

"It's a tiny, insignificant little blob of jelly. And amazing, indeed fantastic though it is, there are good reasons to suppose that it was a creature like this that gave rise to a line which led not only to the fish, but through them to the amphibians, reptiles, mammals, and man."

-David Attenborough, *Life on Earth*

I. The Notochord

The origin within: the earliest continuous filament of bilateral symmetry, the spatial determinant of a spinal axis and frontal orientation. The notochord, thought to have originally arisen from a doubly-ported marine invertebrate, a molluscine progenitor with the novel ability to patch a section of its substrate *through* itself such that the body pattern is given over to one degree of freedom. Interface with the environment thereby becomes directional for a lineage of larger multicellular organisms.

The notochord is a body pattern through which emerge the fish, the salamanders and frogs, reptiles and mammals, and the human. In embryonic development, the notochord remains the orientational structure through which the human biological animal emerges. It can be thought of as a proto-spine. Its earliest phenotype being simply "...bunches of muscles attached to a rod with sensory pits at the anterior."

The notochord is not an animal, nor was it itself ever an animal, though something very closely resembling it did at one time populate the shallow seas. It cannot be thought of as vestigial, in the way the muscles which articulate our ears no longer

provide any discernible behavioral advantage. Its role in comprising our system cannot be reduced to the category of the organs. The coordinates of its presence seem to be the point-infinity of our spatial center and temporal origin.

The adaptive distinction of the spine is in its enabling directional motility, such that the individual may comport itself through its substrate in an internally directed manner. As adaptively advantaged by the spine, motility is the condition of possibility for environment to reveal itself as *environmental*; 'substrate' thereby becoming 'discoverable' in its signaling, summing to a background of significance. At this moment there emerges an 'open' which, having originated mechanistically in the body pattern as an added degree of freedom, now provides the place wherein the animal may enter the world and the world may enter the animal, setting the *a priori* condition for possibility of intentionality.

As discoverable through its signaling, environment becomes intelligible. The environment, however, exists before its intelligibility to any mode of behavioral captivation. Captivation is selected-for, in a sense *created* by the robustness of environment *as resource* for the biological animal and successionaly, for the behavioral animal. Environment *as intelligibility* becomes the very possibility of being-in-the-world. It is through the entry of environment into the body *as signal* that intentionality can exist.

2. The Anthropocene:

The distinction between the animal and the human animal may be understood to

correlate to the distinction between 'environment' and 'world.' For the animal, environment remains concealed except in its issuance of signals, which in their being spatially arrayed and inter-relatable, captivate the animal. In its captivation, the animal does not experience environment *as environment*, but as the responding of physiological receptors which have been selected-for by the signaling of the external presence of resources.

For the human animal, the environment is discoverable *as something*. But its recognition is first of the presence of world as perceptually having-been registered through receptive capacities of the body, which precede the human animal in the same way the existence of environment necessarily precedes any awareness of it or any comportment within it. In this way, the possibility of 'world' is the same as the possibility for the biological human to be a locus of awareness, afforded by its physiological and cognitive registers.

The very physical material of the human biological animal is formed matter, the form of which has been exactly determined by environment: the pressures of its biotic and abiotic signaling. The awareness the human animal has of its environment is caused by the environment revealing itself *to* itself. As the human registers the intelligibility of what is dis-concealed, 'world' comes into existence. Its existence is a state of information which the human understands to be changeable.

Through active engagement with the information states of its world, the human initiates an expanding and autonomously generative process wherein world comes continually into being. As physically manifest, worlds obtaining from changes in information-state imprint themselves into the environment. Here is the moment when environment, having entered the human, is entered into by the human with the

a priori absolute determinacy of the notochord. Through the increasing degrees of freedom afforded to it by the disconcealment of world, the proto-spine jumps states, revealing itself at the vast scale of infrastructure. The scale of the individual becomes the scale of the world. We call this the Anthropocene.

3. *Draba*

“Draba asks, and gets, but scant allowance of warmth and comfort; it subsists on the leavings of unwanted time and space. Botany books give it two or three lines, but never a plate or portrait. Sand too poor and sun too weak for bigger, better blooms are good enough for Draba. After all, it is no spring flower, but only a postscript to a hope.

“Draba plucks no heartstrings. Its perfume, if there is any, is lost in the gusty winds. Its color is plain white. Its leaves wear a sensible wooly coat. Nothing eats it; it is too small. No poets sing of it. Some botanist once gave it a Latin name, and then forgot it. Altogether it is of no importance—just a small creature that does a small job quickly and well.”

—Aldo Leopold, *A Sand County Almanac*

When encountering *Draba* with hand lens and on bended knee, what is revealed to the individual is world, and what is revealed to environment is its mirror image. Here is a drab, lowly organism. Its relevance to the world of human perception and knowledge is at the very least that it is possible to be. It inhabits the most undesirable places and subsists discretely, presencing life in a poetically inconspicuous way. Its scale and characteristics are as close as it is possible to be to the edge of awareness and still read as distinct. This is an impoverished being thriving on the poverty of its environment.

In such a thing, the environment can be seen to have fostered hope in its least amount.

The possibility for the environment to reveal itself to itself creates the opening into which the world of the human expands. In the moment of encounter, in the scanning and seeing, traversing and dreaming out into un-recoverable distances and impossible-to-grasp smallness, the beholding, the making intelligible, legible, the inversion takes place such that as we stand alongside it, it reflects itself, doubling itself in the apparatus of being observed.