

**Jakob von Uexküll beyond bubbles: On Umwelt and biophilosophy**

FRANKLIN GINN

*Institute of Geography, University of Edinburgh*

*A Foray into the Worlds of Animals and Humans with A Theory of Meaning*, by Jakob von Uexküll, Minneapolis: University of Minnesota Press, 2010, 272 pp., \$25.00

Who cares about other species? How can we know other creatures, their worlds, their wants or even desires? And what is the relationship between knowing and caring? Such questions have been animating the ‘multispecies’ turn in the critical social sciences and humanities for some time. Now, as we enter the Anthropocene – a geological epoch shaped by human activity on a planetary scale – the looming threat of a sixth great extinction event gives these ‘animal questions’ heightened urgency. For how long will we be able to turn to our fellow companions and think with them, about them or for them, before their worlds shrink and they vanish from the Earth?

Critics often implicate Enlightenment thought – resolutely reductionist, wilfully utilitarian, caught up with the drive for progress – in the objectification and suffering of animals. Of course, we could construct an equally plausible genealogy of thought in which the nonhuman was never equated to unthinking matter. Such a history might run from Lucretius to Spinoza to Deleuze (Bennett 2010). Certainly, the little-known Estonian thinker, Jakob von Uexküll (1864-1944), deserves a place on any roll call of thinkers who have treated animals as more than machines. Uexküll’s life passion was to observe and describe the lives of sea anemones, spiders, flies, humans, slime moulds, oak trees, tics and other creatures. He adventured in the worlds of organisms. He wrote prolifically; he speculated wildly. Uexküll appears at once as ‘naturalist and biologist shaman’, as the introduction to this book – a new translation of two of his key essays written in 1934 and 1940 – puts it.

Uexküll’s central thesis – organisms are subjects interpreting their life worlds, not mechanical objects reacting to external forces – is now canonical in a wide range of fields, from biosemiotics (Hoffmeyer, 2008) to animal studies (Haraway 2008) to biophilosophy (Bennett 2010). Indeed, the recent *Cambridge Declaration* confirmed much of what Uexküll suspected when it concluded that ‘humans are not unique in possessing the neurological substrates that generate consciousness’ (2012, 2). Little wonder then that he has been re-invented as a founder and ‘pioneering biophilosopher’ (as he is billed on the back cover of *A Foray*). This essay reflects on his reinvention. In particular, I want to take issue with the way Uexküll’s most well-known concept, Umwelt, often stands in for his work as a whole. I will suggest that Uexküll only helps us with questions about the worlds of humans and animals if we take up the full ontological and ethical implications of his rich scientific vision.

Born in Estonia, Uexküll studied zoology in Heidelberg, where he was profoundly affected by the German intellectual response to Darwinism. Although Uexküll was no anti-evolutionary thinker he disdained the grey, mechanical, random world implied by natural selection. In *A Foray*, for instance, he labels evolutionary ‘progress’ as ‘really, after all, only a petty bourgeois speculation on the increasing utility of business’ (Uexküll, 2010, 195). Ultimately, however, Uexküll was less interested in critiquing Darwinism than exploring his

own form of biology. Uexküll's leitmotif is *Umwelt*, translated as 'life world', 'experience world' or 'environment'. According to this concept each organism inhabits its own distinct perceptual universe, or *Umwelt*, and acts not according to a blind stimulus-response but actively interprets signs appropriate to it. In the acting, organisms bring their world into being. *Umwelt* therefore breaks down distinctions between the creature and its environment.

*A Foray* bursts with evocative examples. As the reader will notice, Uexküll does not gravitate towards charismatic mega-fauna or familiar mammals. Rather, his most feted star is the humble tick. From the 'enormous world surrounding the tick, three stimuli glow like signal lights in the darkness,' he writes (2010, 51). The tick hangs patiently on a branch-tip, ready to drop on a mammal moving past. Then, first, the tick's olfactory organ registers the butyric acid of a mammal's skin. The tick then drops and a tactile organ takes over, navigating the hairy body (the second stimulus), until a temperature organ senses warmth (the third stimulus) – a bare patch of skin – which leads to the tick drilling for blood (2010, 178). The tick has a very narrow scope for action. Uexküll writes that the 'whole rich world surrounding the tick is constricted and transformed into an impoverished structure that ... consists only of three features ... However, the poverty of this environment is needful for the certainty of action, and certainty is more important than riches' (2010, 51). Thus the tick lives in an *Umwelt* entirely appropriate to it – it is a 'faultless composition' (Uexküll, 2001, 120).

Traces of Uexküll's 'onto-ethology' run through twentieth century thought on 'life', from Heidegger, through Merleau Ponty, to Deleuze, and beyond (Buchanan, 2008). There is, however, something ironic about the apotheosis of Uexküll as a 'pioneering biophilosopher': Uexküll himself was deeply uninterested in 'vertical' descent and heritage. He cared more about contemporary horizons, worlds assembled from multiple bubbles of perception and response. A wonderfully poignant afterword insists on the need to historicise Uexküll – to grasp the *Umwelt* of *Umwelt*. Geoffrey Winthrop-Young (who writes the afterword) places Uexküll amid a Romantic dilemma – the growing ability to describe interior subjectivity comes at the cost of the growing inability to communicate it with others. As each creature lives alone in its own 'bubble', so too does Uexküll. His writings are permeated with a longing, a sense of struggle that he has important things to say but is not being listened to (2010, 217). One reason is that Uexküll's genre-defying style, which even today appeals as much to the naturalist as the biologist, struggled to colonise a suitable niche. Uexküll's work was also epistemologically out of step with its time. Early twentieth-century behaviourism, its knowledge based on objective observation, was the orthodox way of understanding animals as automata reacting to their environments. Uexküll was a meticulous observer, yes, but also an ethologist (the term was invented after his death) who believed that animals did more than merely react: he wagered that they had an internal life. This took him into the realm of speculation, for he lacked, for example, the capacities of present-day biosemiotics to explain inter-species communication (Hoffmeyer, 2008).

Unfortunately, current scholars often take up the concept of *Umwelt* alone, and when detached from Uexküll's grander vision *Umwelt* becomes a restrictive thing. There is, as my discussion thus far should suggest, something very isolating about *Umwelt*. We may be lying on the same lawn, but the grasshopper and I inhabit mutually unintelligible worlds. Following the logic of *Umwelt*, each creature lives cocooned in its own perceptual bubble. Uexküll offers us the example of an oak tree: it is timber to the forester; home to a scary gnome in a little girl's imagination; a hunting perch to an owl; a birthing chamber for a bark beetle, and so on (2010, 126-132). The oak tree is both one subject with an *Umwelt* and also an object in many other creatures' *Umwelten*. Each of these *Umwelten* 'cuts out of the oak a certain

piece'. While this could be chaotic, it actually coheres in the oak, a 'subject that is solidly put together in itself, which carries and shelters all environments [Umwelten] – one which is never known by all the subjects of these environments and never knowable for them' (2010, 132). The oak tree, even if multiple and divisible into many different worlds, still coheres as one. Yet there remains an impermeable membrane between all subjects, a bubble which surrounds and separates each organism from another. Not one world but many worlds, each of them co-constituted by the organism and its Umwelt, each alone in their own spatially and temporally specific universe. Umwelt, then, represents not life but 'life's imprisonment' (Buchanan, 2008, 6, after Deleuze).

This is a partial reading of Uexküll. We must follow him beyond bubbles, for Uexküll insists that every organism spins out beyond itself into a wider mesh of existence, and thus is never alone. Firstly, Uexküll insists that meaning is crucial to all beings. All creatures, even microorganisms, interpret perceptual signs in their universe, rather than entering into any direct relationship with an object. The stray dog, for example, doesn't react to the rock, but rather to the rock thrown to scare it off – to the flying rock's meaning, in other words. Uexküll prefigures arguments that nature is semiotic all the way down and all the way back. He paints pictures of a vast, complex pulsating network of communication (and equally vast, slow, quiet, unintelligible exchanges, like humpback whale-song reverberating through the ocean) (Deely 2004). Life worlds are therefore part of a web of meaning strung out between other organisms.

More fundamentally for Uexküll, all 'living beings have their origin in a duet' (2001, 118) – and this duet goes beyond material and semiotic relation. He implores us to observe not just coupling and relation, but the invisible 'relation structure'. An example may clarify this. In spinning its web, Uexküll tells us, the spider has to be 'fly like': the threads must meet the power of the fly's body moving through the air; the web must fit the fly's body size and shape; the threads must be thin enough to elude the fly's vision. Crucially, the spider weaves its web before it meets a physical fly. The web represents not a relationship with a physical fly, but with the 'primal image' [*Urbild*] of the fly (2010, 158-159). The key point here is that something of the other is part of every organism: 'to be fly-like means that the spider has taken up certain elements of the fly in its constitution' (2010, 190).

This move from ethology to speculative ontology is crucial to Uexküll's vision, because – although he does not elaborate on this – it involves an ethical charge that Umwelt alone lacks. For if being is always to be given over to the other, then no subject can be self-sufficient or autonomous. Thus, the organism is always more than itself and its meaning – it is making connections, overflowing itself. A relational ethic arises from this virtual duet between organisms, since once we recognise our prior ontological entanglement, that we are always already given over to the other, care and concern for the other becomes at the same time care and concern for our own possibilities of being (Butler 2004). Umwelt should not be understood simply as a scientific theory, but as part of a reciprocal ethic.

Uexküll also proposes that nature operates through musical metaphors of harmony, symphony and tone. Uexküll identifies many levels of music. Within the 'organism-symphony' Uexküll hears the chimes of cells, the rhythms of metabolism, and the 'melody' of organs; beyond he registers not only harmony between organisms but also the harmonic 'composition' of nature (Buchanan, 2006, 26-27). Many commentators are put off by such obscure language and theistic overtones (e.g. Shaw et al, 2013). But Uexküll's use of 'harmony' does not imply some eternally repetitive enactment, the same drama over and

over, nor a world without violence, pain and suffering. This ‘harmony’ is not the kind where lion and lamb lie down together, but the kind which leads the spider to ‘annihilate the fly’ (2010, 158). While harmony emerges between organisms, there is plenty of room for discord, interference and death.

For Uexküll, composing follows a plan: across the keys of the great klavier of life (another musical metaphor) a guiding hand plays, moving us through the ‘world-drama’ (2010, 196). It is not God playing the piano, however. ‘Forever unknowable’, he writes, ‘behind all of the worlds it produces, the subject – Nature – conceals itself’ (2010, 135). Is this Uexküll at his least palatable? He seems to raise Nature to an ultimate authority, always veiled, sensed but dimly through our Umwelt bubbles. But no – for Uexküll describes nature as a ‘composer who listens to his [*sic*] own works played on an instrument of his own construction’ (1992, 281). For Uexküll, in modern terminology, nature can only be understood through emergence – a musically ‘patterned counterpointing of ... selected environments’ (Grosz, 2011, 22) – rather than through reduction to components and laws. Uexküll does not elaborate what kind of worlds nature composes; he leaves more questions than answers. Does composition, the making of worlds-in-common-but-separate represent some ethical principle? Is any way of composing ‘good’, or are some better than others? How do we judge between them? Such questions about composing a common world without recourse to universal authorities occupy contemporary thinkers such as Bruno Latour (2010), and are clearly indebted to Uexküll.

Uexküll was an adventurer in worlds: curious, sensitized, empathetic, but never effacing alterity. He did more than show how animals have a life-world: his scientific endeavour should also challenge us to conceive of our place on earth differently. Our own semiotic webs spread and pulse ever-faster; our human Umwelten cut pieces from more and more of the worlds of others for the tainted promise of capital and progress. This, for Uexküll, is not growth:

Blowing up our environmental space by millions of light-years does not lift us beyond ourselves, but what certainly does is the knowledge that, beyond our personal environment, the environments of our human and animal brethren are secured in all all-encompassing plan (2010, 200).

As should be clear from this review, nature’s plan is not set: it is yet to be written. Uexküll’s lasting gift was his curiosity about the diversity of worlds on Earth. But the richness in which Uexküll worked and observed, and which this book invites us to experience with him, is diminishing. And, from Uexküll, we know that that through this loss we, too, are diminished. That, not the cold prison of Umwelt, should be his legacy.

## References

- Bennett, J. (2010) *Vibrant Matter: A Political Ecology of Things* (Durham: Duke University Press).
- Buchanan, B. (2008) *Onto-ethologies: The Animal Environment of Uexküll, Heidegger, Merleau-Ponty and Deleuze* (New York: State University of New York Press).
- Butler, J. (2004) *Precarious Life: The Powers of Mourning and Violence* (London: Verso).

Deely, J. (2004) Semiotics and Jakob von Uexküll's concept of umwelt, *Sign Systems Studies*, 32(1/2), pp. 11–34.

Cambridge Declaration on Consciousness in Non-Human Animals (2012) *University of Cambridge*.

Grosz, E. (2011) *Chaos, Territory, Art: Deleuze and the Framing of the Earth* (New York: Columbia University Press).

Haraway, D. (2008) *When species meet* (Minneapolis: University of Minnesota Press).

Hoffmeyer, J. (2008) *Biosemiotics: an examination into the signs of life and the life of signs* (Scranton: University of Scranton Press).

Latour, B. (2010) An attempt at a 'compositionist manifesto', *New Literary History*, 41(3), pp. 471–490.

Shaw I, Jones, J and Butterworth, M. (2013) The mosquito's umwelt, or one monster's standpoint ontology, *Geoforum*, 48, pp. 260–267.

Uexküll, J. (2001) The new concept of umwelt: A link between science and the humanities, *Semiotica*, 134(1/4), pp. 111–123.

Uexküll, T. (1992) Introduction: The sign theory of Jakob von Uexküll, *Semiotica*, 89(4), pp. 279–315.