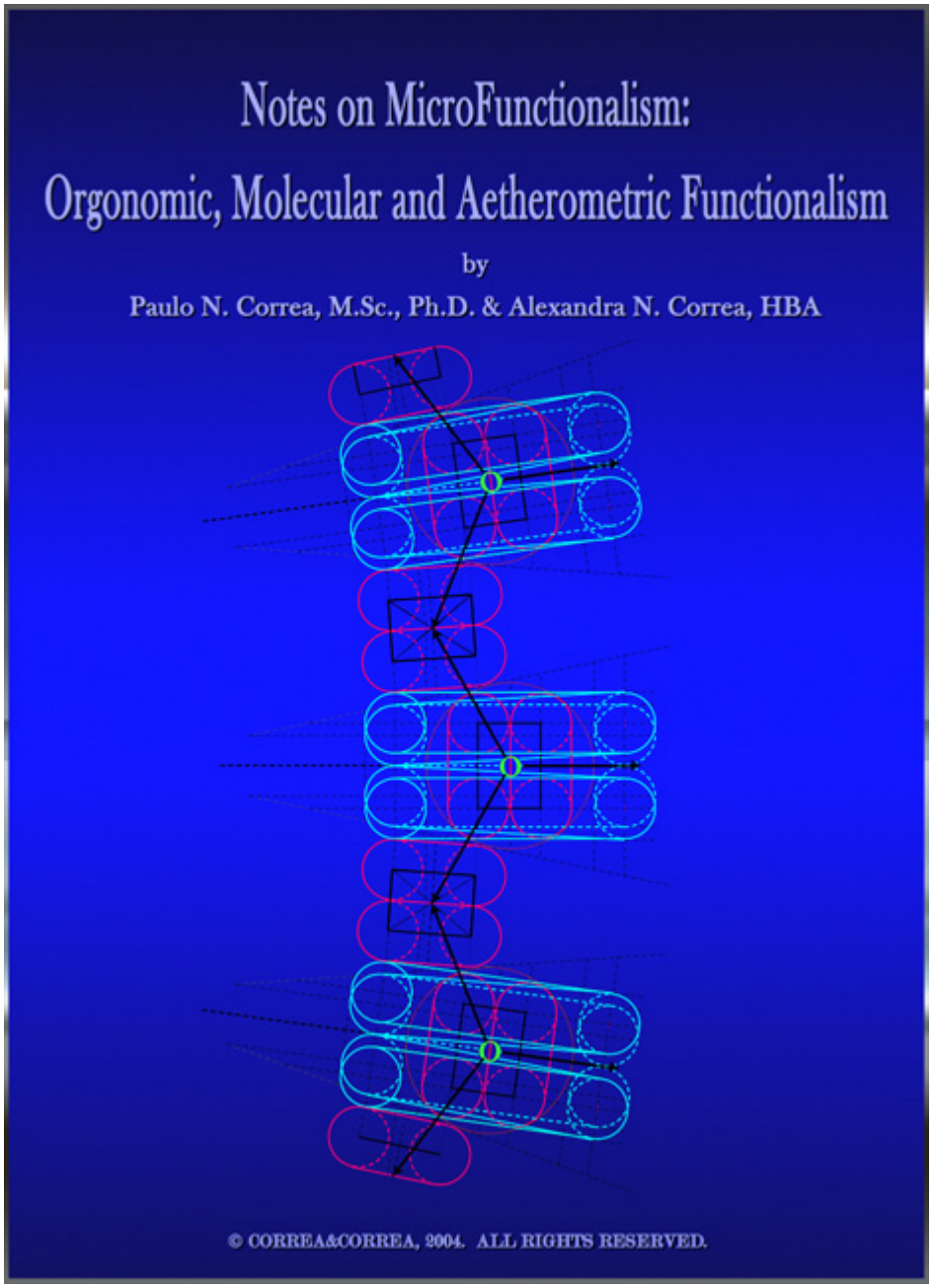


Notes on MicroFunctionalism: orgonomic, molecular and aetherometric functionalism

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Functionalism is, in general, taken to mean the principle that form or structure (conceptual, aesthetic, scientific, etc) follow, or should follow, function. A major part of the problem of functionalism resides in the determination of what is meant by function or functions. As we shall see, the functions acknowledged by molar functionalist theories are solely 'statistical' or 'molar functions' which are, after all, always exercises in Power. The remainder of the problem resides in the fact that only machines capable of forming themselves while functioning can create functional structures, ie forms that are one with their functions - which is the only sense in which structure can 'follow' function. But then, such machines only operate with microfunctions, not statistical or molar functions.

There are, accordingly, two distinct types of functionalist theories - those (microfunctionalist) that work because they tend to uncover microfunctions, and those ('molar functionalist') that are false because the functions they pursue are merely statistical or molar operations.

Orgonomic functionalism, molecular functionalism and aetherometric functionalism are all forms of microfunctionalism to the extent that they pursue the singular energy transformations of nature and, in particular, the self-regulating properties of living systems. From a microfunctionalist perspective, to function is to follow the flow of energy and a function is a creation, a principle of continuous creation - at once a connection productive of difference, an analytical disjunction and a new synthesis, a singular conjunction (a functional identity). Microfunctionalism is 'the elastic form of thought' (Reich) that pursues energy functions.

1. Molar functionalism

First, there are those theories which reduce concepts to mechanical 'functions', and make these into the criteria for all system operations. Variants of such approachs form together what Deleuze and Guattari have called molar functionalist theories. Molar functionalism in aesthetics led, for example, to the horrors of the Bauhaus/Gropius architecture - where the employment of Space is dictated by a an historically formed 'organismic structure' of the so-called biological and social functions, or 'needs', of human beings. Asger Jorn's 'Image and Form' (see "An architecture of Life", Potlacht #15, 1952) was perhaps the first and best criticism of (molar) functionalists - whose program he wanted to "transform" from within. For Jorn regarded utility and function as the departure point of any formal critique, but underlined how, besides practical uses based on 'social' and 'biological' needs, buildings had "an independent [micro]function", a psychological function through which every ambiance conditions a mode of living, feeling and thinking. This was the beginning of a political critique of 'molar functionalism' - for, indeed, one must ask: what are those social needs but political exercises, but operations of Power? And what are those 'biological necessities' but a certain usage of desire - but the representatives of a certain organismic structure, the rule of a Human Form (Castañeda)?

The fact is that no molar functionalism as such is possible - only political uses of purported 'molar functionalism' are possible. The problem with all molar machines, institutions, mechanisms (technical machines) or statistical ensembles is that they do not function, work or operate in the same way they are formed. By definition, all molar machines are statistical and mechanical machines. In what concerns formation of their structures or transformation of their form, none are autonomous. It is possible to entertain the notion that certain social machines (savage or even nomadic) were capable of self-regulation because of their autonomy, their direct sovereignty, but the functioning of their institutions remains distinct from their formation or alteration (transformation). All molar machines are mediated machines. Therefore, there can be no functionalism of molar machines, no organismic functionalism:

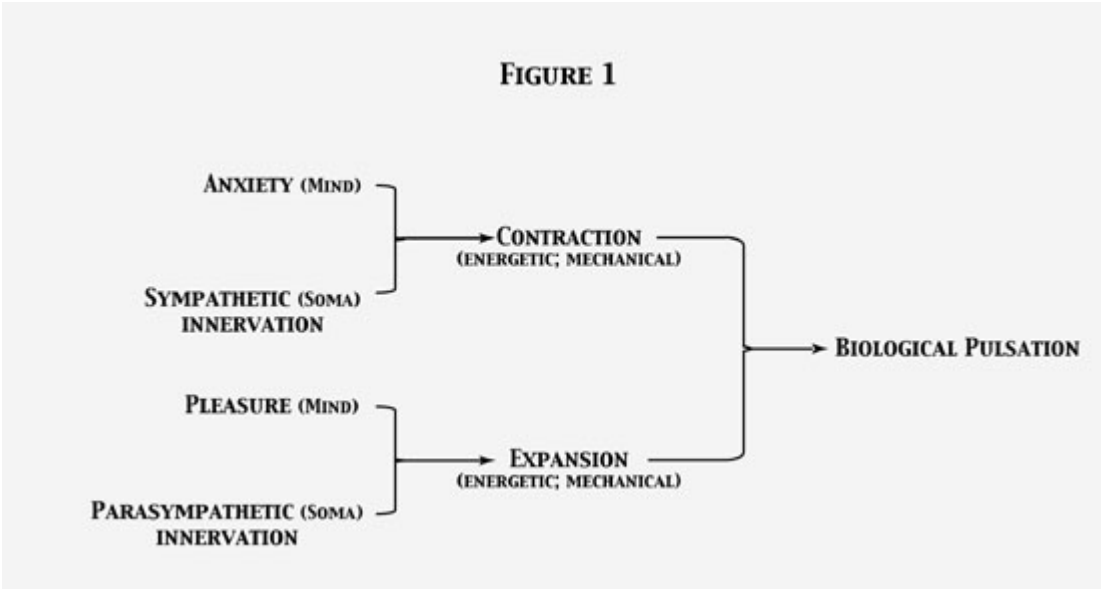
"All molar functionalism is false, since the organic or social machines are not formed in the same way they function, and the technical machines are not assembled in the same way they are used, but imply precisely the specific conditions that separate their own production from their distinct product." (Deleuze & Guattari, "Anti-Oedipus I", p. 288)

2. Microfunctionalist methodologies

2.1. Reich's orgonomic functionalism

The first microfunctionalist approach was that of W. Reich, begun at the end of his work on the Bions ("The dialectical materialist method of thinking and investigation") and later developed into orgonomic functionalism - when he abandoned the dialectical method and sought 'the element' of a relation between terms as a principle of continuous variation between paired differences. Orgonomic functionalism is, in effect, the outcome of Reich's criticism of both the dialectical and the positivist-scientific methods. The core concept that stood beyond both monism and dualism was that, understood as energy functions, two functions could be simultaneously identical and antithetical. This was the beginning of a theory of the difference with its fundamental components: the pairing of natural functions by their difference - as the relation that connects them, at once by uniting (functional identity) and differentiating them, to form a third function; and the pairing of these third functions through the nth function that connects them, and so on, until their principle of continuous variation is reached.

One of Reich's most fundamental examples was his own study of the biological functions of anxiety and pleasure. The first connection came from the correlation of the emotion of anxiety, or, more properly, primary anguish, with the activity of the sympathetic branch of the vegetative system. This pair correlated distinct psychological and somatic (or organic) processes. In this case, the difference between the two processes established a psycho-somatic parallelism intrinsic to their identity or common functioning principle (CFP) - that of a biological contraction, understood as biophysical process of energy withdrawal to the core of the system, the organ or the cell (see **Fig. 1**).



A second connection came from the correlation of the emotions of pleasure states with the activity of the parasympathetic system - their psycho-somatic parallelism yielding, in turn, the CFP of a biological expansion marked by the mobilization of energy from the core of the system

towards the outside world (see **Fig. 1**). When these two parallel but different processes of contraction and expansion are brought together, their connection as 'antinomic processes' becomes their principle of variation - as expressed by their identity as processes of biological innervation or excitation, in the form of instances of biological pulsation. In other words, biological pulsation is the CFP of contraction and expansion. As principle of variation, this CFP sets specific limits to the manifestation of the instances of pulsation, such as: different organs may or may not share the same vegetative state, and an organ (such as the nerve system) can impose a simultaneous vegetative rhythm over other organs, but every organ can only be committed to one vegetative state at a time (disjunction); hence, biological excitation as a CFP of correlated psychological and somatic (or organic) processes applied to an organ or the general state of a system always implies a diachronicity, a disjunction or alternation (pulsation) in time, to the expression of either arm - contraction or expansion. Thus, the biological excitation (eg of a living system) cannot be both a contraction and an expansion at any one time, but encompasses both contraction and expansion in the duration, or a unit-cycle, of a system. Contraction and expansion are both forms of biological excitation, but biological excitation is not reducible to either contraction or expansion. The general form of biological excitation is the alternation between contraction and expansion. Hence, biological excitation is the general principle of pulsation or pulsatory activity. (Yet, we must ask: what is it that couples to excitation that makes it biological? Aren't massbound charges also *excited* by ambipolar radiation so that they produce photons? etc.)

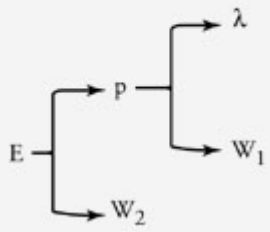
In general, it is the principle of variation that qualifies the limits of the identity of opposites and the limits of their specific difference (in Reich's language, their opposition). This leads to a particular new approach to the mathematical language of physics - permitting quantitative analysis but also directly incorporating the qualitative differences that define the intrinsic limits and physical properties of the functions, thus placing the problem of boundaries as one that is internal to the principle of variation (as we shall see in following examples).

2.2. The particle wave superimposition as constitutive of the energy function

Aetherometry takes great advantage of this new functional language of physics pioneered by Reich. For instance, wave and particle are considered to be the fundamental physical properties of Matter. As Matter is equivalent to energy, physically and mathematically, ie functionally - as Matter is energy in the state designated as mass-energy - wave and particle are the fundamental physical properties of energy. There are no functions for particles per se - writing n for neutron is not a function, just a naming operation. But if we consider the term 'particle' to be but a shorthand for the diverse phenomena of linear momentum p, or its complex function - then it becomes easier to understand how wave and particle properties are strict energy functions, or constituent (sub)functions of the energy function. Having arrived here, we can no longer admit to disembodied waves devoid of energy functions - like the electromagnetic phase waves of Cerenkov's model. No particle or momentum can part company with its waves, whether intrinsic to that particle or associated with it (extrinsic). Cerenkov's phase wave can only be the wave function of some other particle, a true pilot or guiding wave; and indeed that is the case in Aetherometry - where the phase wave of a blackbody photon is (indirectly) the ambipolar wave of a massfree charge, or (directly) the transduced external wave of a massbound lepton (and though these two waves are properties of different charges - ambipolar massfree charges and, subsequently, monopolar charges - they are also one and the same wave transmitting the light-excitation stimulus). If we now apply to these fundamental energy properties of wave and momentum the mass-to-length transformation, it becomes apparent that momenta, whether inertial or massfree, will always generate a particle - and thus that real particles are either massbound or massfree.

Likewise, if we apply Aetherometry's treatment of electric charge as a linear momentum function to this fundamental energy-constitutive disjunction between particle and wave - we come to see that particles may be charges that in turn are either massbound or massfree. Having arrived at this point, we can state that the constituents of the function 'energy', whether massbound or massfree, are always the impulse p of a linear momentum function and the external wave function associated with it. If the impulse p is fixed by the universal value of charge, the energy function is electrical. If the impulse p is variable and the associated wave is c, then the energy function is either electromagnetic (and, aetherometrically, all photons are massfree) or mass-energy-equivalent (the particle is then the linear inertial momentum of a massbound unit of Matter). If the impulse p is variable and the associated wave is not c, then the energy will be gravitational or gravitokinetic, or still thermokinetic. One can pursue this microanalysis further into the intrinsic wave functions of each type of momentum or particle - and find, for instance, that when the energy function is electrical, the difference between massbound and massfree energy does not lie at the level of the first disjunction (between particle and extrinsic or associated wave) but at the level of the second disjunction, within the particle, between the wave intrinsic to momentum and the wavelength function that may or may not be equivalent to inertial mass (see **Fig. 2**). Hence, ambipolar energy has quantitatively identical intrinsic and extrinsic wave functions, while electrokinetic energy (always associated with massbound charges) and the electric expression of mass- energy have, instead, quantitatively different intrinsic and extrinsic wave functions. We could construe, therefore, a scheme for all energy manifestations on the basis of concrete, finely structured momentum and wave functions - of which, say, a neutron would only be a specific instance marked by its inertial momentum, its mass-energy, the waves of its motion, of its graviton, (the dual-nature of its charge, and thus its phenomenological neutrality - as in Aetherometry), etc, etc.

FIGURE 2



Summarizing this example that went well beyond Reich's orgonomic functionalism but illustrates the realms it opened up, we might say that energy and its superimposition of particle and wave properties is the common functioning principle of all energy manifestations - be these massfree, inertial (Matter), electric, gravitational, etc. And that, aside from manifold properties (like those of Space and Time), the two fundamental physical functions of the CFP of all energy manifestations is the pairing of particles with waves. Since particles also comprise intrinsic wave functions, the basic pairing is one denoted by the primary superimposition of waves; in other words, the physical association of a particle - or a unit of momentum - with a wave is a matter of the primary superimposition of waves that first associates (connects) an extrinsic with an intrinsic wave, and then employs the unpaired wavelength constitutive of momentum as what differentiates massfree from massbound manifestations. Accordingly, all energy manifestations deploy primary superimposition of waves (and this is a property of the principle of continuous variation of all energy manifestations).

2.3. Molecular functionalism

The third functionalist approach was that of Deleuze and Guattari - what we may term molecular functionalism. In what concerns us, it was the marriage of the two methods, Reich's and D&G's, that opened up our thinking as it related to microscopic functionalism and scientific methodology. D&G's concept of desiring machines proposes that functionalism only applies to

the molecular domain, where singular elements operate directly with particles and their associated waves, because only here does one encounter self-producing machines whose functioning is indiscernible from their formation. Thus, desiring machines alone are autopoietic machines - they assemble themselves while functioning and are capable of producing microscopic effects that cut across all the macroscopic levels of molar machines. In other words, they can 'scope' their micro-effects to cut across, for instance, organic and social machines. The differentiating characteristic of the living - that which converts physical systems into biophysical systems - is precisely the autopoietic property. Living systems are merely scopes for molecular machines, just as a red-blood cell (an erythrocyte) is a mere scoping of the energy functions of the allosteric protein hemoglobin. Molecular folding itself is not only a cooperative function of allosteric proteins, but most often one promoted by a substrate undergoing distinct and sequential steps in recognition. Without these autopoietic machines - these microscopic and nanoscopic biological machines - there would be no molar machines, no organic, social or technical machines. Molar machines are simply desiring machines, or parts of desiring machines, that are formed, taken up or considered from the viewpoint of their effective subordination to the laws of statistical ensembles, from the viewpoint of their statistical mass-effect or their accumulation in large numbers. Ultimately, then, there would only be desiring machines, biological machines, capable of being 'macroscoped' as a microcosmos, or subordinated to a macrocosmos of possible stochastic effects.

The connection between machines (the associative capacity or primary synthesis) establishes a network of molecular interactions and permits its modifiable formation. The totality of this network functions as a part set aside from the other parts (the molecular elements), and yet is integral to these parts. The network reacts as a body (Deleuze and Guattari's expression is 'a body without organs', where the term 'organs' denotes organ-machines understood as molecular elements, or as the desiring machines from the viewpoint of their primary synthesis of connection) over the machinic connections, inducing phenomena of code, disjunctions (*the dissociative capacity or synthesis of code*) that qualify and group all the connections . This permits its utilization as a recording system, a memory, thus completing the definition of a molecular machine as an open system: so we encounter a transmissible genetic memory, a template for replication recording the list of the molecular equipment of a system, a biological memory encoding instincts, experience and affections for specific systems and collectivities, and in the case of human beings, a social memory of words in a specialized organ, the cortex, making culture and later phonetic writing possible.

Autopoietic machines have, therefore, a very special relationship with the totality they form, with their network assemblage or with its power of disjunction - it is not a principle of organization but a principle of reference, and also the ground on which to build their molecular scopes, plus the intrinsic condition for their self-assembly. No autopoietic machines exist without syntheses of disjunction, without systems of recording, without an analytical map of their connections, without production of a body. This second synthesis is the third term whose connection to the other two terms of any relation, or series of relations, forms the principle of disjunction of those two terms and constitutes their analytical identity as a CFP.

Energy is the body-without-organs or CFP of the events 'particle' and 'wave' (energy is conserved because energy is also a memory of itself, a memory of its own cyclical repetition), just as water with its building-block solutes constitutes the body-without- organs (the liquid plasma) of every cellular system - the memory and reference of an electric energy ground, of a dielectric unit, of the source of 'unformed' materials for all molecular interactions and the reservoir of 'free' energy that allosteric proteins constantly draw on.

The CFP is an element of disjunction affected to a molecular connection as long as the disjunction is an inclusive one - which is the condition of its becoming a principle of continuous variation (eg biological excitation has an animal or neurological variant with an indefinite series of possible embodiments; but this animal variant has, for all members of that series, two

essential energy components, that of contraction and that of expansion, which are basic cellular properties).

And it is continuous variation that makes possible every conjunction - which is the form taken by the third or converging synthesis, a synthesis of composition between associative and dissociative functions, a process-pathway of energy intensities and thresholds that adds a new property to the third term, that introduces a fourth term - a ranking of functions across superimposed levels - thus permitting the conjunctions with other CFP's that identify higher sequential levels of functioning (eg metabolic cycles), or complex forms of superimposition, and conjunctions with deeper CFP's that are still more basic than a given disjunction (like the CFP for the totality of the energy of the universe). There is, in this sense, a continuum between all CFP's, and this is, after all, a property of energy itself that autopoietic machines express through their autonomous order, by grouping and ranking their microfunctions.

At the limit, molecular functionalism teaches that there are only two distinct regimes of these three syntheses - a micro regime that is open to connections and employs inclusive disjunctions and a continuous variation of their conjunction, and a molar regime that specifies connections, employs exclusive disjunctions and organizes them to conform to a transcendental principle of conjunction formed by the logic of large numbers (ie a principle external to the autopoietic machines). The first is the regime of autopoietic machines, the second the regime of molar machines. If ideas are concentrations of energy 'quanta', then whether they pursue the logic of the order of energy (the autonomous logic of a process, its cyclicity, wave behaviour, its order or regime of syntheses, its repetition, etc) or the logic of the largest numbers, becomes the critical functionalist disjunction between two regimes of ideas and two methods of analysis, one microfunctionalist and the other molar.

2.4. Aetherometric functionalism (and the superimposition of Space and Time as constitutive of the energy function)

Aetherometric functionalism, or microfunctionalism in our sense, follows in the steps of the conjunction between orgonomic and molecular functionalism. To become microfunctionalist, mathematics must become the language of energy and its conversions or becomings. That cannot happen if energy as a function is poorly grasped, and its analysis incomplete or, worse still, inconsistent.

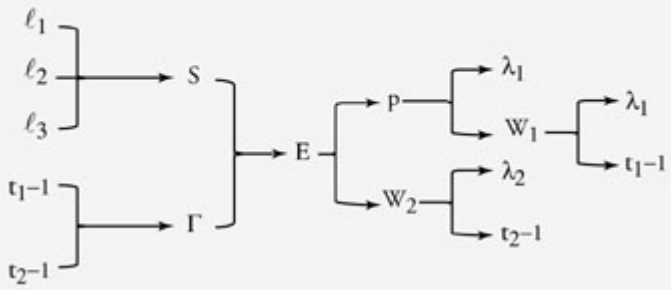
Functions must become microfunctions by an intrinsic synthesis (what we call an endoreference) of both algebraic and qualitative multiplicities. This differs in key respects from both orgonomic and molecular functionalism. With respect to the latter and its theory of multiplicities or manifolds, microfunctionalism views the concept as thought that is adequate to its function, distance and time as components of wave motion and the manifold as a multiplicity which is at once both quantitative and qualitative.

The simplest example of a function is that offered in AS1-04, where energy is always a commensurable relation of production or superimposition between Space and Time as distinct multiplicities or manifolds, each with its own properties (length, distance, surface, extensivity, volumetry, facultative mass on the side of Space; and timeline, synchronism or resonance, frequency of repetition and diachronicity on the side of Time) and each with distinct dimensionalities and proper measures, but such that their distinct measures are commensurable by their relationship of production (with reference to the aetherometric discovery of time and length commensurabilities for all energy manifestations). Space and Time (Synchronicity) are two irreducible series, two distinct manifolds, each with its qualities and measure. Their relationship of production is energy, the element at once connecting them (the element of their identity as ontological properties of energy) and differentiating them (the element of their

genealogy, whereby Space and Time appear as distinct manifolds). Analytically we dissociate energy into Space and Synchronicity, and nature and its 'history' constantly reassembles or conjoins both manifolds into all the energy manifestations and interactions we perceive.

In light of the particle/wave example above, we may indistinctly say that energy is a physical function that produces itself by synthesizing irreducibly different manifolds, or by coupling particles, whether massbound or massfree, to their waves, or, still, by the primary superimposition of waves (see **Fig. 3**). The energy function contains all the constituents already as products. It is a conjunction of Space and Time, as much as a production of Space and Time and of all their qualities. And it is the indissociable link between the particle and its wave, as much as the concrete determination (the disjunction) that permits physical, qualitative detection of the particle as being inertial or massfree: it is always either a massfree or a massbound energy. Particles and waves are also members of two irreducible series, two distinct qualitative and quantitative multiplicities, and together they constitute the general forms employed by energy to convey motion - impart momentum, transduce energy, propagate a stimulus, etc.

FIGURE 3



Hence the very first microfunction - that of energy in the most abstract or general case - is a biheaded function, one that superimposes waves to create Space and Time or to generate the impulses (the particulate momenta) that we recognize as defining either the world of Matter (the massbound momenta of mass-energy with associated kinetic energy and the residual photons it sheds) or the world of the massless Aether (massfree energy in its ambipolar, gravitational, or antigravitational/latent heat manifestations).

A function is a relationship between two terms from two different series, but only on the condition that this be an energy relationship such that either of the series that enters into the relation is at once a qualitative and a quantitative multiplicity. The relation is what connects the two series by any of their members, and it must be both the element of their difference, distinction or analytical separation, qua different series, and the element that synthesizes or produces them as a function, and confers upon them a 'functional identity'. The two qualifiers ('an energy relationship' and 'series that are qualitative and quantitative multiplicities') are critical for microfunctionalism. All functions are energy functions, and these are either iterative (for looped circuits, like the conservation of energy ultimately is) or conversions, transformations. In either case, all energy functions specify states of motion, conversion or transformation of energy systems or energy units. Aetherometric functionalism regards the entirety of nature, living or nonliving, as composed solely of energy functions. The entire logic of nature is microcosmic. Aether energy functions are no more specific to the living than to the non-living, since Matter itself is a specific series of conformations of aether energy. Just like Matter is not specific to the living - though there is no Life without Matter - Matter per se is not alive.

It is here, in this context, that the difference towards orgonomic functionalism becomes sharpest. It is not just that Orgone cannot and does not define the entirety of aether energy, or Dark Massfree Energy - since Orgone and DOR are only the electric components of Aether and

they compose neither the gravitational Aether, nor latent heat. Nor is it that 'orgonotic' or 'dorgonotic' charges exist which are distinct from electrical charge; they don't - all charges are electric and of the same magnitude: some are affected to mass, and thus affected with inertia, others are massfree, and thus inertia-less. It is that one cannot strictly speak about a biologically specific energy, even if it is true that isotonic solutions only transmit OR energy, that the associative portions of the cycles of water, oxygen and hydrogen, etc, are solar OR-driven, that only OR-induced LFOT photons are benign for cellular systems, etc. All that exists are Aether constructs, and so all that exists, living and nonliving, is specific to the Aether. Even though OR energy may well be essential and beneficial for all life, for all living systems, it is no more essential and beneficial than are latent heat or the accumulation of free electronic charges. And OR processes are found to interact with massbound charges of all types everywhere in nature - as inductive or accelerating fields, as sources of kinetic energy and propagation stimuli for the local production of photons. In addition, there appears to be a biopoietic affinity for DOR radiation - even if DOR is indeed inimical to all cellular systems - and DOR is, as well, the driving energy of the most basic dissociation subcycles, whether acid-base or redox.

Quoting from our upcoming book (see the "*Nanometric Functions of Bioenergy*"):

> But both OR and DOR exist in nature and both affect and emanate from the living as well as the nonliving. So we may not define any biological specificity of an energetic nature by recourse either to the ambipolar or the nonelectric 'Aethers': they pervade the entirety of nature, animate or inanimate. And if we hold on, instead, to Reich's four- beat formula [of biological pulsation] as what characterizes the specificity of the living, then, even the descriptive value of the formula must be questioned, as regarding its lacunes and incompleteness: where does the charge come from? Mechanical swelling may transduce charges to a membranous interface, but where do they come from? What energy do they dispose of? And the mechanical swelling, how does it arise to begin with? And if it is by a reverse potential of "orgone energy", then are we not confusing what is the draw of nonelectric massfree energy with the active capture of ambipolar radiation emitted by an external source? And how could a mere draw of energy actually find the paths to develop a swelling cytoplasm - followed by a swelling nucleus prior to cell division?

One cannot even be sure that organismic pulsation is the differentiating characteristic of living systems. Then Life could only be conceptualized as a cellular event - there would be no molecular Life, no molecular biopoesis, no pre-cellular assemblages. Yet, it may well be that the noncovalent energy cycles of molecules such as enzymes constitute very primitive energy cycles or pulsatory activities. Cells are mere scopes for the activity of these biomolecules under the sequestered conditions that optimize this activity and permit metabolic cycles to be formed through macromolecular association. So what exactly is pulsation? Can it be defined merely by cyclicity, even by a specific form of cyclicity? What is metabolic pulsation?

Biological nature is everywhere in energy continuity with physical nature. The specific energy transformations employed by biological systems exist everywhere in nature, just not assembled in specific orders of metabolism. The electron can be said, in this sense, to be a perfect 'autopoietic machine', whose product is not separable from its ongoing production. The electron can be seen as the originary atom, or the first of all molecules of Matter. Yet, an electron is not really self-catalytic - an electron does not form itself - nor is it self-replicative - an electron is not a template for another electron. An electron is not an autopoietic machine. It is a part (the part of Matter) in a machine of Aether (the machine of secondary superimposition), but it is not a living machine. An electron is the byproduct of a constant secondary superimposition between distinct massfree latent Aether fluxes, or the residual of a proportionality ratio between this secondarily superimposed massfree Aether and the graviton energy affected in Phase Space and Phase Time to that electron.

What is specific to the living is the definition of open systems (molecular and cellular machines) that are *autonomously capable of accumulating internal energy* through a variety of energy processes or machinic functions (syntheses of autoproduction), and are thus capable of forming themselves while functioning (self-production), and of forming templates for their replication (reproduction). The proportion of massfree to massbound energy in that internal energy function is of great importance, but it is the order and the nexus of the energy transformations (the syntheses of auto-production) that now matter so very much if such a system-internal energy function is to become autonomous. At a molecular level and from an energy perspective, structure or form is everywhere determined by integrated energy functions - since morphogenesis and biopoiesis are autonomous properties of autopoietic machines.

Microfunctionalism applies therefore as much to the physics of Matter as to the physics of Life when these are viewed as energy functions; but when applied to machines and their syntheses of production (or energy cycles) it relates solely to the properties of autopoietic machines - of machines that are autonomously capable of synthetic activity, capable of auto-production and self-assembly, capable of syntheses of conjunction ('ordered energy transformation') by selecting maps of the pathways of connection that are ordered or assembled by their (all-inclusive and re-iterative) analytical disjunctions.

For instance, in allotropic or re-forming cycles, the analytical differences in proton and electron concentrations, in blackbody photon emission, in the effects of bases, acids, free-radicals and redox enzymes, form two distinct series, one for OR energy and the other for DOR energy. The two series exist independently of each other, but their correlated differences imply, at all times, the integral differentiation between the two series or of all members of both series. Now the two series are coupled with respect to the allotropic cycle of the polar forms of a molecule or a specific group of molecules - there is now cyclicity, molecular oscillation or pulsation even, and this conjunction of the different series is itself productive of the allotropic cycle. Does this then mean that the molecular Matter entrained, fashioned and refashioned by these allotropic cycles, is alive, alive either as cellular Life or as molecular Life? Allotropic cycles do exist in nature, and they deploy both types of ambipolar energy, but they cannot sustain their energy autonomously by the cyclic ordering of their reactions, and are thus precluded from forming systems that are capable of autonomously increasing their internal energy. An allotropic conjunction is not an autopoietic conjunction. This effectively indicates that pulsation is only biological (only autopoietic) when it defines a cyclicity inherent to an autonomous internal energy function - which is what one means, exactly, by an active metabolism. OR energy is not a Life-specific energy. There is an affinity of all physical and chemical processes of association (that underly biophysical and biochemical processes) for OR energy, just as there is an affinity of the inverse processes of dissociation for DOR energy. Hence, biophysical processes responsible for the specific metabolism of oxidative respiration have a high affinity for OR energy, just as metabolisms of fermentation can be classified as having increasing affinities with DOR energy the more severe are their anaerobic conditions. OR is a Life-affine energy, not a Life-specific energy, and only to the extent that the Life which is meant is aerobic Life.

By the same token, the being of the energy function for the totality of the universe is a machine, already constitutes a machine, and a self-forming one at that, which purveys the memory for all energy functions including Matter, its elements and their states. So, in a very real sense, by definition of the self-producing property of autopoietic machines, the universe - or the most abstract energy function for the totality of what exists - appears alive by its self-forming, self-sufficient and autonomous activities. Indeed, the universe has an infinity of Time to create all possible forms of Matter and Life and their articulations, and all that exists is ultimately the product of aether energy in all possible configurations and arrangements, material and nonmaterial. The taking up of these forms or configurations, living and nonliving, are all products of the Aether. What the universe or the totality of energy cannot do, which is the specific characteristic of autopoietic machines, is not autonomous morphogenesis or self-production, but the increasing of its internal energy. Hence, the universe is alive only to the

extent that it includes (as a part of itself) partial systems which are able to do, for a period of time in their finite existence (their duration), what the universe cannot do for itself as totality in an infinity of time, or with an infinite existence. The universe is the being of the totality of energy, of all energy as Aether, and it constitutes an energy machine, the most perfect energy conservation machine there is, in a perpetual iterative cycle. But as machine, as 'functive' of the energy function for the totality of energy of the universe, it is not autopoietic - thus no state of its internal order depends upon the universe increasing its energy, as if energy could be produced *ex nihilo*.

From an aetherometric perspective, differentiation is a fundamental functionalist process. The identity of the CFP is not a merely symbolic activity, nor reducible to the representation of signs - and the opposition of its paired functions is not antinomic per se (eg Space is not the opposite of Time, a particle is not the antinomy of a wave - it even contains a wave!). Identities and contradictions do not exist, they are the textual limitations of hyperbole. A connection that effectively functions (that 'works') between different elements is as much an inclusive disjunction that analytically differentiates the terms and their series (what Reich called "the process of development"), as it is an element that leads from the variations to their CFP (what Reich called "the natural history" of a process), a conjunction, a synthesis of the different that describes a transformation, a becoming. The relation between terms is already a third term, the term of a differentiation between them, and a fourth or nth term, the term of their conjunction, the natural history of their synthetic constructs, the natural history of singularities - the singularities of nature, of becoming, of energy.

The terms are paired by their analytical difference or the synthetic element of their difference. Identity and opposition are polar representations of difference, but differences are relationships of production or the constitutive functions of a system, at once the connection, the disjunction and the conjunction as properties of a relation. The microfunctionalist method can be said to be at once a quantitative and a qualitative method - but it is, more fundamentally, a power to differentiate, a power to couple, decouple and integrate the 'acting-differences'.

At the limit, the method is intended to permit one to think and perceive, at all times, in terms of energy. Functions acquire, in this context, a very specific sense - they are related to the inner workings of nature, in animate and inanimate systems, and only exist as energy transformations or energy properties.

April 4, 2004

Our thanks go to Michael Tilley, whose question in the Aetherometry Study Group prompted us to write this monograph.