise of wildlife management stakeholders, practitioners can tap into the power of stories to communicate their expertise. Communicating expertise through storytelling transforms thinking and practice. For example, since the 1980 s, the organisation Tangentyere Design has relied on the storytelling traditions of the Aboriginal inhabitants of the Central Australian desert to develop eco-architectural solutions adequate for the challenges posed by the region's severe climate, fragile land and scarce water resources. In co-developing architectural eco-projects with Indigenous peoples, storytelling has become a way to engage and involve the community by allowing its members to become the main characters in the story (Broffman 2015).

The importance of stories in management programmes cannot be understated.

'No one ever made a decision because of a number. They need a story', wrote Daniel Kahneman, Nobel Prize winner for his research on decision making (quoted in Lewis 2017, p. 250). He later expanded on this by saying that 'the human mind tends to work on stories, on individual cases, and on anecdotes' (Kahneman 2022). As the empirical evidence presented in this article demonstrates, the same applies to thinking about ecological management.

For international environmental conventions to efficiently shape the action of conservation and restoration sectors, they must be translated into stories. As part of its training programmes, governments in Australia and New Zealand (and elsewhere in the world) could produce a set of pedagogical narratives that, based on conventions, would bring stakeholders together in cooperative programmes as heroes in the story of conserving and restoring nature. The Department of Climate Change, Energy, the Environment and Water in Australia, and the Department of Conservation, the Ministry for the Environment, and the Parliamentary Commissioner for the Environment in New Zealand would be suitable bodies to spearhead the efforts.

By transforming international environmental conventions into stories, stakeholders—among which Indigenous organisations should be front and centre —would be more effectively engaged. More importantly, storytelling would facilitate the *deep involvement* of stakeholders in the operationalisation of environmental conventions, allowing them to provide feedback on the appropriateness of those instruments to conserve and restore ecosystems.

Acknowledgements

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