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Conservation without nature: the trouble with *in situ* versus *ex situ* conservation

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ABSTRACT

Although understudied in academia and mostly unheard of by the general public, the *in situ/ex situ* dichotomy has shaped—and still very much shapes—the development of the nature conservation movement and its institutional alliances in the last few decades. Latin for "in" and "out" of place, the *in/ex situ* dichotomy often stands for the seemingly less scientific dichotomy between wild nature and captivity. Drawing on ethnographic engagements with zoo professionals and wildlife managers, this article explores the evolution of the *in situ/ex situ* dyad in nature conservation, which traverses the worlds of dead and live matter, artificilia and naturalia, and the seemingly disconnected institutions of museums and zoos, game parks, and nature reserves. Drawing on animal and relational geography, the article suggests that the assumptions underlying the *in situ* versus *ex situ* divide in conservation are anachronistic, romantic, and unsustainable and that they are incompatible with ideas of naturecultures and multinatures and with non-traditional perceptions of space. Eventually, this grounded study of conservation discourses and practices highlights the possibility of conservation management without nature.

> What is it that we want? Much of what conservation biology must do is confused by notions of animal "wildness" and "freedom," and even by the belief of a few that when a species' historical home is altered, that species is no longer worthy of interest.
> William Conway, in Ballou et al. Population Management for Survival or Recovery, xix

> Strange as it may sound, the idea of nature is getting in the way of properly ecological forms of culture, philosophy, politics, and art.
> Timothy Morton, Ecology without Nature, 1

Although understudied by historians of science and mostly unheard of by the general public, the *in/ex situ* terminology has shaped—and still very much shapes—the development of the nature conservation movement and its various alliances and goals. One of the most important legal texts of the conservation movement to date, the 2002 Convention on Biological Diversity (CBD), defines "In-situ conservation" as "the conservation of ecosystems and *natural* habitats and the maintenance and recovery of viable populations of species *in their natural surroundings*" (my emphasis). The term "Ex-situ conservation" is defined in the same text as "the conservation of components of biological diversity *outside their natural habitats*" (my emphasis). The International Union for the Conservation of Nature—one of the leading conservation organizations operating in the world today—adds that, "*Ex situ* collections include whole plant or animal collections, zoological parks and botanic gardens, wildlife research facilities, and germplasm collections of wild and domesticated taxa" (IUCN, 2002).

Latin for "in" and "out" of place ("*situ*"), the *in situ/ex situ* dichotomy in discourses of nature conservation often stands for the nature/captivity dichotomy. On one end, *in situ* is defined as on-site conservation in a wild nature, while on the other end, *ex situ* is off-site, unnatural, or captive conservation. This definition embodies and naturalizes a few central assumptions: (a) that such wild nature actually exists; (b) that conservation in and of wild nature is always "in" place, while any other form of conservation

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is "out" of place; and (c) that "in" is normatively preferable to "out." Put differently, to use *in situ* and *ex situ* in the context of nature conservation is to assume that such exclusive and neat categories and spaces of "in" and "out" are, and should be, the driving forces of conservation. Indeed, traditional conservation narratives rest upon this schism between *in* and *ex situ* space. Without it, it seems difficult, if not impossible, for many to imagine what conservation could mean.

This article draws on more than fifty in-depth, semi-structured interviews with prominent conservationists from the zoo world and from wildlife organizations, identified through a snowball sampling method (Biernacki and Waldorf, 1981). I began this project by re-interviewing a few contacts that I had already established in my previous study of zoos (Braverman, 2012b) and gradually expanded the circle of interviewees through contacting conservationists whom these initial people knew and suggested would be relevant to my project. This sampling is not random; quite the contrary, most of my interviewees have one foot in the *in situ* world and the other foot in the *ex situ* world–and have personally experienced some of the tensions and integrative processes that they describe (for a more detailed depiction of this project's methodology see Braverman, 2014).

Quoting just a fraction of my interviews, this article will expose, explore, and critique the underlying assumptions of *in situ* versus *ex situ* conservation. I shall argue that the *in situ*/*ex situ* dichotomy in nature conservation should be challenged on similar grounds as the broader nature/culture, or nature/society, schism (Cronon, 1996; Hinchcliffe, 2007; Latour, 1993). In particular, I will suggest that this terminology conveys a perception of wild nature that is anachronistic and romantic and that such views are incompatible with emerging critical understandings of naturecultures (Haraway, 2008) and multinatures (Latour, 2004, 2011; Lorimer, 2012), which question the simplistic division between wilderness and civilized culture by illuminating their interdependency and irrevocable fusion. In the current paradigm, *in situ* and *ex situ*—wild nature and captivity—are conjoined in a system of meanings and symbols. Without a wild, free, and pristine nature (*in situ*), captivity (and *ex situ* conservation) is meaningless; without the notion of captivity, nature as the very opposite of captivity cannot exist. I will claim that such a bifurcated and essentialist view of nature and captivity does not account for the many *situs*, or sites, of human-affected natures.

The idea that pristine nature will have to wither away in an ecological state of human society is not new (Morton, 2007: 1; Latour, 2004), nor is it a novel claim that our definition of nature will have to alter considerably to move away from notions of the pristine to include human natures (Castree, 2005; Cronon, 1996; Marris, 2011). Nonetheless, this idea has received renewed attention in the form of the debate over renaming the current geological epoch as the Anthropocene (Szerszynski, 2012; Latour, 2010; Lorimer, 2012). I would like to expand this idea into the realm of conservation biology—namely, to replace the discourse of nativity and indigineity with explorations of viability, vitality and relationality that are self-reflective about the ethical and political issues at stake. In essence, I am proposing conservation without nature, in the traditional sense of this word at least (Braun, 2006; Lorimer, 2012).

Such explorations will not be new to the readers of this journal. Indeed, the site (or location) of conservation practices and philosophies is a topic that is geographic at its core. In particular, animal geographers have been very active in the area of human–wildlife studies. One of the main strands in this area has been to challenge consisting frameworks for approaching wildlife management. In "Living Roods and Brownfield Wildlife," for example, Jamie Lorimer employs a range of conceptual resources from relational geography, a tradition that is quite relevant for this project. "Broadly speaking," Lorimer writes, "relational geography understands identities such as 'nature' and 'society', or 'the urban' and 'the rural' as fluid, complex, and emergent from situated interactions and interconnections, rather than as fixed as immutable essences" (2008: 2046). My view of nature focuses, similarly, on preserving *processes* rather than idealized nature and wild bodies. In other words, it promotes an understanding of conservation that moves away from purity and toward hybridity, in the rich and variant ways already explored by hybrid geography (Whatmore, 2002). Such hybridity not only relates to animal bodies, but also to regions and places. "No longer is conservation to be directed only at purified regions far removed from centres of civilisation" (Lorimer, 2008: 2056). Many of the spaces and bodies discussed in this article are, similarly, hybrid by nature. This hybridity paves the way for a shift in focus toward dynamic human-nonhuman assemblages. Such assemblages are similarly championed in the animal geography literature by Christopher Bear and Sally Eden in their work on marine fishery certification and the movements of "transient populations" across management borders (Bear and Eden, 2008), and in David Lulka's work on the attempts to curb the movement of bison bodies by Yellowstone National Park (Lulka, 2004). Like Lorimer, Whatmore, Lulka, and Bear and Eden, my work recognizes that there is a certain open-ended and anthropogenic nature to human–nonhuman assemblages, which stands in contrast with the rigid categories of habitat/site/range with which conservationists often conceive their world. Bruce Braun remarks similarly that landscapes should be understood as open-ended, rather than as closed and natural, and that conservation must be directed at "the possibilities and consequences of a 'new earth' and 'new humanity' that is still to come" (Braun, 2006: 219).

By problematizing the bifurcation of nature and human, wild and captive animals, and *in situ* and *ex situ* conservation, this article supports "an anthropology that is not just confined to the human but is concerned with the effects of our entanglements with other kinds of living selves" (Kohn, 2007: 4). Recent scholarship in "multispecies ethnography" (Kirksey and Helmreich, 2010) argues, similarly, for a fresh understanding of the material entanglements of humans with organisms that are not simply windows (or mirrors) into the symbolic concerns of humans but are rather themselves vital subjects who must be *lived with*, similar to "companion species" (Haraway, 2003) or "unloved others" (Rose and van Dooren, 2011).

This article will begin by exploring the meaning of the *in situ*/*ex situ* terminology in different disciplinary contexts. Next, it will explore the evolution of the *in situ*/*ex situ* dyad in nature conservation. This genealogical account will travel in between the worlds of dead and live matter, *artificilia* and *naturalia*, and between the seemingly unconnected museum and zoo institutions. It will then move to focus on the uses of the terminology in the *ex situ* context of zoos, illustrating the various models that have evolved from the realization of the important interconnections, indeed the impossibility of a categorical divide, between *in situ* and *ex situ* conservation.

1. *In Situ*/*Ex Situ*: an intra-disciplinary genealogy

The terms *in situ* and *ex situ* are used in an overwhelming variety of disciplinary contexts. In art, *in situ* refers to a work made specifically for a host site, or one that takes into account the site in which it is installed or exhibited, also referred to as "site-specific" art. In computer science, an *in situ* operation is one that occurs without interrupting the normal state of a system. For example, an *in situ* upgrade would allow an operating system or application to be upgraded while the system was still running. Under public international law, *in situ* refers to a government with effective control over a certain territory, in contrast to an exiled government. And in architecture *in situ* refers to construction that is carried out at a building site using raw materials, and is contrasted with prefabricated construction, whereby building components are