Symmetric Relations

A scientific theory classifies phenomena based on a universal set of structural relationships. Experiments and theories which deserve the name scientific thus share a coherent set of properties. First, they are *systematic*, meaning that phenomena as presented possess certain structural or virtual unities despite actual or potential diversities. A fully systematic theory is also complete in that nothing is *arbitrarily* left out of the universe of discourse.

Events, spaces and processes are presented as approximating a mode of relation which is in every case either symmetrical or complementary, and possibly even transitive (symmetrical and complementary.) Consider the relation between two inter-connected processes A and B. A symmetric relationship could be as follows: A exhibits behavior x when B exhibits behavior x, and A exhibits behavior y when B exhibits behavior y. Complementary relations, on the other hand, could be (for example): A exhibits x when B exhibits y, and A exhibits y when B exhibits x. Complementary relations are characterized by a disjoint or heterogeneous symmetry which distinguishes them from the smooth or homogenous symmetries of the first type of relation.

A transitive relation can describe phenomena which exhibit both types of behavior, but more specifically it can denote a relation which is itself both smooth and disjoint. For example, A exhibits x then y when B exhibits y then x, and vice versa (B exhibits x then y when A exhibits y then x.) Transitive relations have to do with time, or a convergence/divergence of a schematic series of symmetric or complementary relations.

Science, in short, reintroduces us to difference. By enframing difference genetically, we un-know the stasis and identity of the universe and our theories of it. Science places theories into self-destructive spirals, on the self-improving logic that the collapse of a theory tend to yield new and better theories (more universal, more symmetrical images of the universe's structure.) In fact, even in pure theory there is never absolute continuity: just like differential spaces, theories overlap or are disjoined. Modern science is the collective move away from a solid, structural metaphor towards a liquid, probabilistic metaphor. In a sense this shift is a recurrence (of world-images like Heraclitus' and Lucretius'); in some senses it is altogether original (like Mandelbrot, Thom and Varela).

Structure and Difference

The origin of the universe is a destruction of pure symmetry; the big bang begins with a point of spontaneous symmetry-breaking which disrupts an intense laminar flow. The symmetry of energy and space bring science into a complementary relationships with change and diversity: asymmetry and particularity become transitive points of departure towards a symmetric vision, a critical vision which burrows beneath surfaces towards liquid inner depths. Non-science explains as though the world were shaped by powerful external forces ('celestial mechanics') thus ensuring the ontological consistency of the theoretical discourse.

Science explains origins by symmetries and complementarities of forces, not by necessary laws but by dynamic structural unities and spontaneous differentiations (even of the very structure of space and time itself.) The laws of the universe are not called on to support my theory; rather the universe possesses such and such a symmetry group, a trans-relational structure, for which this law is a good approximation. The differentiable manifold of space-time presents these opportunities for the interactions of those forces, and so on. The question of structure always concerns the tiniest differences in intensity, the most minimal openings of interactive potentialities. Science produces theoretically the symmetry it actually describes. In the absence of a scientific framework, particular point-fluxes (atomic relations) become imperceptible.

Science actualizes the infinitesimal differences between old and new theories by splitting the universe into two distinct spaces: the (smooth) known situation and the (disjoint) unknown rhythm. Events are pure intensities and pure unknowns, they are qualified by possessing a new rhythm, they are not just echoes. Similarly, there are no simply punctual events, only process-flow brimming with imaginary point-events, each of which are processes in a continual state of becoming-known, that is, of breaking knowledge apart and reorganizing it. Events shift the very structure of reality, not just of theory. Nothing ever actually arrives at the blessed isle of knowledge, of pure symmetry. As soon as we believe we have achieved it, that we actually established eternal valuations and verities upon which to base our predictions, no sooner there emerges some spontaneous rhythm, some rare event, some declination which upsets our all-too-solid theoretical apparatus. Probability reigns: unexpected does not mean impossible. In a long enough timeframe it becomes certainty.

Symmetry and Thought

The transitive relation has to do with these ‘hyper-modern’ evental possibilities, that is, with reading the future points of convergence and resonance between disparate flows of intensity through a scientific analysis of the phenomena, by going out into the world and experimenting with it. The first and all scientific discoveries have this in common: that the self-organization of systems of flows and breaks is a consequence of fundamental symmetries of space and time. The universe is musical, moves in meter and with rhythm.

Irreversibility means that complexity can occur; and nothing is more complex than systematic decay brought about by new rhythms. The process process of decay decodes the encoding system, cuts it open and peers into it (perhaps even while it is still working,) and by doing so reveals hidden intensities and capabilities — as well as unforeseen lapses, blind spots and other weaknesses of the system. Science spirals down, into the world and the smallest possible differences. Science is informed by these differences; the diverse forms of theory mirrors the diverse forms of approaching, burrowing under, and going down into perceptual and conceptual reality.

The scientist vivisects the world and himself; they are not cadavers, but living and intelligent things, from which a vulgar secret must be coaxed. Not being ashamed of oneself, of one’s own material and social and psychic nature (whatever these may turn out in the end to have been!) is the first and most important requirement for the scientist. The scientist cannot be afraid of the answer he may recieve to the question which he asks. He must not restrict his questioning for any reasons but universal ones, particular laws are no laws at all. Thus the second characteristic we consider: any science which deserves the name will not declare the existence of universal laws, or arbitrary halting-places in the self-critical discourse. A symmetry is not a halting place but a multivalent puncture which convergences theoretical structures.

The only pure universal is symmetry; that is, finally there are no universal reasons to stop questioning at all, the depth of the unknown is limitless and we are unafraid, indeed joyous. The scientific will is not yet a creative will. This would be the final requirement of a real science: that it engage in the adaptive creation of structurally new cognitive processes, that it function as a dynamic and experimental agency producing innovation and illumination within space and time.