The Asymmetry of Life in Gravity's Rainbow

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Thomas H. Schaub notes that "the experience of ambiguity in the reading of Pynchon is essential."[1] However, this is not necessarily the case for criticism of Pynchon's work. So, when Schaub makes a rather ambiguous statement concerning chemistry in dealing with Gravity's Rainbow, I feel that a minor debate about that statement should ensue. It is not that Schaub's statement is grossly in error as it stands, but the ambiguity of his phrasing leaves him open to criticism from the very field he is using to elucidate a pattern in Pynchon's novel.

Schaub's ambiguous statement is:

> Chemistry is the basis for molecular pluralism in Gravity's Rainbow. In the world of molecules distinctions between animal and mineral life disappear, just as the distinction between "life" and "death" is lost in the process of transmutation that joins them.[2]

When he says "distinctions between animal and mineral life disappear" he should, I think, say: "distinctions between the animal and the mineral worlds can be disregarded at the molecular level"--and this only in the case of the thermodynamic elitists who are seeking to create a corporate City-State in Gravity's Rainbow. In addition, a biologist would surely ask: what is "mineral life" anyway? Schaub is too ambiguous here because he fails to take into account the real differences which exist between the animal and mineral worlds (between the organic and the inorganic) at the molecular level. His use of "molecules" is, in fact, indiscriminatory, and a more precise distinction between the molecules which comprise organic things and inorganic things can be sought. I turn to Martin Gardner's The Ambidextrous Universe for that purpose.

Throughout his work, Gardner stresses the fact that the main distinction between organic and inorganic molecules lies in the amount of symmetry and asymmetry to be found amongst them. Inorganic substances contain equal, or almost equal, amounts of symmetry and

asymmetry:

> Whenever an asymmetric compound is found in nature, not as the result of a living process, it is always found in a racemic form; that is, in an equal mixture of left- and right-handed molecules. The reason is easy to understand. The forces of nature--gravity, inertia, and so on--have no bias for right or left. While the compound is being formed, laws of chance dictate that molecules of each handedness will be formed in equal amounts.[3]

Yet, due to the properties of Carbon, which is the basis for all organic molecules, this is not the case for non-mineral substances:

> Almost every compound found in living things is a stereo-isomer of single-handedness that twists polarized light in one direction or another.[4]

In fact, if amino acids, the subunits of the proteins which comprise all living things, are created artificially, not made by another living organism, they do not exhibit the characteristics of the amino acids found in living organisms:

> There are some twenty different varieties of amino acids, all but one (glycine) with an asymmetry of either right or left form. When an amino acid is synthesized in the laboratory it is a racemic mixture of both types of handedness, but in the proteins of living things (with only a few rare exceptions) it is always left-handed.[5]

Therefore, Schaub's statement concerning molecules is ambiguous, and the real issue here is: at the molecular level distinctions between animal life and minerals do exist.

The significance of this distinction to Pynchon's Gravity's Rainbow is clear. When he is dealing with the creation of plastic by such corporate giants as Shell, DuPont, and IG Farben, Pynchon is actually showing how organic molecules are converted into inorganic ones. Oil, the source of plastics, is comprised of the residue of simple forms of prehistoric life which have been transformed by geophysical processes.

These metamorphised molecules are further transformed by man into polymers and other hydrocarbons for use in industry. The organic carbon-hydrogen molecule becomes the inorganic hydrogen-carbon molecule of plastic. The corporate scientists are thus, in effect, radically blurring the distinction between life and death as they produce inert, non-biodegradable substances. Yet, although this is the main point here, as Schaub probably intends it, one cannot say that at the molecular level the distinction between the animal and the mineral "disappears."

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Notes

[1] Thomas H. Schaub, Pynchon: The Voice of Ambiguity (Urbana: Univ. of Illinois Press, 1981), ix.

[2] Schaub, 97.

[3] Martin Gardner, The Ambidextrous Universe: Mirror Asymmetry and Time-Reversed Worlds (1964; rpt. New York: Charles Scribner's Sons, 1979), 108.

[4] Gardner, 110.

[5] Gardner, 111.