



# THINKING HUMAN ENVIRONMENTAL LEARNING FROM AN INTERSPECIES PERSPECTIVE

## CURRENT RESEARCH IN THE HESCOR PROJECT

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### INTRODUCTION

HESCOR (Human and Earth System Coupled Research) is a multidisciplinary cross-faculty initiative at the University of Cologne, Germany, that investigates past human and Earth system interactions with the aim of creating new models of human cultural evolution. The project integrates natural and social sciences and humanities perspectives across ten working packages in a broad collaborative effort. In grappling with the impact of human activity in the Earth system, one specific challenge pursued by HESCOR lies in conceptualizing the role of human learning in general and human environmental learning in particular. This poster presents the first results of this subproject. We suggest that human environmental learning in the past and deep past frequently involved learning from and with other species in specific environmental contexts, an underappreciated angle on human-environment relations that points to a broader more-than-human relationality as a key feature of the anthroposphere.

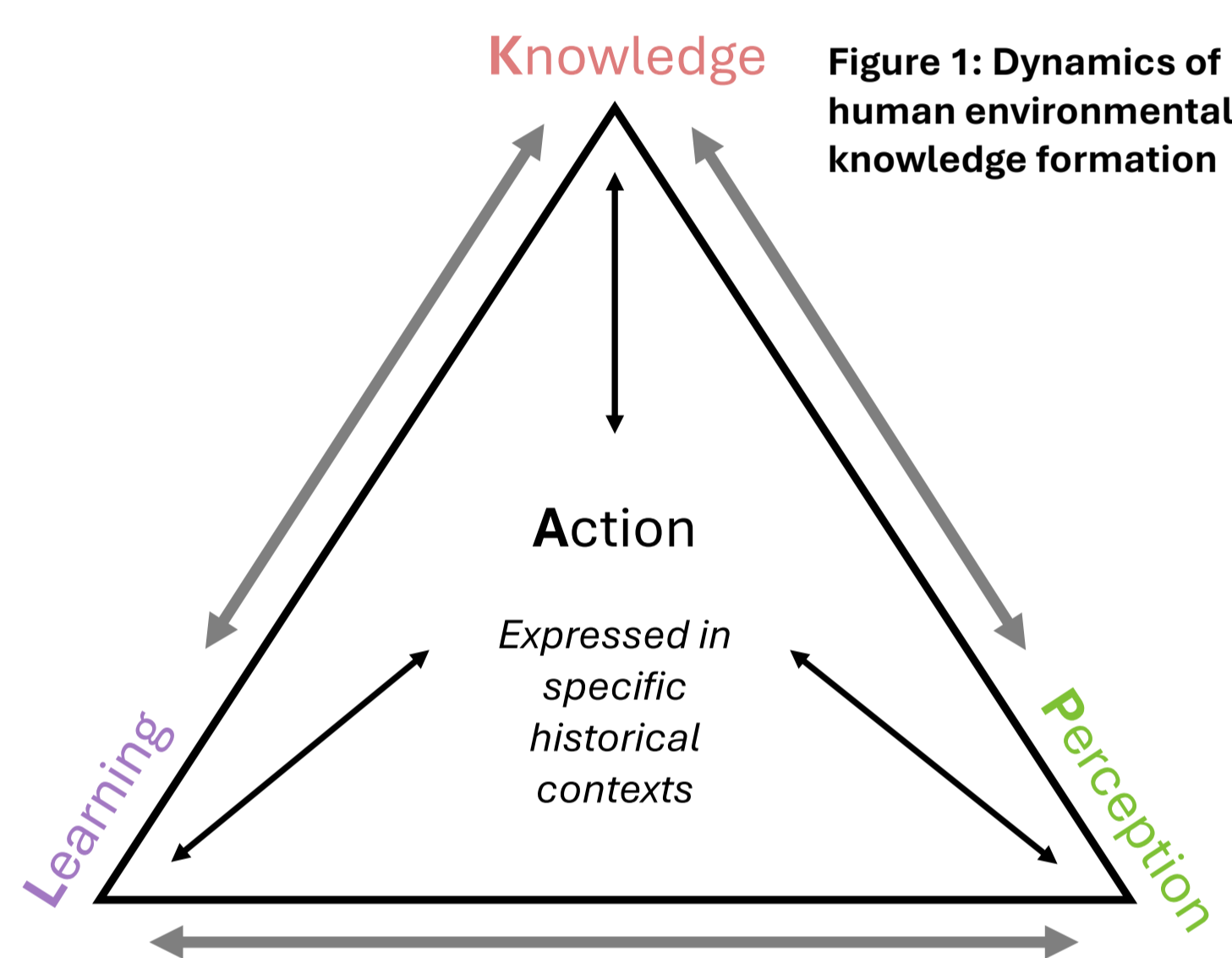
### ENVIRONMENTAL KNOWLEDGE

Environmental Knowledge (EK) can be defined as a body of actionable knowledge pertaining to specific human-environment configurations. We understand EK as embodied and enacted by variously configured collectives in a way that upends a strict separation between knowing and doing while also emphasizing the importance of communities of practice over individual subjects as knowledge-makers.<sup>1</sup> Rather than theoretical or propositional, EK is a form of culturally-mediated experiential knowledge that is produced, and must prove itself, under situated conditions of practice. It is always *of and about* something, and it evolves as humans respond to, negotiate, and modify the affordance landscapes that shape their modes of existence and inhabitation in specific environments.<sup>2</sup> Environmental Learning (EL), a specific type of cultural learning, describes the processes involved in EK generation, acquisition, and transmission (intra- and intergenerational and oblique) within and between cultural collectives. Like other types of cultural learning, it has a generative and creative aspect and is not reducible to a set of (predetermined) responses to deficiencies or challenges. Most importantly, EL is shaped by the dynamic interplay between existing cultural frameworks and environmental characteristics and is thus necessarily defined by a degree of receptivity to forms of nonhuman agency, including those of other organisms who are themselves embedded in complex webs of “persistence.”<sup>3</sup>

### THE KNOWLEDGE-PERCEPTION-LEARNING NEXUS

EK and EL are about actionability, and this is especially true in the encounter with unfamiliar environments or the adaptation to environments defamiliarized through

significant and potentially rapid environmental change (e.g. the disruption of Indigenous social-ecological systems by European domesticates in settler colonial contexts). We conceptualize EK formation in terms of an action-oriented knowledge-perception-learning nexus that shapes but is also shaped by lived ecological practices (Fig. 1). Like EL, environmental perception, too, is culturally-mediated rather than a passive and objective registration of sensory information. Both depend upon processes of “relevance realization” that are not fundamentally different from how other organisms explore and learn to orient themselves in the world.<sup>4</sup>



### ANIMAL-ORIENTED ENVIRONMENTAL LEARNING

Human learning is commonly understood as unparalleled in scope, potency, and evolutionary implications, having enabled humans to develop “cumulative culture”<sup>5</sup> based on sophisticated learning ecologies. This exceptionalist emphasis on human learning has led to a significant undervaluation of the more-than-human aspects of human learning processes, particularly with regard to the active and longstanding role of animals – adept learners in their own right – as “knowledge partners”<sup>6</sup> in the evolution of human thought. The many zoomorphisms that permeate human cultures across time and space may be linked to broader systems of interspecies knowledge formation facilitated by “pluripresent” multispecies communities that sometimes involve complex kinship and sharing ecologies.<sup>7</sup> Our emphasis is on knowledge-making in terms of interspecies reciprocity rather than a notion of “knowing other creatures” where nonhuman alterity is reduced to an object at the disposal of a human knower. We propose a heuristic tripartite typology of animal-oriented environmental learning that involves three basic modalities – learning *through*, *from*, and *with* animals – with different levels of spatiotemporal and eco-behavioral integration (Fig. 2).

The first modality, learning-*through*, pertains to insights and inspirations gleaned from animal ways of being-in-the-world rather than knowledge generated through the direct observation of, or interaction with, animals as ecological agents. The animals here are thus symbolic rather than embodied – though a clear distinction between the two is possible only at a conceptual level – and often function as purveyors of cultural norms or moral lessons about the human place in the cosmos as well as associated roles and responsibilities. Such learning can certainly promote (ethical) aspirations of becoming other based on a receptive engagement with zooalterity but at least in the mainstream of western thought has often reduced animals to interchangeable “ciphers”<sup>8</sup> and served to reaffirm notions of human sovereignty – whether conceived in terms of dominion or stewardship – over nature and animal life. Learning-through is thus somewhat set apart from the other two modalities, which involve animals as embodied beings with behavioral specificities and embedded in specific sets of ecological relations, presenting us with cases that more clearly underline the more-than-human aspect of human environmental learning in terms of agentiality, directionality, and the parties involved.

### LEARNING FROM OTHER ANIMALS

Learning-*from* occurs when people look to animals as sources of environmental information or as behavioral “exemplars” for developing skills and tools necessary or useful in particular environmental contexts. Learning-*from* mobilizes specific animal capacities, behaviors, and perceptive registers through strategies like mimesis, imitation, or re-enactment, typically requiring some form of transfer or translation. Numerous cases from various bodies of Traditional Ecological Knowledge and European folklore can be counted as examples. This includes animal self-medication, a phenomenon observable in a diversity of species – from honeybees to spider monkeys – that has spawned its own area of multidisciplinary study, zoopharmacognosy (“animal knowledge of medicine”) and demonstrates that people have long turned to animals to develop medicinal knowledge about the uses of plants to treat illness, repel parasites, neutralize poisons, or heal wounds.<sup>9</sup> Another example exists in the form of animal-mediated traditional tracking practices that help people navigate the environment, find specific locales (such as water holes), access particular animal and vegetal resources, and overall shape landscape perception and conceptualization in significant ways.<sup>10</sup>

### LEARNING WITH OTHER ANIMALS

It is the third modality of learning-*with* that we are particularly interested in, not least due to its potential implications for multi- and interspecies conviviality in

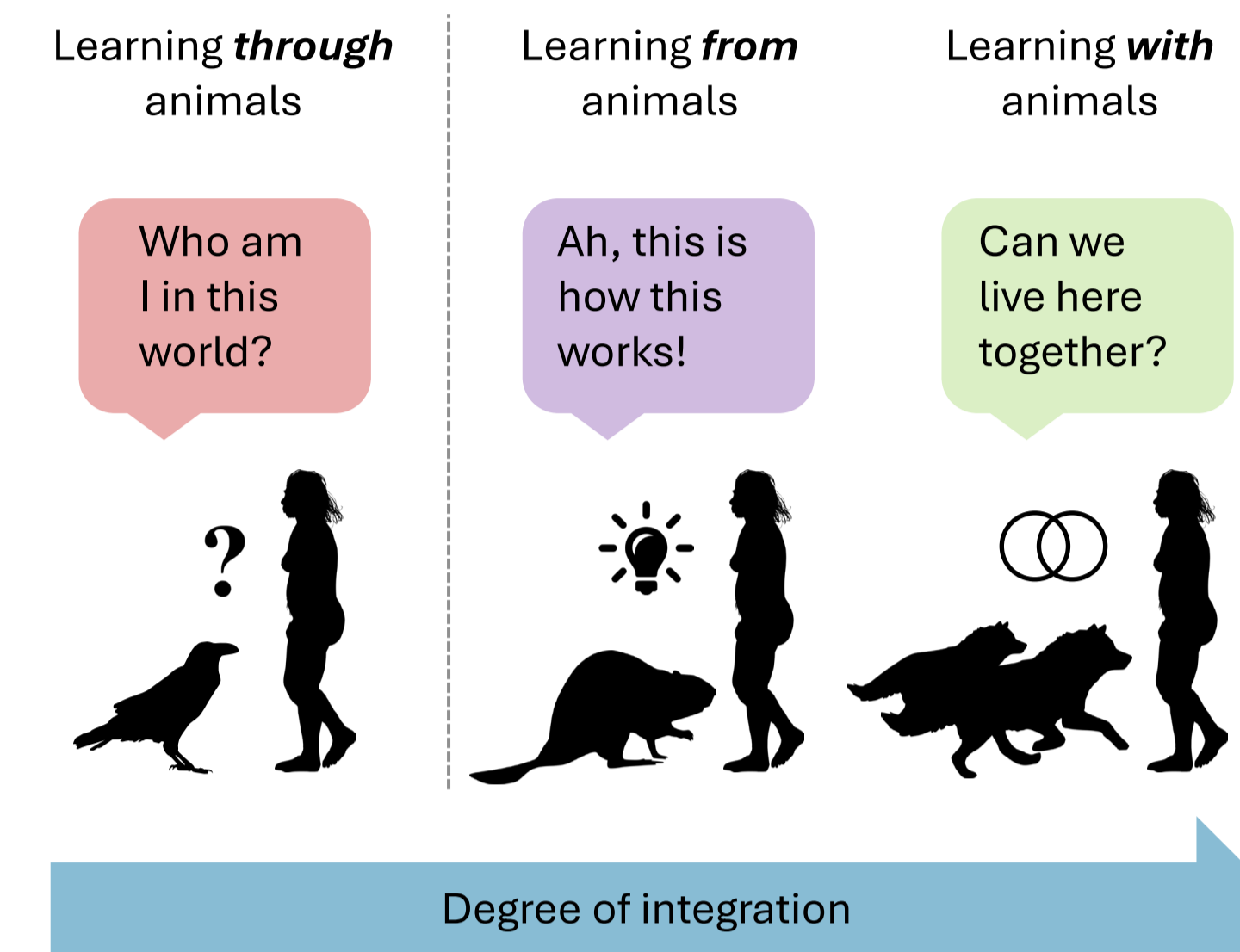


Figure 2: Animal-oriented types of human environmental learning

the Anthropocene. While learning-*from* refers to processes of one- or two-directional transfer with a more or less clearly identifiable beginning and end, learning-*with* focuses on long-term interspecies *lifeways*, thus designating a broader set of conditions in which human environmental knowledge and agency are formed within human-animal co-ecologies. Learning-*with*, in other words, is typically bound to modes of “dwelling”<sup>11</sup> and includes landscape sharing in different forms and degrees with potential openings for significant animal neighborhoods. Relevant examples include long-term feedbacks between early human settlement and synanthropic species that fostered particular animal-oriented material cultures and lifeways.<sup>12</sup> Dorset-polar bear relations grounded in the emulation of the bears’ seal-hunting practices that resulted in the development of a pervasive bear-oriented cultural logics and architecture,<sup>13</sup> or ungulate-mediated encounters with and foraging affordances of weedy plants harvested and later cultivated by humans in different places of the world.<sup>14</sup> One specific form of learning-*with* of increasing relevance for present and future interspecies relations on an imperiled planet is learning *to live with* other animals – specifically those who are unwanted and/or considered too “dangerous” to coexist with. Contestations of “human” space and patterns of land use on the part of apex predators like wolves or grizzly bears but also less formidable creatures like prairie dogs have frequently resulted in exterminatory violence rather than attempts at compromise, accommodation, and coadaptation.<sup>15</sup> Beyond questions of practical implementation, learning-*to-live-with* requires not only a conscious break with entrenched (especially, but not exclusively, European or European-derived) notions of human sovereignty, in which even non-existential human interests have often trumped the most basic

existential interests of other animals, but also a shift from myopically conflict-centered paradigms of human-wildlife relations to a culture of multispecies conviviality.<sup>16</sup> Some current examples of human-wildlife coexistence, often tied to conversation efforts, demonstrate that this is not merely a theoretical or programmatic perspective. The Ata Modo people in what today is Komodo National Park, Indonesia, have learned to coexist with Komodo dragons by drawing upon longstanding Indigenous knowledge about the behaviors of the large monitor lizards, including feeding patterns and territorial needs, which facilitates conflict minimization.<sup>17</sup> The Warli people of Maharashtra, India, provide another example in the form of their centuries-long coexistence with leopards. The Warli institution of Waghoba, centered on the worship of an eponymous big cat deity, combines spiritual beliefs and environmental knowledge with a set of cultural norms geared towards maintaining interspecies coexistence in a shared landscape.<sup>18</sup>

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