Afterword

A future for Jakob von Uexküll

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It may not seem like big news to readers of this book, but in a time when machine metaphors overwhelmingly dominate scientific and popular discourse, it comes as nothing short of a revelation to say that meaning is a relation between multiple processes involving emerging agencies and norms. To say that meaning is not a thing, a state, a series of algorithms, a content moved about in vehicles. That meaning is not, as functionalism would have it, a sort of well-packaged information that is processed by cognitive mechanisms in the brain. And, at the same time, to say that meaning is not a sort of magical *a priori* either, coming out of nowhere, casting a veil of significance on a meaningless world. These claims still sound radical within Western thinking. Researchers continue to pin meaning down to things, locations, mechanisms, models, and boxes as if a relation of significance between dynamic material processes could ever be assigned a whereabouts, a boundary, or be compartmentalized within the brain, realized somehow in neural events. "But meaning is not in the head!" many will protest today, and others have said this in different ways in the past, but Jakob von Uexküll said it in a particularly useful manner.

The task today is similar to the task in Uexküll's times, but also rather different. It still demands a critical questioning of dualistic ontologies and epistemologies that continue to nourish research in biology, psychology, neuroscience, AI, and robotics – the mechanistic worldview that schizophrenically wishes to explain the mind by remaining skeptical about its key components: meaning, autonomy, agency, and so on. Critical schools of thought have emerged that oppose these widespread views, and over the past two decades, they have moved beyond criticism and set themselves the task of building concrete positive alternative ways of thinking and doing research. I am talking about embodied perspectives that move scientific inquiry from an exclusive focus on brain mechanisms and their algorithmic counterparts, into situated living bodies, into their ecological surroundings, their enacted activity, history, and social world. These perspectives owe much to Uexküllian thinking and often acknowledge this debt explicitly.

Perhaps the question that remains open today – and this book contributes to its examination – is about Uexküll's place in the present context. It is certainly the case that his ideas are useful and profound and can continue to shape research in enactive, ecological, and embodied approaches to life and mind. But, as we would

expect, they do so not simply as canonical transpositions of his œuvre into the 21st century with the occasional terminological update. Things have changed not only within science (new discoveries, new methods, new technologies, and new theories) but outside science too (different social and political climate, different communication and information technologies, an advanced economic and ecological crisis of global magnitude). We are faced therefore with the task of assessing and adapting not necessarily all aspects of Uexküll's ideas but perhaps the ones that speak most directly to our urgent needs and current concerns, maybe even discarding some original elements, or changing the accent of meaning into something new, something contemporaneous. All of this is to be done in the spirit that the best recognition of genius is when someone's ideas keep evolving by their own momentum.

The contemporary accents we need to emphasize to continue to transform the scientific understanding of life and mind are at the radical end of the Uexküllian corpus, not at the conservative end, the one Uexküll himself was sometimes more outspoken about. The movement of the ideas themselves, rather than their letter, will give us the richest Uexküllian heritage, the one we need in our time.

Consider the claim that it is in the nature of all life to be "surrounded." That such is, in fact, part of its essence. Nonliving objects, by contrast, are located in place, encircled by relations around them. But objects are relatively resilient to being moved from one environment to another. For organisms, things are not so easy. Living organisms take place "within surroundings," that is, through relations that orient their activity and existence; take place as in "happen," also as in "claim a stake" in the here and now. Organisms are ongoing happenings; organisms claim their place.

From a *non*relational perspective, this sounds odd and unintuitive. We are used, since Aristotle, to finding essences in things themselves once we divest them from contingent particulars. We think of essence as immanent. Even artifacts that are built for a purpose, things that have a wherefore as their reason for being, can be said to be what they are by virtue of how they are put together, to have a mode of existence all by themselves and not relative to their surroundings. Assuming this tacit epistemology, we claim to be able to ascertain essential and inessential properties by mere observation, following a classical logic of necessity and sufficiency, and by linguistic inquiries into the grammar of the words we use to talk about things.

Yet, organisms are networks of relations between "themselves" and their surroundings. Moreover, they are time-extended, self-individuating, and autonomous, thus projecting relations of significance onto their world by enacting the norms they themselves live by. A living organism is grasped inadequately by our perceptions as being this or that anatomical body. Bodies are concrete assemblages of self-sustaining material flows and therefore what counts as essential cannot be an abstract idea we formulate simply by projecting our own views into their existence and their worlds. This entails that perceiving living organisms differs from perceiving nonliving objects, and yet, historically, we have found difficulties in articulating this difference despite many voices remarking on it.

The difference is flatly ignored and living bodies are treated just as any other machine.

We must acknowledge the fact that organisms build worlds different from ours, and we must devise epistemologies that take us closer to understanding these worlds, since the epistemology by which we approach nonliving objects is systematically misleading. This is a Uexküllian heritage we must cherish today.

Uexküll's theory of meaning and his concept of the *Umwelt* help a lot in furthering relational perspectives, new ontologies, and new scientific thinking, that give due justice to living (co)existence in fragile surroundings. What we should question in this legacy are the vestiges of idealism and conservative appeals to the apparent harmony of the living world.

In contraposing harmony to "mindless materiality," as he understands it, Uexküll does us an important service, provided we are careful not to take him too much at face value. We cannot deny the complex web of coherent relations both within and between organisms. Nor can we explain this complexity only as a result of blind mechanisms that fixate accidental changes. But we must also see that "harmony," if and when it is the case, is precarious, conflictive, and always changing. Partial harmonies are at best temporary achievements, modes of existence unwarranted by the very forces that bring them into being, challenged "internally" by these forces and not only by the external "mindless" forces of entropy and decay. If the spider is fly-shaped, this harmony should not hide the conflict that brings it into being. The untrapped fly teases the spider's hunger; the trapped fly is killed by it. In a dialectical view, an *Umwelt* does not entirely coincide with itself. It is self-contradictory as well as unified; its partial harmonies revealed precisely only against the background of inherent contradiction. *Umwelten* have open horizons. This is why things change and evolve. This is why life is, at all scales, both metastable form and perpetual transformation.

This means that, while we must avoid the flattening out of the biological and psychological worlds into a series of mechanisms, we must also be cautious with the theme of the harmony of the world. The harmony metaphor is in its own way a flattening out of biological and psychological phenomena if we understand harmony as a primordial state of mutually counterpunctual relations of meaning ("the spider is fly-like"). Here, what is excluded, to repeat, are the precarious conditions and the ongoing, effortful processes by which meaning is achieved whatever the timescale, whether evolutionary, developmental, or behavioral. This is not a mere addendum but a fundamental condition that warrants the introduction of relations of meaning in a materialist ontology. For it is the ongoing risk and precarious conditions that tend to *dis*harmony and the dissipation of metastable relations that drive the ongoing struggle for sense-making. Otherwise, meaning would be superfluous; it would all boil down to letting self-organizing systems relax into their ultimate attractor states. Nothing would even need to be achieved by living beings – a game with no stakes.

The ongoing individuation, the "constitutive unfinishedness" of the living condition is what makes an *Umwelt* meaningful for organisms in ways that a network of relations is not meaningful "for" nonliving objects whose ongoing existence

is not at stake. Lacks and surpluses make relational processes meaningful, but for needs and excesses to exist objectively, it is necessary for material self-individuation to be in place and for vital norms to emerge in processes of organic life, sensorimotor agency, interpersonal relations, and collective history.

The ghost of the harmonious world is the idea that tempts us with guidance for our actions and beliefs in the face of ongoing degradation, be this manifested as the current environmental and political crises or at the "simple" level of the needy creature in search of food and shelter where none is to be found. Also, in the ever-present risk of illness and death. "If only we could steer our activity toward this presumed Ur-harmony of the natural world ...". In spite of beautiful musical metaphors, this haunting harmony is only a normative abstraction, a conservative idea. It makes us think of degrading and conflictive conditions as anomalous simply because they challenge the apparent norms of harmony. It blinds us to the way these "negative" trends are as much the means as the test of life.

It is true that the nonrelational epistemologies of meaninglessness – scientism, with its mechanicisms, functionalisms, representationalisms, and so forth – justify themselves in adopting a "no-nonsense" metaphysics of the spiritless void as the starting point of all scientific inquiry. They do so precisely by looking at the evidence of conflictive and disharmonious nature all too closely. They see in this evidence the indifference of the world. But this view is also abstract. Its error lies in missing the whole by taking only one of its contradictory moments simply because it serves to make a moral point. Scientism is gleefully stoical; it attaches a moral superiority to the "realistic" attitude of confronting meaninglessness the way "rational adults" (read: white male adults) must while ignoring the evidence of living experience that stares them in the face. Scientism does not really pay heed to concrete materiality and its self-renewing, active, and vibrant nature. It is "materialist" in name only. Uexküll is right to point to dynamic *Gestalt* forms of meaning as the evidence that scientism is keen to ignore (or downplay to the status of accidents or illusions).

However, rejecting scientism, we insist, does not necessarily demand a return to a conservative all-encompassing harmony. On the contrary, it is by pushing Uexküllian thought to new frontiers, looking at the agencies entailed in the perspectivism of *Umwelten*, at the precarious, not only time-extended but also time-limited processes of self-organization, at the internal and external conflicts inherent in the living condition, at the struggle and ongoing transformations taking place at all scales, that we can conceive of meaning not as unattained perfection, but as thriving processes of fragile and vulnerable life. It is by these operations that meaning can be finally naturalized, not as a harmonious exception to the assumed random patterns in nature but as the struggling activities of living beings. These activities become meaningful by the very enacting of the organic, sensorimotor, and social normativities they bring forth as the condition for sustaining their precarious and challenged existence.

The future of Uexküll is open and exciting, although probably also riddled with conflicts and contradictions. One of the most active and innovative strands of embodied cognition in the 21st century is the enactive approach, which predicates

the relation between agents and worlds in terms of participation and enactments. We bring forth the world together with other creatures. Uexküll anticipates this idea when he discusses the intertwined relation between perception and action, which he nevertheless still sees as conceptually distinct. But is not this joint bringing forth of a world at the same time a dissolution of the static, bubblelike concept of the *Umwelt*? By giving this idea an inherent temporality, a sense of praxis, achievement, and risk, in other words, by grounding the concept of sense-making in the temporal and material tensions of life, enaction tells us that the *Umwelt* is always in the making, that it may not yet entirely surround us, that its potentialities are always in the process of being collectively realized. This anticipation drives our actions. In this sense, to act is always simultaneously to act both within an *Umwelt* and outside it, insofar as material actions galvanize the forces that consciously or unconsciously can and often do change our worlds. Perception/action/emotion, sense-making in general, are therefore liminal concepts; they reaffirm a world by the very fact that they risk changing it. They occur both within a world and at its limits. Living creatures and *Umwelten* are a codefined conceptual pair, very much like the notion of a boundary and the notion of crossing it.

Perhaps the idea of harmonious *Umwelten* is less able to offer us comfort in the 21st century. In the face of the irrecoverable damage we inflict on the planet that hosts us and the limit situations we drive ourselves into through social weathering and outright violence, our epoch looms more dangerous even than the decades in which Uexküll worked. The patterns that recur from that violent era are so much more amplified and so much more destructive and powerful today. We must urgently recover a progressive idea of the *Umwelt* but not as a refuge, not as a conservative move, but as a tool for action. For this, we must always understand it dynamically and dialectically, perhaps in ways Uexküll himself might have disagreed with in the 1930s but maybe, who knows, might have found it acceptable were he alive today witnessing the world with which we have surrounded ourselves.