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Article

What is a Conservation Actor?

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Abstract

As a crisis-oriented discipline, conservation biology needs actions to understand the state of nature and thwart declines in biodiversity. Actors—traditionally individuals, institutions, and collectives—have been central to delivering such goals in practice. However, the definition of actors within the discipline has been narrow and their role in influencing conservation outcomes inadequately conceptualised. In this paper, we examine the question 'What is a conservation actor?' Who or what creates the capacity to influence conservation values and actions? Drawing from theoretical developments in Actor-Network Theory and collective governance, we argue that the concept of an actor in conservation biology should be broadened to include non-humans, such as species and devices, because they have the agency and ability to influence project goals and outcomes. We illustrate this through four examples: the Asian elephant, International Union for Conservation of Nature red lists, the High Conservation Value approach, and an Integrated Conservation and Development Project. We argue that a broader conceptualisation of actors in conservation biology will produce new forms of understanding that could open up new areas of conservation research, enhance practice and draw attention to spheres of conservation activity that might require stronger oversight and governance.

Keywords: conservation actor, Actor-network Theory, conservation biology, conservation governance, interdisciplinarity, Asian elephant, IUCN red lists, Integrated Conservation and Development Project

INTRODUCTION

Michael Soulé (1985) famously described conservation biology as a crisis discipline. Whilst many might assume the discipline's *raison d'être* is the development of theory and evidence leading to better conservation of species, habitats, places, and processes, Soulé placed the actor at the centre of conservation biology, with his assertion that 'one must act before knowing all the facts' (Soulé 1985: 2). A 2007 Nature editorial titled 'The Great Divide' urged conservation scientists and practitioners to get out of their respective ruts and seek more effective means to their common ends. In response, Chan (2008) pertinently observed that the omissions of the social sciences and humanities from conservation science are constitutive in creating this divide and impeding the integration of theory and practice. This article contributes to emerging efforts to broaden and integrate conservation theory by examining the question 'What is a conservation actor?' Who or what creates the capacity to influence the futures of the attributes of nature valued by societies or groups therein?

At first sight the answer to the question 'What is a conservation actor?' seems straightforward. The literature generally talks in terms of the individuals, groups, and organisations who actively pursue conservation agendas (conservationists), the constituencies, communities, companies, and government agencies whose co-operation and support is enlisted in the pursuit of conservation goals (supporters/stakeholders), and the individuals, companies, and governments whose activities, policies, practices or inaction damage nature (opponents) (Kleiman *et al.* 2000; Salafsky *et al.* 2001; Peterson *et al.* 2003; Berkes 2004).

However, conservation governance has transformed during the last twenty years. Perhaps the most salient change is the

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declining importance of state actors (that required and were responsive to scientific evidence), and the rise of eclectic networks operating with or without state participation (Agrawal & Lemos 2007). Conservation policy approaches such as Forest Stewardship Council certification and Marine Stewardship Council certification, Reduced Emissions from Deforestation and Degradation (REDD), Biodiversity Offsets, and so forth are all constitutive of this change. Rhodes' (2007: 1246) observation that society is nowadays governed 'with and through networks' suggests that conservation science needs to engage with theory that conceptualises the nature of these networks and actors therein.

For instance, developments in post-humanistic thinking reveal that governance networks are not produced solely by something and someone, they do not arise from human autonomy or purpose or values alone, but instead are formed in relations (e.g., negotiations, alliances, engagements, and conflicts) between a much wider array of actors, both human and non-human (Lorimer 2007; Dempsey 2010). The non-human notion of actors is developed in Actor-Network Theory (ANT) and offers the potential for new thinking regarding actors and agency in conservation. It offers conceptual tools to make more explicit the assemblages that conservation (consciously or otherwise) constructs and/or operates within as a means to affect change or maintain the status quo. This in turn could among other things: 1) provoke new thinking on strategy, configurations for action and performance evaluation, 2) help ensure that influential actors are not over-looked and/or marginalised, and 3) point to new research directions in conservation biology by better locating the sub-discipline in the dynamic actor-orientated context for which it is intended.

ACTORS, AGENCY AND CONSERVATION

Conservation actors are entities with agency, i.e. the capacity to produce a phenomenon or modify a state of affairs. Traditionally agency has implicitly been associated with intention and the ability to speak out, and this may explain why conservation biology has treated actors as human (real people, organisations, etc.). ANT goes beyond these traditional associations of humans with agency to consider the 'participation' of non-human entities (organic or technological) in the assembly, behaviours, and influence of networks (Law 1999; Whatmore 1999; Latour 2005). In the ANT idiom, any entity has the potential to become an actor, for it is imbued with the capacity to influence unfolding events (act) through the relations with other actors in which it resides. These relations or interactions result in the emergence of agency and that which acts may neither be solely human, nor organisational or neatly-bounded entities (Blok 2007). ANT is not an attempt to ascribe intention to non-humans as has been suggested (Laurier & Philo 1999); ANT rather seeks to investigate how relations between human and non-human actors define the conduct of networks (Callon 1999). The term 'actant' is used to describe non-human actors that are 'given voice' (i.e., agency) by the apparatus of science and policy (Latour 1996; Teubner 2006).

ANT draws attention to the fact that an actor is never alone when acting—it cannot be separated from the network (assemblage) in which it resides and is enmeshed (Latour 2005). Moreover, decisions, roles, and outcomes are mediated by the relations in which actors reside and these settings co-produce the outcomes of individual and collective actions. Put another way, action is always action-in-context, and agency is not purely the domain of humans, but it is distributed across networks of interconnectedness. It follows that actors/actants, to varying degrees, achieve their form as a consequence of the relations in which they reside and define each other in their interaction rather than separation (Callon 1999; Law 1999). The term 'becoming' is used to signify the idea that the specific identity of an actor is never singular or stable but is always in the process of 'becoming something' (Blok 2007). Moreover, the process of 'becoming' may be double or 'relentlessly heterogeneous' (Castree 2002)—as one actor assumes a specific form so the form of other actor/actants might change. Apart from offering the possibility to identify different forms of actors that affect conservation outcomes, this mode of thinking also promotes (and requires) more attention to the specificities of conservation actions in time and place.

Whilst we are convinced of the value of ANT perspectives for extending theorisations in conservation science and practice, they have a number of important short-comings. First, ANT has difficulties in distinguishing between material nature and beliefs about, or accounts of, nature (Bloor 1999). For example, from an ANT perspective the notion of a minimum viable population is co-produced by the interaction of sampling protocols and modelling methods with animal encounters. However, a conservation biologist would argue that there are a number of individuals 'out there' with particular genetic make-ups that can be counted or estimated to produce an informed, if partial, account of such a population. Second, ANT is positioned as a non-explanatory theory or 'sensibility', and strict forms of ANT both disapprove of meta-narratives and generalised theories—causal explanations of agency are avoided as this would assume prior understanding of how phenomena act. Clearly this is at variance with conservation biology, which as a practice-oriented discipline, cannot proceed without making some substantial assumptions about what the world (nature/society) is like—it utilises, and needs, some manner of knowledge claim and establishes objective standards to legitimate its claims. Third, as Castree (2002: 135) points out, ANT's suspicion of causality may result in an ontological monism which risks ignoring the possibility that some actors/actants 'marshal' the power of many others and, in so doing, limit the latter's agency and 'circumscribe their existence'. Lastly, whilst describing actor-networks, ANT's treatment of how actor-networks assemble and gain influence is limited.

In our view, a conception of conservation actors needs to adopt a 'softer' version of ANT that accommodates more causal and explanatory notions of agency. An older (structuralist) strand of thinking that may supplement ANT sees agency as arising from temporally constructed engagement of actors, which (through the medium of ideas, emotions, images, and

devices) enter and infiltrate cultural contexts and/or policy development settings. Such 'actor constellations' influence issues and ways of thinking, and therefore enable or constrain forms of action. In this guise, agency is understood as playing out in three ways: 1) iterative—an actor prompts consistent types of responses in the thoughts and actions of others in a given setting, 2) projective—where an actor generates future visions that interact with and modify other actors' hopes, fears, interests and aspirations to reconfigure their thoughts and actions for the future, and 3) evaluative—recognises the capacity of animate actors to make judgements among alternative possible trajectories of action, in response to the emerging demands, dilemmas, and ambiguities of presently evolving situations (Emirbayer & Mische 1998). These categories suggest explanation and causality, yet the notion of iterative agency could equally apply to non-human actants, and the notion of projective agency could equally apply to animal actants.

Similarly, work on social learning in resource management (Pahl-Wostl & Hare 2004), whilst humanistic in character, adds perspectives that appear compatible with strands in ANT, and supplement thinking on the notion of a conservation actor. This work arises for interpretative themes in the social sciences that see knowledge as contextually located. It represents a shift away from the expert-led technical design of management systems and their assumed controllability towards the more dynamic forms of collaborative governance. A key idea is that ways to act or behave in relation to the environment are learnt through practices and participation that are culturally and historically embedded and that give rise to shared meanings and values. Crucially, interactions between multiple actors in networks are seen as forming collectives that are 'at the core of formal or informal participatory processes in resources management' (Pahl-Wolst *et al.* 2007: 4). ANT perspectives would argue that non-human actants are part of such 'collective actors', and this is indeed inferred by the emphasis on the influence of environmental context and practices that are likely to involve technologies. Equally, as Teubner (2006: 13) discusses, Latour's (1993) notion of 'hybrids', i.e., associations of human actors and non-human actants, accepts that 'more elaborate action capacities' (e.g., political or conservation action) will only be visible in humans. The social learning and collaborative governance literature can be interpreted as supplementing our 'soft' ANT approach, with its focus on the role of shared norms, values, practices, and codes of conduct in forming and stabilising networks. These are clearly important in conservation which, as a values-led practice (Jepson & Canney 2003), makes 'strict' ANT perspectives problematic to use on their own.

PROFILES OF NON-HUMAN ACTORS IN CONSERVATION

To illustrate the relevance of these 'soft' ANT insights to conservation practice, and to explore the possibility of combining other perspectives on actors and agency we next consider three non-conventional cases of conservation actors, each with evident agency. These are the Asian elephant (a species), extinction risk categories/Red Lists and the High Conservation Value Forest Framework (categorisation devices), and local networks of power and accommodation (collective actors).

The Asian elephant has penetrated and influenced multiple cultural and institutional spheres including networks of trade and commerce, forestry and military operations, and popular entertainment (Groening & Saller 1999; Scigliano 2002; Sukumar 2003). In the early 1990s, landscape-scale conservation gained prominence in conservation biology networks. This reflected scientific advances in conservation genetics and understanding of the effects of deforestation and habitat fragmentation, but was also a response to the emergence of affordable GIS (geographic information system) technologies that created a powerful new 'connection standard' amongst actors influencing land-use planning decisions. Megafauna, by virtue of their large spatial requirements were enrolled in these networks—they became 'focal' or 'landscape' species' (Lambeck 1997; Sanderson *et al.* 2002). In Asia, the Asian elephant influenced the development, up-take, legitimacy, and influence of the outputs of these emergent conservation technologies. For instance, the Asian elephant's ability to 'carry' the relatively large radio transmitters (at the time) and its itinerant movements over large spatial scales simultaneously introduced real animals (and a sense of groundedness) into the GIS representations and demonstrated the reality of corridors and habitat connectivity (Johnsingh & Joshua 1994; Venkataraman *et al.* 2002). The elephant's presence in diverse socio-cultural networks enrolled widespread support (or sympathy) for these planning visualisations that enhanced their influence in competitive land-use planning arenas and established the reality (or possibility) of landscape-scale conservation.

These GIS-based configurations of the elephant, emerging through an interaction of individual animals, technology, and science-based imperatives, unfolding in fragmented landscapes have produced particular social orderings of space (elephant reserves, buffer zones, corridors, agricultural areas). Here the agency of the elephant performs in a projective manner, as it 'enables' conservationists to engage in grand landscape planning visions of corridors and networks (Menon *et al.* 2005). Conservation planning in India would be very different if the landscape species was pigmy hogs! In this way, elephants are actants—they influence the cause of events due to relations with technologies, science, and cultural institutions.

However, this contemporary ensemble changes the elephant—it becomes a set of data points and the individuality of the animals and their interaction with humans are edited out in policy networks. For instance, particular bull elephants have a propensity to take risks and foray into human habitation to raid crops (Sukumar 1990). Such forays and close encounters with humans evoke fear amongst farmers, often leading to the vilification of individual animals. The elephant becomes a demon; its protection symbolic of an elite uncaring state. An

individual elephant's iterative agency prompts people to take retributive action against it, as well as towards the organisations promoting elephant reserves. Such interactions undermine the ability to translate GIS visualisations into effective conservation practice (Barua *et al.* 2010). They point to the need to acknowledge that 1) elephants are actants co-producing their conservation, 2) that this actant property emerges the relationships in which it resides, and 3) these relationships are multiple, playing out in actor-networks involving humans, technologies, and institutions.

Along with organic non-humans (e.g., animals and plants), ANT seeks to investigate and foreground the actant role of technologies. Notably, Callon *et al.* (2007) developed the notion of 'devices' to investigate the behaviour and governance of markets. Devices in this context are assemblages of analytical techniques, pricing mechanisms, trading protocols, discourses, and/or regulations that 'intervene in the construction of markets' (Callon *et al.* 2007: 2), and as the 2009 bank crisis demonstrated may become difficult to govern. Applying this analytical perspective to conservation draws attention to the increasing prevalence of 'devices' in contemporary conservation science and practice, e.g., Biodiversity Hotpots (Myers *et al.* 2000), Important Bird Areas (Heath & Evans 2000), Forest Stewardship Council Standards and Red Lists. These are just some examples of conservation devices that act to produce interconnected expert communities, techniques of assessment, geographies of intervention and discourses that co-produce the institutions of contemporary conservation.

In conservation discourse such frameworks, schemes, and standards are referred to as planning and prioritisation 'tools' which means that they are or can be under direct human control. However, they are also what Barry (2006: 241) terms technological zones (specifically zones of qualification) that intensify agency 'in particular directions and with unpredictable and dynamic effects'. In short, they are conservation 'actants'. A brief analysis of International Union for Conservation of Nature Red Lists and the High Conservation Value approach illustrates the value of this perspective.

IUCN Red lists, and more specifically the set of science-based extinction risk assessment criteria (Mace *et al.* 2009), clearly have evaluative agency. Among other things, they have : 1) enabled the formation and meaningful implementation of international conservation regimes, e.g., application of the appendices that are central to the Convention on International Trade in Endangered Species, 2) helped legitimate the participation of conservation NGOs in global environmental governance through the production of overview statistics on the state of the environment (Collingwood & Logister 2005), 3) enabled periodic evaluation of international policy initiatives (e.g., their role in the Millenium Ecosystem Assessment) and the strategic choices of regions, sites, and species to be target by conservation interventions. More fundamentally, Red Lists have interacted with the notion of extinction to produce global norms concerning the protection of endangered species (Epstein 2006; Ladle & Jepson 2008).

As Possingham *et al.* (2002) note, Red Lists have come to do things for which they were not specifically designed. For example Red Lists are implicated in 1) the profiling and status raising of species within collector markets that can exacerbating their already endangered status—the so-called anthropogenic Allee effect (Courchamp *et al.* 2006) of which Spix's Macaw and Javan Hawk-Eagle are two well documented examples (Juniper 2002; Nijman *et al.* 2009), and 2) activist campaigns aimed at mobilising Western public opinion to apply political pressure to southern governments. For example, in the early 1990s a loose coalition of NGOs and Western government officials sought to reduce parrot exports from Indonesia by lobbying for various species to be included in the CITES Appendix 1 and II. The inclusion of Tanimbar Corrella (*Cacatua goffiniana*) in the 1988 ICBP Checklist of Threatened Birds (Collar & Andrew 1988) enabled a UK-based parrot charity to run a high profile media campaign that portrayed the issuance of catch quotas for the species as an example of the Indonesian government's disregard for the ethos, principles and guidelines of CITES. The species was voted onto Appendix 1 of CITES in 1992 (where it remains) despite evidence available at the time, that it was an agricultural pest and that trade provided one means for farmers to gain compensation for crop damage (Jepson *et al.* 2001).

Whilst such examples could all be explained from the more humanistic perspectives of evaluative and projective agency, ANT perspectives draw attention to other forms of agency that enrich our understanding of the Red List 'device'. For example, during the 1990s, transformations in the logic and participation of the actor-networks in which Red List were enrolled (relating to globalisation, mainstreaming of biodiversity, expansionist NGO policies, etc.) produced a reshaping of the IUCN threat categories—they became more 'systematic', 'objective', and 'measurable', and with more clearly specified goals relating to the monitoring of species status, indicators of ecosystem health, and providing a global context for local conservation planning (IUCN 2010a). This process imbued threat categories with the capacity to act in certain ways.

As a 'connection standard' that allows data to be amalgamated and compared, IUCN threat categories assume enrolment capacities—a country, organisation, or individual that conducts a species assessment according to these criteria both contributes to and becomes part of a network 'that collectively holds what is the most complete scientific knowledge base' on threatened species (IUCN 2010a). Red Lists construct international scientific authority and by implication call into question the authority of non-participants—in August 2010, Brazil's respected Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio) finally agreed to adopt the standard and receive 'training and capacity building' from IUCN (IUCN 2010b).

The IUCN Red List device functions as an instrument and measure of threat only if its categories can be populated with data. Consequently thresholds have been devised that will produce policy meaningful numbers when applied to taxa and/or regions (e.g., countries). The practice of summing these numbers produces figures that suggest a significant proportion of the world's species are 'at risk' of extinction. These figures

contribute to the idea of an impending 'extinction crisis' that in turn has a role in producing notions of a new epoch—the Anthropocene (Crutzen 2006). The device was designed to help thwart extinction, but simultaneously acts to construct the 'reality' of extinction. Furthermore, the criteria emphasise species attributes that are quantifiable, or more correctly, whose quantification is non-controversial. This highlights endemism, range size, and population numbers, but edits out qualities of sentience, cultural profile, and utility in species that have clear agency. As a consequence, the Asian elephant, for example, has a similar unit value to the Biak Scops-owl (*Otus beccarii*), despite the vastly different ethical and policy considerations surrounding their conservation. Moreover policy discourse drifts from species and places with unique identities to generalised areas (e.g., biodiversity hotspots), groups of taxa (e.g., amphibians), and purposes (e.g., ecosystem services). We suggest that it is limiting to understand such effects solely in terms of the interaction of different forms of human institutional intentionality—the Red List device has had an agency in all of this.

It is this blend of intended and unforeseen consequences that distinguishes a conservation device (actant) from a conservation tool, the latter being much more directly under the control of originators and users, such as reserve selection protocol or radio tracking. As a device, Red Lists are quite tightly constrained because the specialist knowledge needed to apply the criteria help anchor it within formal institutional structures. The same may not be the case for a newer generation of conservation devices being invented to build conservation's influence within corporations and markets. Take for example 'High Conservation Value Forest' (now HCV Areas) created in 1999 as an additional standard within the Forest Stewardship Council and intended as a tool to embed biodiversity conservation in forest management (see www.hcvnetwork.org). This device is 'travelling', and through its circulation appears to have a particular network-building agency. It is akin to what sociologists of science term 'intermediaries', namely texts and technical artefacts that allow networks to come into being through creating shape and consistency to social and/or organisational links that create a degree of longevity and size (Callon 1986). The HCVA device was instrumental in the formation of the 'Roundtable on Sustainable Palm Oil' and is doing something similar with soy—it is creating new constellations of relationships involving corporations, consultants, think tanks, and NGOs, but the extent, boundaries, the number of sub-constellations, and their make-up are unknown and perhaps even unknowable. The HCVA device may interact with certain network configurations to deliver outcomes which were neither intended nor desired, e.g., legitimating planned deforestation and reducing public scrutiny of corporate action. Moreover, though the HCVA criteria are quite new and still under discussion, it is becoming apparent that the complexity of network relationships within which they are now embedded makes it difficult to backtrack and redesign the device. The HCVA and other certification devices seem to have an agency that is performative rather than iterative, projective, or evaluative. By this we mean they are capable of co-producing informal constellations of relationships by their very existence.

Our third example is informed by the collective actor perspective. The Kerinci-Seblat Integrated Conservation and Development Project (ICDP) (1997–2001) involved a 35 million USD investment in a key Sumatran protected area. It sought to institute governance structures that would effectively protect the forest landscape and important biodiversity attributes, and improve the livelihood of local communities. The ICDP involved creating a partnership between the national park management unit and the nine district administrations coordinated by the World Bank, along with two central government ministries and was characterised by a strong involvement of expert consultant technical input. Its conservation legacy of three years of preparation and five years of implementation is limited (Wells *et al.* 1999).

The lens of collective actors offers a way to evaluate this failure and provides a framework for more effective intervention design. In the Kerinci-Seblat landscape, historical practices and norms of governing in remote areas had produced powerful actor-networks based around practices of extracting timber and allocating land titles. Three powerful 'collective actors' penetrated the village communities that were the focus of the ICDP's change strategy, namely the army, the police, and the local government. These assembled a quasi-legal network of timber extraction and processing—for example local government networks operated sawmills and leased out chain saws, army networks provided labour and security, and police networks semi-legalised the timber by issuing transport permits. Relationships within and between these collective actors were governed by clientelist norms and values. These were characterised by: 1) actors of unequal power and status; 2) reciprocity and loyalty, and 3) relationships that are specific to a setting, private, and loosely tied to public law or community norms (Brinkerhoff & Goldsmith 2004). For example, income accumulated from the licensing and processing of timber and its procurement for local government building projects is used to supplement the income of subordinates who reciprocate with loyalty. At the village level, clubs run by ex-soldiers for youth aspiring to enroll in the army offer a ready and willing labour force. The ICDP project which aimed to stop deforestation in return for simple livelihood alternatives (e.g., fish ponds, small-scale ecotourism) simultaneously challenged and unsettled these networks and offered nothing for the network beyond the village where power is located. Indeed, the ICDP project may have appeared as an actor competing with such village clubs for community loyalty through the instrument of community agreements linked to conservation grants. By failing to acknowledge, understand, and integrate with the networked nature of governance in the landscape, the ICDP project became an external collective actor and temporary annoyance in the area. An actor-network perspective reveals the need to pay careful attention to the specificity of context, including analysis of local actors and design of reciprocal arrangements when designing a new conservation intervention.

DISCUSSION

The examples and observations outlined above illustrate our point that actors in conservation are not just people and organisations but also collectives and non-humans such as animals, and categorisation and certification devices. A conservation actor might be defined as any entity (human or non-human) having the capacity, intentionally or otherwise, to affect conservation outcomes. From this perspective, conservation actors are entangled in networks sustained by relationships and are never alone in acting. The temporal engagement of actors produces agency which prompts, enables, or constrains forms of action leading to change in, or maintenance of, a status quo. The presence of non-human entities in a network contributes to the emergence of such agency, which is why conservation action cannot be thought of as a solely human endeavour. The Actor-Network Theory provides the crucial insight that non-humans have the capacity to act, and human action is with, and in relation to, non-humans. Furthermore, agency emerges from such relationships and prompts action, and as one actor assumes a specific form, the forms of other actors/actants might change. For example, many conservation NGOs have become more bureaucratic in character since partnering with inter-governmental development bodies.

We believe that this more expansive notion of actors (animals, devices, collectives) can supplement rather than substitute or displace the importance of traditional actors (individuals, institutions) in conservation. We are aware that ANT conceptions of actor-networks could be unmanageably inclusive, with little guidance to suggest what the extent of a network is and who or what is acting therein. However, our view is that different actors have varying importance in conservation networks, and that mapping out key human and non-human actors (including collective forms of both) will produce new forms of understanding that might open up new areas of conservation research and practice.

Our case studies exemplify the possibilities. Mapping the generative relationships that elephants have with the people sharing the same landscape would expose the role of individual elephants and move conservation biology form a population/landscape model towards a multi-scalar model of elephant conservation, that simultaneously embraces the local-level relationships that are imbued with emotion, memory, and learning, that shape the success, or otherwise, of conservation interventions. Such broader conceptualisations of elephants and other species as conservation actors/actants prompts the type of thinking (conjecture, if you like) necessary to question current practices, and prompt other conservation visions, for example a more diffused integrated landscape approach in the case of elephants. More fundamentally, it prompts us to see target species not as animals that can be directly managed, but as creatures with an agency of their own that can influence or subvert conservation efforts.

It is vital that conservation biologists understand how their scientific products act. Our Red List and HCVA examples suggest that research on the actant role of conservation devices and frameworks will produce new insights on how conservation is carried out, thereby promoting greater reflexivity and accountability in the field. For instance, we suggest the need for some sort of 'actant assessment' prior to the release of new conservation categorisation and planning schemes involving inputs from political scientists and sociologists, and perhaps including proposals for how these scientific products should be governed. Finally, our Kernici Seblat ICDP example suggests that conservationists may be more successful in bringing about effective on-the-ground change, by recognising local collective actors and more carefully locating themselves in relation to these networks.

In conclusion, we recognise that this exploration of 'What is a conservation actor?' risks clumping diverse associations and entities in conservation into one single 'actor' category. As one of the anonymous reviewers of this paper rightly pointed out, it might detract from the individual purchase and specificity these associations entail. However, by examining conservation actors it is not our intention to generalise the many scenarios of conservation action or to resort to an ontological monism. Rather, our goal is to stimulate thinking and reflection on conservation interventions and outcomes by prompting conservation biologists to become more aware of who or what has the capacity to act and affect change. We believe this exploration enhances efforts to address the repeated calls for a more interdisciplinary conservation science that improves interventions to understand the state of nature and thwart declines in global biodiversity loss. Further, it draws attention to the spheres of conservation activity that might require stronger oversight and governance. In short, injecting a wider conception of actors and agency into the conservation community might lead to more enlightened management and policy, and help conservation adapt and transform to the challenges of accelerated social, political, and environmental change. This is because it opens up new avenues of analysis on how conservation—as a science, practice, and/or cultural movement—builds, sustains, or loses its influence.

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