THE LIVELINESS OF NATURE: EARLY IONIANS AND A COMPREHENSIVE NATURALISM

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Naturalism abhors discontinuities. There can be no separations between body and mind, subject and object, life and non-life, or "the divine" and nature, to mention only a few of the traditional philosophical trouble spots. John Dewey proposed a "postulate of continuity" that precludes "complete breaks or gaps" in nature and rejects anything supernatural or extra-natural.[1] Current naturalism takes its lead from science and prefers to maintain continuity through a version of materialism now usually called "physicalism." Mind is reducible to physical body or at least to an epiphenomenon thereof. Life is explainable in terms of chemical processes that need not be considered alive, even inside a living body. Of course there have been philosophers who rejected such a restrictive view. An alternative philosophical strategy for maintaining continuity is to read the characteristics of life or mind into inanimate nature, giving us the various panpsychist or hylozoist philosophies. Most scientifically inclined naturalists are not comfortable with such approaches and reject them wholesale.

Although I am a died-in-the-wool naturalist who is averse to supernaturalism and generally not in favor of panpsychist or hylozoist views, I am also a naturalist of the Deweyan sort who is deeply dissatisfied with how contemporary naturalism has used science as its only source for a metaphysics. Equating naturalism with physicalism has been a mistake. There is some kernel of truth in panpsychist and hylozoist views that find something of life throughout nature. There is an idea here that needs to be included in any naturalism that aims to be comprehensive. To discover what this kernel is we need to rethink the problems of life and matter from the beginning—from the beginning of philosophy, that is. The early Ionians provide clues to how we might rethink nature. Of course we cannot simply accept their philosophies as they stand, since they are rooted firmly in their times and their fragmentary remains require a great deal of speculative interpretation. However, we can find suggestions that point toward a naturalism that emphasizes continuity and that can incorporate notions of soul, life, and the divine throughout nature. These clues have been for the most part quietly forgotten ever since Parmenides and Plato insisted that true Being is unchanging.

The early Ionians were interested in how things came to be the way they are. But when Parmenides declared that being cannot come from non-being and denied the possibility of coming-to-be in any form, he challenged the entire Ionian project. Subsequent Greek philosophers of nature accepted his basic tenant and proposed a plurality of unchanging entities, plus a source of motion. Change is merely a rearrangement of what already exists. This same basic principle endures in the conservation laws of modern physics, and in the desire to explain the manifest complexity of experienced events in terms of universal mathematical laws. This has given us a so-called "naturalism" in which qualitative daily experience finds no home. In marked contrast, early Ionian philosophy finds in nature a truly generative principle. It is such a principle that needs to be incorporated into any naturalism that aspires to be fully comprehensive of nature and experience.

The early Ionians were philosophers of *phusis,* or nature. There have been various modern interpretations of this Greek word. Recently, Gerard Naddaf has reviewed these interpretations and concluded that the early Greek meaning of *phusis* includes, 1) the absolute *arche*, as both the primary constituent and the primary generator of all things, 2) the process of growth, and 3) the outcome, product, or result of this process. "In brief, it means the whole process of the growth of a thing, from its birth or commencement to its maturity."[2] Naddaf points out the kinship of this view of *phusis* with the theories of medicine current at the time.[3] To understand and treat a disease, the physician must know its origins and development. Knowing the origins was and still is an important part of understanding the nature of a disease. The processes that originated the disease are still functioning to make it what it is. The early Ionians took the same approach to understanding the *kosmos*. To know the nature of the *kosmos* or anything in it requires knowing the principles that originated and guided it since these are still functioning in its mature stage.

The Milesian interest in origins is continuous with that of the earlier mythic cosmogonies. This interest, says Charles Kahn, "implicitly affirms the conviction on which the creation myths are based: that by discovering the original state of affairs, one may penetrate to the secret core of things.... Nature and Origin are combined into one single idea."[4] An originating *arche* for the Milesians—whether it is Thales' water, Anaximander's *to apeiron* ("the limitless"), Anaxemines' air, or Heraclitus' fire—is not just a one-time beginning. It is a principle of origination that continues to function during the growth and maturity of any being. When the early Ionians identified water, air, fire, or "the limitless" as an *arche*, they did not have in mind only a material out of which things are made. Rather, an *arche* is in all things as a principle *actively making* a thing what it is. The principle of origination is ongoing. The word "*arche*" comes from the verb "*archo,*" which means both "to begin", and "to command."[5] An *arche* originates in the sense of a governing, commanding and organizing principle. Aristotle says of Anaximander's *apeiron* that as an *arche* it "encompasses and steers (*kubernao*) all things."[6] In this sense, it commands and leads much as a military commander leads a group of warriors into battle, initiating the group's movement and maintaining its cohesion. The *arche* organizes the continuing development and cohesion of the mature being.

An *arche* must be self-moving. If it is dependent on an outside source for its movement, it is not a true *arche*. The ancient doxographies tell us that Anaximander's *apeiron* and Anaxemines' air were in eternal motion before other elements or principles emerged from them. Nothing was needed to set them in motion. Aristotle conjectured that Thales saw water as giving life to things.[7] Since life for the Greeks is closely associated with self-movement it would be reasonable for Thales to think that water has a principle of self-movement within it. These ideas seem quaint to us today, for we do not think of water or air as self-moving.[8] Science tells us that they move as a result of the planet's gravity or an outside source of heat. However, it seems we are able to consider fire as self-moving. Thales and Anaximander may have considered water or air to be self-moving just as we can consider fire to be so. As directly experienced, streams, waves and wind do give the impression of self-movement. There is no obvious external source of their motion. While today we do not think of any one of the Greek elements as an ultimate source of movement, we are able to view nature *as a whole* as self-moving. Science depends on this idea. But whereas modern science views motion as the movement of unchanging

entities through space according to fixed mechanical laws, the early Greeks had a more organic idea of motion that included origin, growth and development. It included genuine change and emergence.

Common to the movements of water, air and fire is their striking irregularity. This must have been obvious to the Greeks, as attested by Heraclitus reportedly saying that we cannot step into the same river twice. Though we might discern some patterns in the movements of clouds, flame, and mountain streams, there is always an irreducible irregularity that never seems to conform to the pattern. There is continual novelty, something completely new in every moment. Of course we could say that this novelty can be completely resolved into determinate and unchanging universal laws. On this account, the appearance of novelty is due to the extreme complexity of the processes involved. In other words, there is no genuine coming to be. This is the Parmenidean heritage. This certainly offers useful explanations from the point of view of science and technology. Science depends on this view to maintain its freedom from any external limits to its inquiries. This is all well and good. Nevertheless, there is no reason even from a strictly scientific perspective to hold on to such a view as an underlying ontology. It is only by a belief, or more like a faith, in the Parmenidean principle of non-generation that would lead us to maintain such an ontology. There is no a priori reason to assume that the irreducible novelty obvious at the scale of direct observation does not go all the way down to the smallest imaginable bits of nature. It may actually be more reasonable to assume that what is being studied with the hardware of physics is inextricably bound to that hardware. In that case, physics does not directly study the regularities of nature so much as it studies the functioning of its own machinery.

Charles Peirce concluded that there must be some element of spontaneity, originality, and freedom in nature, noting that even in the most carefully controlled experiments there is always something that is not law-like.[9] This irreducible novelty he called "Firstness." Firstness is that immediate quality in any situation that is "fresh and new, for if old it is second to its former state.... [It is] initiative, original, spontaneous and free; otherwise it is second to a determining cause."[10] Perhaps this quality of "freshness" and spontaneity in nature is what the early Ionians saw as a self-moving *arche*. It is spontaneous in the *American Heritage Dictionary* sense of "happening or arising without apparent external cause; self-generated."[11] It is also spontaneous in the sense of not following predetermined law. It moves when it wants, so to speak. It is spontaneity itself that is the *arche*, the principle of origination and self-movement. For the early Ionians, this principle was inseparable from a primordial substance that makes up all things as they are born, grow, and exist in their maturity. It would only be after Parmenides that philosophers posited a separate cause of movement, such as Empedocles' Love and Strife or Anaxagoras' *Nous*.

Truly spontaneous, the *arche* is undetermined and indeterminate. Which is to say, the *arche* is without form or limit. Each of the primordial elements of the early philosophers has the characteristic of formless flow. They are without definite form, yet they can take many forms. Aristotle claimed that the early "physicists" (primarily Anaximander) made the Unlimited a principle or source. Something, he said, must either have a source or be a source. "There cannot be a source of the infinite or limitless, for that would be a limit of it."[12] Therefore, the origin of limit must be something unlimited. Anaximander, with his

"*apeiron*," made explicit what is implicit in the other thinkers. It is the formlessness and spontaneity in the primordial element that provides its power as an *arche*. It is formless spontaneity that is the continuously originating principle of nature.

Out of the continuously functioning formless *arche* emerge the forms and stable principles of the *kosmos*. *Phusis* is not only *arche*, but also a principle of *genesis*—of generation, growth, and ordered development. The etymological root meaning of *phusis* is growth, the orderly development that we see in organisms. The *-sis* ending indicates the ordered world, "the (completed) realization of becoming."[13] But how does an ordered world grow out of formlessness? According to Pseudo-Plutarch's account of Anaximander, the hot and the cold were "separating off," *apokrinesthai*, from the unlimited. Naddaf suggests that since the predominant metaphors of the Ionians are organic, "secretion" is a better translation for *apokrinesthai*.[14] The hot and cold were "secreted" from the *apeiron* "like bark round a tree."[15] The metaphor of secretion is intriguing. The spontaneous movement of the *apeiron* secretes definite principles, just as the living tissues of a tree secrete bark, which then breaks away in distinct pieces. Form is a spontaneous secretion from the formless. The indefinite *arche* is without things; things are secreted out of "no-thingness."

The emergence of things out of no-thingness sounds very close to self-creation *ex nihilo*. This was deemed impossible by Parmenides and rejected by nearly all subsequent philosophy and by science. But this no-thingness is not an absolute absence. It is a restless and spontaneous movement. A movement of what? For Anaximander it was a movement of the limitless itself, a formless and generative movement without a definite substrate—irregular movement all the way down, if you will. Admittedly, this idea is at the horizon of intelligibility. But that is precisely the nature of an *arche*. The intelligible (i.e., the limited) must have its originating principle in something unintelligible or unlimited. This "unintelligible something" is not the absolute non-being denied by Parmenides. It is a positive generativity—generativity itself we might say. It generates all emergence and growth and is without form.

Spontaneous self-movement is, for the ancient Greeks, characteristic of life or soul (*psuche*). *Psuche* is the principle of self-movement within *phusis*. Wherever there is spontaneous self-movement there is soul. The apparent self-movement of water, air, and fire indicated to the early Ionians that these things were alive or "en-souled" in some way. According to F. M. Cornford, "For Thales the moving soul was the same as the ultimate element, recognized in water, which pervades all things."[16] Aristotle interprets Thales' "all things are full of gods" as meaning they are full of soul.[17] For Anaxemines air is ensouled. The root meaning of *psuche* is breath. When the animal body dies, it stops breathing as the *psuche* escapes the body in the last exhalation. The body loses its principle of self-movement and then disintegrates. *Psuche* as the living breath seemed to the Greeks to hold the body together as a governing and steering principle. It functions as an *arche*. Anaxemines saw the relationship of air to the *kosmos* to be the same as breath to the body. "As our soul,...being air, holds us together and controls us, so does wind [or breath] and air enclose the whole world."[18]

The early Ionians did not see *psuche* as a separable element in nature. It is integral to nature itself. Cornford insists that the meaning of *phusis* for the early Ionians "is nearer to

'life' than to 'matter'; it is quite as much 'moving' as 'material'—self-moving, because alive."[19] Soul and *phusis* "are not merely analogous, but identical."[20] The ideas of *phusis*, *arche*, and *psuche* thus converge as different aspects of one continuum involving growth and self-movement. *Psuche* is inseparable from the idea of *arche*. As self-moving, soul is the principle of origination and spontaneous creativity that is pervasive throughout nature.

The early Greek philosophers considered *phusis* to be divine, which is to say immortal. They eliminated personified gods from their cosmologies, but kept the idea of immortality in the sense of something everlasting. The spontaneous *arche* is an everlasting fount of creativity. Forms and stable features of nature come and go but the generation of form continues without end. It is also unborn. It is itself the process of continuous birth. Unborn and undying, it is eternal. This creative spontaneity is also omnipresent. It is found in every infinitesimally small bit of nature. It is omnipotent, the potential of all things. Need a naturalist call this generativity divine? Probably not, though the option is surely there. The difference between this notion of divinity and the traditional notion is that after Parmenides, form and completeness took priority over coming-to-be as the divine element in nature.

Naturalists may be willing to acknowledge that there is a genuine spontaneity or "freshness" in nature. But they are understandably reluctant to attribute *living* self-movement to non-organic nature. Yet non-organic nature is obviously involved in and is necessary for life. Moreover, an evolutionary view maintains that organic life emerged from an inorganic world. If we deny any sense of life and self-movement to inorganic processes, then where does the self-movement of living organisms come from? Is it some spark, some vital spirit added to inanimate materials from outside? A naturalistic position must reject such a vitalism. However, if the difference is not due to something extra that is added to organisms, then the spontaneous self-movement of life must be traced back to physical nature. So accustomed are we to the animate-inanimate divide that we lack a word to describe this continuity. Early Ionian thought suggests an alternative. We need not understand water, air or all of nature as being alive in the full sense that plants and animals are alive. Presumably the ancient Greeks could tell the difference between an organism and something non-organic. I will hazard a term: Physical nature is not alive in the full sense but it is nevertheless "lively." "*Psuche*" could be translated as "liveliness." By "lively," I mean nothing more than the spontaneous self-movement that pervades physical nature and is generative of form and order. The "spark" is already in physical nature.

But what, then, do organisms have that non-organic nature does not? They have an organized self-maintenance that manifests itself as responsiveness, reproduction, and organic development. If we saw a body of water resist evaporation, respond to threats, and search after sustenance, no doubt we would consider it fully alive. Water does not have these qualities. Nevertheless, we observe that it is "lively" in its movements and transformations. The spontaneous *arche* of physical nature still functions in living things, but in a more complex and organized way than it does in water, air, or fire. Life *is* that organization. It is the organization of liveliness. Questions about the emergence of life from non-life become questions about how the liveliness already found in physical nature becomes organized—along with nature's stable processes—into self-maintaining, living

cells. To answer these questions effectively, a genuine naturalism must take into account the lively spontaneous novelty—dare we say *psuche*—in both living and non-living nature.

Seeing all of nature as "lively" is not the same as reading organic traits into inanimate nature. It is simply acknowledging what is empirically obvious: Inanimate nature is a scene of spontaneous change and novelty. While science must ignore this liveliness in order to get its work done, a comprehensive naturalism cannot be so limited if it wants maintain its postulate of continuity. It must take account of the spontaneous and creative element in nature. Re-reading the Presocratics, we find this spontaneity as an unborn and undying originating principle of nature's own self-creation. We find there not only a continuity of animate and inanimate, but also of nature and the divine. A comprehensive naturalism indeed!

NOTES

1. John Dewey, *Logic: The Theory of Inquiry*. Published as *Later Works,1925-1953, vol 12:1938,* ed. Jo Anne Boydston, (Carbondale: Southern Illinois UP, 1986) 30.
2. Gerard Naddaf, *The Greek Concept of Nature* (Albany: SUNY P, 2005) 20.
3. Naddaf 20-28.
4. Charles Kahn, *Anaximander and the Origin of Greek Cosmology* (Indianapolis: Hackett Publishing, 1994) 202.
5. Naddaf 172. Also, H. G. Liddell and R. Scott, *A Greek-English Lexicon.* Oxford: Oxford UP, 1995.
6. Aristotle, *Physics* 3.4 203b12.
7. Aristotle *Metaphysics* 1.3 983b20.
8. Hippolytus *Refutations* 1,6,1-2. DK 12A11. *Refutations* 1,7,1. DK 12A9.
9. Charles S. Peirce, "One, Two, Three: Kantian Categories." *The Essential Peirce Vol. 1* (Bloomington: Indiana UP, 1992) 243.
10. Pierce, "A Guess at the Riddle," *The Essential Peirce Vol.1,* 248.
11. *American Heritage Dictionary of the English Language*, Fourth Edition, (Boston: Houghton Mifflin, 2000).
12. Aristotle, *Physics* 203b 4-9.
13. Naddaf, 11-12. Based on Emile Benveniste, *Noms D'Agents et Noms D'Action en Indo-European* (Paris: Klincksieck, 1948), 80.
14. Naddaf, 72.
15. Naddaf, 72. Psuedo-Plutarch, *Miscellanies* 2. DK 12A10.
16. F. M. Cornford, *From Religion To Philosophy: A Study in the Origins of Western Speculation* (Princeton: Princeton University Press, 1991), 132.
17. Aristotle, *De Anima* 1.5, 411a7.
18. Translation based on G. S. Kirk, J. E. Raven and M. Schofield, 158-159. (DK 13b2).
19. Cornford, 7.
20. Cornford, 131. Also 128.