

# **Encyclopedia Dialectica**

## **Brief #2**

### **Meta-Monadology:**

**The Universality Of The «Aufheben» Process.**

#### **Part I.:**

**The «Aufheben» Meta-Monadology  
of Platonic «Arithmoi Eidetikoi» Dialectics.**

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**Introduction.** On the issues surrounding the Hegelian <<*aufheben*>> operation, I'm with Marx. Although I learned much from Hegel, I reject Hegelianism, as further explicated below.

There is, in "Marxian" discourse today, a habit of *conceptual vagueness* – inherited, I suspect, in Marxian circles at least, from the influence of the Frankfurt School. This habit infects, particularly, discussions of the Marxian dialectic, of the <<*aufheben*>> process, etc. It does so in a way that makes most such discussions come off as essays in obscurantism. It leads, if not to "mysticism", then at least to a foggy "*mist-icism*" of uselessly vague shibboleths and "articles of faith". It leads, at best, to discussions which only a handful of elite academic specialists could ever comprehend, if their "mutual understanding" even deserves the name of "comprehension".

It is possible to be much more concrete, much more specific, and much more accessible in such discussions. Indeed, it is even possible to explicate these dialectical concepts in terms of the everyday empirical content of contemporary human life-activity, as I will demonstrate below.

Recall that Marx's key concepts – in *Das Kapital*, in the *Grundrisse*, etc. -- are a rich '*cumulum*' of organized, orchestrated *thought-determinations*. Richly so textured, they form a veritable 'mental organism' of 'thought-*<<speci>>-fications*'.

Regarding this "'concreteness of human thought'", to quote Marx himself:

"The concrete is the concrete because it is *the concentration of many determinations*, hence *unity of the diverse*.

It appears in the process of thinking, therefore, as a process of concentration, as a result, not as a point of departure, even though it is the point of departure in reality, and hence also the point of departure for observation and conception.

Along the first path [*the initial process, of observation and conception, of Marx's "method of discovery"; of generalization and abstraction – Anonymous*], the full conception was *evaporated* to yield an abstract determination; along the second [the, succeeding, oppositely-directed methodological path, of evoking from immanence, and then adding-back and [ac]cumulating determinations, and, thereby, moving into greater "'thought-concreteness'"; Marx's "*method of presentation*" – *Anonymous*], the abstract determinations lead towards *a reproduction of the concrete by way of thought*.

... In this way Hegel fell into the illusion of conceiving the real as the product of thought concentrating itself, probing its own depths, and unfolding itself out of itself, by itself, whereas the *method* of rising from the abstract to the concrete is *the only way* in which *thought appropriates the concrete, reproduces it as the concrete in the mind*.

But this is by no means the process by which the concrete itself comes into being." [Karl Marx, *Grundrisse*, M. Nicolaus, translator, Penguin Books, 1973, p. 101, *emphasis added by Anonymous*].

I hold that, what we find, in the realm of human social systems [e.g., of "primitive communism", of the progressions of class societies since, and of the predicted irruption of class-less, state-less, higher 'democratic-communist' global 'human-species society', or 'species-wide society'] are a variety of '*diachronic meta-systems*'. I hold also that what we find, in the realm of human thought-systems [such as philosophical systems, scientific systems, and mathematical systems], are a variety of '*diachronic meta-systems*'. We find, that is, a variety of historical progressions of multiple, qualitatively different, ontologically-different, predecessor-successor systems. We find pairs of predecessor systems followed by their successor systems, with each pair interconnected *causally*. This '*pattern of followership*', of system "'following from'" system, is a "*logic*".



Each such predecessor/successor system is characterized, at first, by a longer period of gradual, internal “evolution”, characterized mainly by a “law-like” “dynamic” of growing quantitatively, of changing/rising quantities all apparently within the limits of that system’s ‘essence-ial’, characteristic qualities/ontology. That period is followed by a second period leading up to a ‘meta-finite singularity’. This second period is a much shorter period, a period of ‘meta-evolution’, or of “revolution”. It exhibits a ‘meta-lawful’ ‘meta-dynamic’ in which new, unprecedented qualities/ontology manifestly irrupts from *within* the innermost, immanent *core* of that system. This irruption causes that system to grow qualitatively, i.e., to grow ontologically, to grow out of and to outgrow the bounds of its former self-definition / <<speci>>-fic “‘essence’”/‘qualitativity’ and identity. Thus, this second period becomes that of the birth of a qualitatively new, ontologically-new, “incommensurable” successor system/identity.

Still, such a successor system characteristically not only <<aufheben>> conserves much of its predecessor-system’s – and predecessor-systems’ -- ontology, but also appropriates that conserved ontology to itself. This produces an unprecedented ‘ontological hybridization’ of old and new ontology. This process of ontological hybridization is such that each such new, emergent system evolves from an early, merely “formal subsumption” of that predecessor ontology, to, later on, a fuller, “real subsumption” of that predecessor ontology, by its own, ‘<<speci>>-ic’, ‘neo-ontology’. Also, in that very process, this ‘successor system’ begins the engenderment of *its own* ‘successor system’; the process of its own ‘becoming predecessor’.

Nevertheless, I claim, this self-iterated self-transformation, of an *infant* predecessor system “‘evolving’” into a *mature* predecessor system, thence ‘meta-evolving’, by ‘immanent-revolution’, or ‘self-revolution’, into a successor system – the very ‘self-iteration’ that constitutes the ‘diachronic meta-system’ – can be clearly accounted for, *with breathtaking generality*, by the concretized concept of the <<aufheben>> operation that I will present below.

Including the self-irruption of new ontology -- “‘incommensurable’” with the old ontology – these system ‘self-revolutions’ can be formulated, not only *narratively*, in phonetic, *phonogramic symbols*, but also -- and with far greater compactness, or ‘*semantic density*’ of syntax -- *mathematically*, in *ideogramic symbols*.

This is possible, for example, by using a new, ‘*holistic-dynamics notation*’ – a revolutionary new system of dialectical mathematics, developed by Foundation Encyclopedia Dialectica, or F.E.D., for short, whose principal websites are [www.dialectics.org](http://www.dialectics.org), and [www.adventures-in-dialectics.org](http://www.adventures-in-dialectics.org).

This “shorthand” notation, this new ideogramic language system for dialectics, is one which itself arises as an ‘ideo-self-revolution’ – via an immanent critique, i.e., via a dialectical, determinate, self-negation -- of the existing, “Standard” system of mathematics, from out of the innermost core of that “Standard” system. It so arises via the self-application of the same generic <<aufheben>> self-operation “by” the existing, “Standard”, system of mathematics, to the existing, “Standard”, system of mathematics. This self-action arises from out of the immanent, internal, self-inadequacies, self-“incompletenesses”, or ‘self-dualities’, of that “Standard” system/language of mathematics itself.

Specifically, it arises out of the implicit ‘self-duality’ of “qualitative” versus “quantitative” in that “Standard” system. It arises out of the ‘intra-duality’ of ‘qualifier’ versus ‘quantifier’, which is immanent to, and implicit in, the modern mathematical concept of ‘unit-y’, of “the unit”, of **1**. This ‘intra-duality’ also manifests externally, [psycho-]historically, in a vast conceptual chasm. This chasm, on one side, features the less exchange-value-permeated, or Ancient, prevailing conception of the unit – of the <<monad>> [or <<μονας>> in Ancient Greek] – per the Platonic <<Arithmos Monadikos>>, and per Diophantus’ circa 250 C.E. <<Arithmêtikê>>, with its syncopated ‘qualifier’ symbol,  $M^{\circ}$ , for the generic qualitative <<Monad>>.



This chasm features, on its other side, the far more exchange-value-permeated, or Modern, conception of the 'unit-y' of the "Natural" Numbers, as 'pure quantifiers'.

Even more profoundly, this 'intra-duality' is met externally, [psycho-]historically, in the Platonic doctrine of the <<arithmos eidetikos>>; of Plato's <<asumblêtoi>> ["non-addible"], "dialectical idea-numbers".

Indeed, the new system of language arises, by one of several pathways of immanent critique, from the solution of equations that are "unsolvable" in the language of the predecessor-system of mathematical language -- e.g., out of the "unsolvable" negation of the equation which George Boole named "the fundamental law of [linear, statical, formal-logical -- *Anonymous*] thought".

It arises also as a language capable of modeling the inherent thought-self-movement -- that is, the inherent 'ideo-auto-kinesis' -- of that notorious, "impossible" [cf. Gödel], "Sisyphosian" thought-object called 'The Set of All Sets'. This inherently dynamical thought-object starts from the "power-set" -- the set of all subsets -- of the "universal set", the set of all idea-objects belonging to a given "realistic" [finite] universe [of discourse]. This "'idea-object'", or "'thought-object'", must, by the very definition of its "self", continually "become". It must expand qualitatively and ontologically. It must continually ingest its own, ever-expanding power-set [i.e., itself and its other subsets]. It must ever-irrupt, inside itself, the 'setical' expressions of new predicates, new qualities. It must continually accumulate new set-content. It must continually escalate its own Russellian "logical type". It must do all of this in a dynamical, ever-vain attempt to simply "be" itself, to fulfill the definition of itself that is given in its very name; its logical essence, undynamically, statically. This [idea-]object "is", and can only ever "be", an ever-self-regenerating 'idea-movement'; process; "eventivity" within the human mind that thinks it, for as long as that mind thinks it.

That is, this new, dialectical language arises also as an immanent critique of Set Theory. It is an immanent critique because "The Set of All Sets" is the central idea-object at the very heart of that theory. It is an immanent critique also because this critique adopts the very question, and criticism, that any 'self-honest' Set Theory must have of itself: why must Set Theory suppress, outlaw, and exile its own 'heart-concept'?

"The Set of all Sets" is the 'heart-concept' of Set Theory because that set is Set Theory's self-definition of the concept of "Set" itself; the "extension" of the "intension" of that concept.

"The Set of All Sets" is also the <<reductio ad absurdum>> self-refutation of "natural" Set Theory; of its implicit, 'Parmenidean Postulate' -- the set theorists' shared, tacit belief that all idea-objects must be 'statical'.

Indeed, "The Set of All Sets" is also the set-theoretical model of the generic dialectic itself.

This text critiques the lately-fashionable, sub-dialectical renditions -- of "incommensurability", of [impenetrable] "mystery", of "'transgression'" -- supposedly as opposed to <<aufheben>> "'[self-]transformation'"; of "'conceptual leap'", supposedly as opposed to <<aufheben>> [self-]transcendence, and of 'ontological thrust' [<<sprung>>] supposedly as opposed to <<aufheben>> '[self-]revolutionization'. This text critiques those fashions for their introduction of [further] 'mist-icism' into a would-be universal science. It criticizes them for re-introducing fallacious, metaphysical, radical dualisms into that science. It criticizes them for introducing false distinctions, since, properly comprehended, the dialectical concepts of '[self-]<<aufheben>>' and of '[self-]<<aufheben physio-autokinesis>>' already contain the valid moments of those ideological fashions.



Shifting focus from ideas about "internal", mental 'idea-systems' to ideas about "external", natural-historical systems: There is, for example, an aspect of ontological incompatibility, of deep discontinuity, in the transitions from the epoch of primitive communistic human social systems to that of class systems, as also in the predicted transition of global capitalist class society to global, higher, 'democratic-communistic', "classless" society.

But there are also aspects of 'meta-continuity', aspects that the prevailing, '*mist*-ical' concepts miss.

I find recently-fashionable concepts of internal "perdurance"/"endurance" of ontological differences – of the persistence of "internal ontological/existential contradictions" -- to be already wholly encompassed within the **F.E.D.** -- i.e., within the 'dialectical-realist' -- concepts of (1) '<<*aufheben*>> subsumption/conservation', (2) "complex unity", and (3) 'intra-duality', or '*self*-duality'.

I find the Freudian concept of "sublimation" to be partially foreign to dialectics, as it is tied to the Freudian concept of "[self-]repression". I find that concept otherwise fully pre-incorporated into even the ancient Platonic dialectic. I find it to be pre-incorporated in the Platonic-dialectical concept of the relation of a "singleton" <<*idea-genos*>> to its multiple <<*idea-species*>>, i.e., in the concept of '<<*gen*>>-eralization', or of the formation of a singular, <<*genos*>>-level concept-unit, from out of a multiple-concept-unit, multi-idea-unit <<*species*>> level of '<<*species*>>-ficity', or '<<*speci*>>-ficity'.

Concerns that concepts of the <<*aufheben*>> process posit "a wholly positive phenomenon, a revolutionary advance, even if certain superseded negative forms are also carried over", should also be allayed in the sequel.

There, I will demonstrate the capability of this **F.E.D.** concept and language of the <<*aufheben*>> operation to model also "retrograde conversions", and the generation of "degenerative", 'de-evolutionary' ontology.

That capability arises immanently in the dialectical progression -- into ever-greater capability to describe *determinateness*, i.e., "*thought-concreteness*" -- of the 'meta-system' of the **F.E.D.** systems of dialectical mathematics. That 'meta-system' starts with the "Natural" Numbers, "Standard" system, denoted by **N**, as the first system of arithmetic; as its *undialectical* -- or only *implicitly* dialectical -- <<*arché*>>. This 'meta-system' is self-modeled by this very language, of the second system -- the first system of *explicitly* dialectical-mathematical, dialectical-ideographic language -- denoted by **nQ**. This capability -- to model 'de-evolutionary' conversions and interactions -- arises within the **F.E.D.** 'meta-system', for example, in the 'meta-systematic dialectic' of the *sub*-systems-progression -- 'inside' the third, 'first *uni-thesis*' system of arithmetic, the second system of *explicitly* dialectical arithmetic -- from **nU** to **wU** to **zU**, and beyond, per **F.E.D.**'s **nQ** model of this **U** *sub*-systems dialectic. The essence of this ideogramic-linguistic capability arises from the following arithmetical principle: Negative subscripts "annihilate" positive subscripts.

That is, this descriptive capability arises, for example, in the 'meta-evolution' internal to the "non-Standard", third system, of arithmetic, the "first synthesis", or 'first uni-thesis', system of arithmetic. This system is denoted generically, by **F.E.D.**, by **U**. It is a system of *quantifiable* [<<*sumblétoi*>> "addible"] *ontological qualifiers*. This system also develops dialectically, internally. It advances from the **nU** system, appropriating and *subsuming* parameter-values derived solely from the "Natural Numbers" [**N**] system of "Standard" arithmetic, whose number-set is {1, 2, 3, ... }, to **wU**. The latter appropriates and *subsumes* parameter-values derived solely from the "Whole Numbers" [or **W**] system of the "Standard" arithmetic, whose number-set is {0, 1, 2, 3, ... }. Next, **wU** births **zU**, appropriating and *subsuming* parameter-values derived solely from the "Integers" [**Z**] system of "Standard" arithmetic, whose number-set is { ..., -3, -2, -1, 0, +1, +2, +3, ... }.



In this process of exposition, I will be guided by the **F.E.D.** dispensation. That dispensation, IMHO, has begun to bridge, and to unite, the most advanced conceptual [including mathematical] developments of the Ancient world -- previously lost for Modern *in*comprehension -- with those of the Modern world. It leaps upward into a new, dialectical-“realist-ic”, holistic-dynamic world-view. It does so in a way which can, at last, implement the Marxian programme for the immanent critique, and revolutionary transformation, of the modern epoch's ‘capital-value-ideologized’ sciences generally. The extant **F.E.D.** introductory documents can be accessed via <http://www.dialectics.org/primer.htm>

Via that **F.E.D.** dispensation, that new world-view is equipped with a new, dialectical-scientific method [*‘Dialectical Meta-Axiomatics’*, as part of *‘Meta-Systematic Dialectics’*], and a new <<*organon*>> of dialectical logic and mathematics. That new <<*organon*>> begins to redress the disfiguring psycho-historical influences, upon the deep, general conceptual structures and processes of the modern human mind -- and, therefore, upon modern mathematico-science, and upon modern ideology in general -- of the entire “meme pool” of capital-value. These influences tend to the “reductionist / atomistic”, to the “subject-object inverting”, and to the “purely-quantitative”. They arise from the ever-more-intensively socially-pervasive experience of exchange-value exchange, ingredient in especially the post-Dark Ages development of feudal, and, then, especially, of capital-value-based, societies.

So equipped, that dispensation moves towards a new, Marxian-dialectical, *universal science*; a new science, of, and constituted by, the *universal labor* of humanity, and characterized by a holistic, self-reflexive, nonlinear, *auto*-dynamical “*dialectical realism*”, or “[*socio-politico-econo-psycho-historical materialism*” -- “*psycho-historical materialism*” for short.



The term <<aufheben>> arises from very concrete German.

Its derivatives can be applied, for example, to describe the concrete operation of a person picking up a stone from off of the ground.

That concrete operation involves the following three "moments": (i.) the neg-at-ing, i.e., the *changing*, of the original 'pos-i-tion' of the stone; (ii.) the elevation of the stone, from the ground, to a higher position, distant from and above the ground, in the hand of the person who knelt to pick up the stone, as that person returns to an upright posture, and, (iii.) the conservation of the stone, which remains, *preserved*, in the hand of the person who picked it up, throughout the movement that neg-ates, or determinately changes, by elevating, the 'pos-i-tion' of the stone in relation to the ground-level.

But how does this simple, concrete operation provide a *universal metaphor* for the changes that go on in the natural world -- including in the human, mental world -- a world purportedly "'everywhere dense'" with <<aufheben>> dialectic?

Well, let's begin our inquiry into that question in one of the loci -- per the extant historical record -- where the self-conscious, 'self-observant' human thought-process first began to be recorded in written form: Ancient Athens, circa 360 B.C.E., within the Platonic Academy.

Consider the **253b-253d** passage of Plato's dialogue the Sophist, on "the science of dialectics" -- a passage that is reproduced in slide **8** of

[http://www.adventures-in-dialectics.org/Adventures-In-Dialectics/Dialectical\\_Pictographv/Dialectical\\_Pictographv.htm](http://www.adventures-in-dialectics.org/Adventures-In-Dialectics/Dialectical_Pictographv/Dialectical_Pictographv.htm)

Consider a diagram, containing a multiplicity of boxes. Suppose that this diagram features a separate box for each of a "number" of "'idea-species'" -- e.g., a series of boxes labeled "cow", "horse", "dog", and "cat" -- all drawn on a single horizontal level of the diagram. Suppose that this diagram also features a *single* box, at a horizontal level *above* that of the just-named *multiplicity* of <<ideo-species>> boxes. Suppose that this *single*, higher box is labeled with the <<ideo-genos>> name "Animal". For actual, generic renditions of such a diagram, see slides **11-12** in

[http://www.adventures-in-dialectics.org/Adventures-In-Dialectics/Dialectical\\_Pictographv/Dialectical\\_Pictographv.htm](http://www.adventures-in-dialectics.org/Adventures-In-Dialectics/Dialectical_Pictographv/Dialectical_Pictographv.htm)

A diagonal line connects a point at the center of the top of each of the multiple <<eidos-species>> boxes to a single point at bottom center of the single <<eidos-genos>> box.

That point, at the center of the bottom of the <<idea-genos>> box, represents the 'vanishing-point' of the <<differentia specifica>> that 'ideo-ontologically' separate -- that qualitatively, *not-quantitatively*, distinguish -- each <<idea-species>> box from every other <<idea-species>> box.

That "vanishing point" depicts the moment whereby the multiple <<idea-species>> merge into their single, "'unitary'" <<idea-genos>>, for human thought, as a product of the human mental process of "abstraction", of '<<gen>>-eralization', or of '<<genos>>-generation' ['<<genos>>-eration' or <<genos>> '<<gen>>-eration'].

This diagram, at its <<idea-species>> level, depicts a simple example of the "mysterious" Platonic <<arithmos eidetikos>> -- an example of a "number", a "multitude", a "multiplicity", a "plurality", an "assemblage", an <<ensemble>>, and a qualitative, ontological "diversity" of 'idea-units', or of <<eide-monads>>.



A “number”, or, in Ancient Greek, an <<arithmos>>, meant, to the Ancients, a “number” of qualitative units, an <<arithmos>> of qualitative <<monads>>, all being of some single, at some level homogeneous, ontic, ‘<<gen>>-eric’ kind. The ancient Mediterranean civilizations were already impacted by the emergence of the human-social ontology of Money-value and, even, of “antediluvian forms” of Capital-value -- but not yet by the deeper, modern pervasion of human-social life by the experience of apparently “‘purely-quantitative’”, money-mediated, price-mediated equation/exchange of qualitatively different commodities at every turn.

Quantity, for the Ancients, thus began with two [units], not with one [unit], because one [unit] was not a multiplicity, not yet an <<arithmos>>, not yet a <<number>>, but merely a single, qualitative unit; a single, qualitative <<monad>>.

Thus, an <<arithmos eidetikos>> -- literally a “number” of “ideas” -- located, by Plato, at the very heart of his “mysterious” <<dialektikē>>, is, quite simply and literally, a multitude, an assemblage -- a “number” -- of ‘idea units’. These units are grasped as “ideal units”, as ‘mental-object units’, at some “‘level’”, “‘layer’”, or “‘scale’” of ‘<<gen>>-erality’ -- e.g., that of idea-<<species>>, idea-<<gene>>, idea-sub-<<species>>, or idea-super-<<gene>>, etc. These units are bound together by their content, by an ‘ontological likeness’, by a general, shared ‘kind-ness’, combined with, and trumping, their specific mutual, qualitative diversity.

An <<arithmos eidetikos>> is thus simply “a number” of ideas -- an assemblage of more than one idea -- and, thus, an “‘idea-number’”, an ‘idea-multiplicity’, an ‘idea-assemblage’: a “number” of qualitatively different, <<speci>>-fic idea units, or idea <<monads>>, of common kind, i.e., which <<genos>>-ically belong together.

An <<arithmos aisthetos>> is simply a “‘number’” -- more than one -- of ‘aesthetic’, or sensuous, objects, i.e., of object-units, or object-<<monads>>, of the same kind in some sense.

An <<arithmos monadikos>> is simply a “‘number’” of abstract, generic, qualitative ‘chameleonic’, ‘mockingbird’ <<monads>>. Each one is capable of standing for the more specific qualitative unit of any kind, or <<genos>>, of sensuous object -- as used in the “logistical” / practical / mercantile / “sub-philosophical” ‘<<arithmoi>>-etic’, per Plato’s, Diophantus’s, and other ancients’ theories of practical, logistical <<arithmêtikê>>, whose roots reach back to the ‘tokenography’ reconstructed by Denise Schmandt-Besserat.

The “‘systematic dialectic’” -- the ‘ideo-systematics’, or ‘ideo-taxonomics’ -- of Plato’s <<arithmoi eidetikoî>> assemblages of ideas, is a ‘synchronic dialectic’ -- given that especially the early, more Parmenidean Plato considered each ‘idea-taxon’, to represent a kind of “‘ideal’”, transcendental, ‘statical’, immutable, eternal and timeless, ontological ‘substantiality’.

“‘Systematic dialectic’”, today, for us, is still ‘synchronic dialectic’ given also that we, on the contrary, are considering these ‘idea-taxa’ to represent idealizations from sensuous-experience and from thought-experience. Single systems are presented conceptually as if they could be completely characterized by a frozen, ‘staticized’, synchronic, “space-like” “slice”, or “cross-section”, cut “perpendicular” to the “time-like” direction of history. As such, they capture only one, thin [but finite] “interval”, “instant[iation]”, or “moment”, of an otherwise, sensuously “time-varying”, dynamical, thickly diachronic universe of human experience and ideation. These “‘sections’” usually emphasize / sample from only, or mainly, the zenith of the “‘ascendant phase’” of the expanding processes of self-reproduction of the system being “‘systematically’” presented.

Alternatively described, a single system is presented, in this systematic-dialectical method of presentation, as if via a “‘stroboscopic’” view of its internal self-reproduction process, timed to the quasi-periodicity of that process, so that, in appearance, a single, apparently stable content is all that is seen, thereby pedagogically exploiting the small-time-interval temporal self-similarity, or ‘diachronic fractality’, typical of such systems.



Nonetheless, the <<aufheben>> concept applies to the relation of, e.g., <<idea-genos>> to <<idea-species>>, as depicted in such 'idea-systematics', or "'systematic dialectics'", diagrams, or 'complex pictograms'.

Each <<idea-genos>> unit, or <<monad>>, is: (i.) a *determinate negation*, or 'determination(s)-negation' [of one or more <<speci>>-fic, differentiating *determinations* of each of its own <<ideo-species>>]; (ii.) an *elevation* of the level of abstraction / '<<gen>>-eralization' of the object / unit of thought, from the <<species>> level to the <<genos>> level, and; (iii.) a *conservation* of all of its <<idea-species>> units. This is so (1) *explicitly*, as the conservation of the <<idea-species>> *common* determination(s), in and as the "'intension'" or "'connotation'" of their <<idea-genos>>, 'unit-ing' the totality of these <<idea-species>> "'idea-units'", or "'<<idea-monads>>'", via their <<idea-genos>>, grasped as their single, '<<gen>>-eric' 'meta-unit'. This is also so (2) *implicitly*, as the *implicit conservation* of their *total particularity*, '<<species>>-ficity', or '<<speci>>-ficity', within – "'in-side'" -- their 'unit-ary' <<genos>>

Each <<idea-species>> <<monad>> is a 'meta-<<monad>>' of its <<idea-sub-species>> <<monads>>.

Each <<idea-species>> unit is "'intensionally'", "'connotationally'" made up out of the heterogeneous multiplicity – the entire <<arithmos>> -- of its own <<idea-sub-species>> units.

Each <<idea-genos>> <<monad>> is a 'meta-<<monad>>' of its <<idea-species>> <<monads>>.

Each <<idea-genos>> unit is "'intensionally'", "'connotationally'" made up out of the heterogeneous multiplicity – the entire <<arithmos>> -- of its <<idea-species>> units.

Each <<idea-genos>> unit is thus also a 'meta-meta-unit' of its <<idea-sub-species>> units.

Each <<idea-super-genos>> <<monad>> is a 'meta-<<monad>>' of its <<idea-genos>> <<monads>>.

Each <<idea-super-genos>> unit is "'intensionally'", "'connotationally'" made up out of the heterogeneous multiplicity – the entire <<arithmos>> -- of <<idea-genos>> units.

Each <<idea-super-genos>> unit is thus also a 'meta-meta-unit' of its <<idea-species>> units, and, moreover, is a 'meta-meta-meta-unit' of its <<idea-sub-species>> units. ...

**F.E.D.** describes such *finite*, multi-scaled, multi-leveled, *qualitative* and 'ideo-ontological' mutual-similarity recursion-structures via the term '*meta-fractal*'.

**F.E.D.** also terms such 'meta-<<monad>>-ic cumula' as 'meta-<<monad>>-ologies' or 'meta-unit-ologies'.

**F.E.D.** presents a '*meta-system-atic dialectic*' of the '*meta-system*', or systems-progression, of the **F.E.D.** systems of dialectical arithmetic/algebra. **F.E.D.** presents this '*diachronic ideo-meta-system*' in the form of a micro-step-by-micro-step algorithmic generation, and narrative, expository, Marxian *method of presentation*, and evocation, of these successive systems, expressed in the language of the second system in that progression, the **Q** system, and starting from the **N** system as first, or <<arché>>, system of arithmetic/algebra.

This dialectical progression contains systems of dialectical arithmetic/algebra that can ideographically represent such synchronic, systematic-dialectical structures—viz., the 24<sup>th</sup>, the 56<sup>th</sup>, and the 120<sup>th</sup> systems of dialectical arithmetic/algebra in that progression.



For examples from the 24<sup>th</sup> system, and the 120<sup>th</sup> system, respectively, see slides 13 & 17 of

[http://www.adventures-in-dialectics.org/Adventures-In-Dialectics/Dialectical\\_Pictographv/Dialectical\\_Pictographv.htm](http://www.adventures-in-dialectics.org/Adventures-In-Dialectics/Dialectical_Pictographv/Dialectical_Pictographv.htm)

However, that dialectical systems-progression of dialectical-mathematical systems also contains systems of dialectical arithmetic/algebra that transcend any purely synchronic, Parmenidean, statical, and one-sidedly, purely qualitative – *qualifiers only* -- view of such ‘ideo-taxonomical’ systematics.

That is, that dialectical progression includes dialectical mathematical languages that can model the logic of *dynamical* “disjunctive syllogisms” [cf. Hegel]; of dynamically and *quanto-qualitatively* self-evolving and even ‘revolutionarily’ ‘self-meta-dynamically self-meta-evolving’ taxonomies.

Moreover, that progression includes dialectical systems of arithmetic / algebra / analysis [or of generalized “calculus”] that can model the ‘*other*-systems-perturbed self-development’ – the ‘*other*-evolving-dynamical-systems-impacted self-evolution’, and the other-[meta]-systems-impacted “‘self-meta-evolution’”, i.e., the “‘self-transcendence’” / “‘self-revolutionization’” -- of both conceptual systems, and of [other, physical, <<*physis*>>-ical] natural-historical systems. It can model these as conceptual and physical expressions of what the later Plato called <<*auto-kinesis*>>: nonlinear, ‘self-reflexive’, ‘self-induced’ ‘*self-change*’. That is, these later systems of ideographical language can ‘*qualo-quantitatively*’ model the phenomenologies of the other systems modified “‘self-development’” – or *system self-induced system change/development* – of systems.

For examples thereof, from the 31<sup>st</sup> system / ideographical language of dialectical mathematics, see slide 99 in

[http://www.adventures-in-dialectics.org/Adventures-In-Dialectics/Dialectical\\_Pictographv/Dialectical\\_Pictographv.htm](http://www.adventures-in-dialectics.org/Adventures-In-Dialectics/Dialectical_Pictographv/Dialectical_Pictographv.htm)

Here, to fulfill our present purpose, it should suffice to narrate just 3 of the **F.E.D.** *historical-dialectical* models, in terms only of the second, descriptively most simple, most abstract / least concrete of the **F.E.D.** systems of dialectical mathematics, showing, in each case, how the <<*aufheben*>> operation is integral to these “‘*historical dialectics*’”.

The first, ‘<<*arché*>>-thesis’ system of arithmetic in the **F.E.D.** arithmetical-systems-progression is called the **N** system, wherein **N** stands for the Standard **N**atural Numbers,

$$\mathbf{N} = \{1, 2, 3, \dots\}.$$

The **N** system is described, by **F.E.D.**, as being only “vestigially” dialectical.

The **F.E.D.** expositions describe the **N** arithmetical system as an arithmetic of ‘*pure, unqualified quantifiers*’.

An example of a *qualified quantifier* is “*three apples*” -- wherein “apple” functions as an ‘*ontological*’ qualifier -- or “*three kilometers*” -- wherein “kilometer” functions as a ‘*metrical*’ qualifier’.

An example of an ‘*unqualified quantifier*’ is, simply, the “pure number” word “*three*”.

The second system of dialectical arithmetic in that dialectical arithmetical-systems-progression, or diachronic ‘ideo-meta-system’, is described by **F.E.D.** as a ‘*first contra-thesis*’ to **N** as ‘<<*arché*>>-thesis’.



That second system is described as an arithmetic of 'pure, unquantifiable qualifiers'.

Called, by **F.E.D.**, the **Q** arithmetic – short for 'Qualifier arithmetic' -- its 'meta-numbers' are described as being entirely 'unquantitative'; as being purely qualitative.

These 'meta-numbers' are "unaddible", 'unsummable' -- <<asumblêtoi>>, as also, per Aristotle, Plato himself described the "idea-numbers" of his dialectical <<arithmoi eidetikoî>>.

For a quote regarding this longstanding "mystery" of the Platonic Dialectic, solved by **F.E.D.**, see slide **87** of

[http://www.adventures-in-dialectics.org/Adventures-In-Dialectics/Dialectical\\_Pictography/Dialectical\\_Pictography.htm](http://www.adventures-in-dialectics.org/Adventures-In-Dialectics/Dialectical_Pictography/Dialectical_Pictography.htm)

The **Q** 'ontological qualifier meta-numbers' can be interpreted, or assigned, to represent the dialectical interconnexions, and the 'inter-<<gen>>-erations', of 'ontological categories', or of 'system-categories' [i.e., of 'a-system-as-an-ontological-category'], in the interpreted, dialectical, "categorial progressions", and, thus, in the categorially-modeled "systems-progressions", that the second arithmetic can algorithmically and connotationally generate, and, thereby, model.

The **Q** system is also described, by **F.E.D.**, as an 'explicitization' of the implicit, from out of the latent, implicit, immanent 'intra-duality', or 'self-duality', of the "first order" **N** system.

The **Q** system is the extreme "Non-Standard" 'intra-dual' of the "Standard" **N**atural Numbers system.

The "first order" **N**, 'purely-quantitative' axiomatic system has long been known to 'hiddenly' "contain" "Non-Standard" models of itself. "Non-constructive" knowledge thereof arose from the proofs of three of the most profound theorems of modern mathematics, unknown in Ancient times. This knowledge arose as a result of the "first-order" co-applicability of the Gödel Completeness Theorem and of the Gödel Incompleteness Theorem, and, independently, as a consequence of the Löwenheim-Skolem Theorem alone.

The **Q** 'meta-numbers' conform to the same four, "first order" Peano Postulates which also rule the **N** "Natural numbers", but with a completely different -- extreme-opposite -- purely-qualitative meaning.

In the sequel, we narrate the application of the **Q** dialectical arithmetic, and of its dialectical algebra, to the modeling of the <<aufheben>>, 'meta-fractal' 'meta-monadologies' of **3** natural-historical dialectics of the Marx-Engels tradition –

I. The historical dialectic of human social formation(s). See slides **55 - 59** of

[http://www.adventures-in-dialectics.org/Adventures-In-Dialectics/Dialectical\\_Pictography/Dialectical\\_Pictography.htm](http://www.adventures-in-dialectics.org/Adventures-In-Dialectics/Dialectical_Pictography/Dialectical_Pictography.htm)

II. The 'dialectic of nature' – the historical dialectic of cosmological natural history at level one of the

**F.E.D.** 'universal taxonomy'. See slides **60 - 63** via the same link, and;

III. The historical dialectic of the 'meta-evolution' of the human-social *relations of production*.

See slides **64 - 66**, also via the same link.



# **Encyclopedia Dialectica**

## **Brief #2**

### **Meta-Monadology:**

**The Universality Of The «Aufheben» Process.**

**Part II.: A Model for Systematic Dialectics.**

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I believe that experience with compact, explicit dialectical models; with the ‘*algorithmic dialectics*’ and the ‘*dialectical algorithm*’ of, e.g., the **Q** categorial ideography, can help to catalyze, in the ‘experiencer’, a *cognitive revolution*. It can help to catapult that experiencer [deeper] into “‘the *dialectical operations* stage of adult human development’”. That, at least, has been my experience. I also hold that such a *revolution in cognition*, diffusing in widening waves throughout the global populace, is prerequisite to a successful, liberatory transition to the higher polity – to the political-*economic democracy* – of ‘democratic-communist’ society.

Three examples of dialectical mathematical models, soon to be explored, are cited at the close of Part I. They are: (1) a dialectical model of human social formation(s), (2) a dialectical model of the cosmological history of Nature at the level of its primary ‘monad-izations’, or ‘unit-izations’, and (3) a model of the [r]evolutions of the [human-] *social relations of [human-society/human-social-relations-of-production self-re-]production*. Before embarking upon the individual odyssey of any of these 3, each modeling a key *historical dialectic* integral to the Marx-Engels tradition, let us pause.

Let us pause, to exemplify this method of *dialectical-mathematical modeling* in support of Marxian, *systematic-dialectical exposition* for a, literally, “‘prosaic totality’”, one that is already well-known to [www.dialectics.org](http://www.dialectics.org) site users, by virtue of their literacy alone.

Such readers know this “prosaic totality” not only in a “chaotic” sense [Marx, *Grundrisse*, *ibid.*, p. 100], but, to some extent at least, also in a “*systematic*” sense as well.

Our ‘pre-familiarity’ with this totality is key. It allows key features of the **Q**-algebraic *dialectical-mathematical modeling* mode to emerge in a context free of most of the *unfamiliarities* which might otherwise afflict the communication and comprehension of these two, related, Marxian-scientific dialectical methods, those of: (1) *systematic dialectical immanent critique/exposition* of experienced totalities, and of: (2) *historical dialectical reconstruction* / ‘pre-construction’. That *dialectical modeling* mode can model both methods.

The everyday, prosaic ‘[sub-]totality-of-reference’, or “‘universe-of-discourse’”, for this familiarization excursion, is that which we name, herein, *Phonetic Writing Systems*.

This totality is a key sub-totality of the Phenome, or “‘meme-pool’”, of human civilization, and a fundamental ‘psycho-artefact’ of humanity’s ‘Psycho-Historical Material’, as addressed by ‘*Psycho-Historical Materialism*’, the paradigm of Marxian Theory that we are instancing here.

This [sub-]totality is partially represented, via a ‘diagonal transcendence diagram’, ‘meta-fractal <<aufheben>> diagram’, or ‘*meta-monadology diagram*’, as slide-viewer slide 25, linked via: [http://www.adventures-in-dialectics.org/Adventures-In-Dialectics/Dialectical\\_Pictography/Dialectical\\_Pictography.htm](http://www.adventures-in-dialectics.org/Adventures-In-Dialectics/Dialectical_Pictography/Dialectical_Pictography.htm)

An updated version of this diagram can be reached via the link below, as p. 16 of a PDF file: <http://www.dialectics.org/archives/pdf/F.E.D.,%20Dialectical%20Pictography,%20I.,%20Systematic%20Dialectics,%20Parts%20I-III,%2018MAY2008.pdf>

*Phonetic Writing Systems* have evolved, and are still evolving.

Nevertheless, the method of presentation of thought-totalities [including of presentations of thought-representations of *sensuous*, or ‘<<physis>>-ical’, totalities] called “‘*systematic dialectics*’” treats such “systems” as if they were ‘Parmenidean eternalities’.



More realistically, each is treated as a synchronic “‘slice of time’”; a “thin” cross-section, mentally-cut, by the tool of abstraction, from out of, and perpendicular to, the diachronic flow of ‘Nature-al’ history; a slice of contemporaneous 3-D space and its object-content; a short *time*-interval of *space*-time.

Claim. The top-level “‘ontological categories’”, or “‘kind-of-being’” categories – the ‘ontos’, for short – that constitute the content of our cognition of our experiences of *Phonetic Writing Systems* are, rendered in English phonetic symbols, the categories named ‘Letters’ [of the alphabet], ‘Words’, ‘Sentences’, ‘Paragraphs’, ‘Chapters’, ‘Books’, and ‘Libraries’.

These categories form, we contend, a systematic-dialectical ‘meta-monadology’. They exhibit a ‘qualitative-fractal’, or ‘meta-fractal’, ‘meta-temporal’ structure. They exemplify a relationship wherein ‘sub-<<arithmos>>-becomes-neo-<<monad>>’. That is, they exemplify an <<aufheben>> relationship of each predecessor ‘category-unit’ to its immediate successor ‘category-unit’, at what **F.E.D.** calls ‘taxonomy level one’ of this [sub-]totality.

The ensuing, intended-‘exemplificatory’ systematic-dialectical exposition of prosaic ‘textnology,’ or ‘text-knowlogy’, may even hold some intrinsic interest in its own right.

This [sub-]totality, of *Phonetic Writing Systems*, constitutes an <<aufheben>>-negation-driven, anti-reductionist ‘meta-<<monad>>-ology’, via these 7 categories, in the following sense –

1. The ‘ideo-<<arithmos>>/alphabet of Letters as <<monads>>/units is our beginning-, or <<arché>>-, onto 1;

2. The ‘ideo-onto’/<<arithmos>> of Words as <<monads>> is our ‘not-Letters’ ‘[contra]-onto’ 2.

Each Word unit, or Word <<monad>>, is a ‘Meta-Letter’ unit; a ‘meta-<<monad>>’, or ‘meta-unit’, made up out of a [typically] heterogeneous multiplicity of Letters; that is, each is made up out of a particular, definite sub-<<arithmos>> of the total Letters <<arithmos>>, or “alphabet”.

3. The ‘ideo-onto’/<<arithmos>> of Sentences as <<monads>> is our ‘not-Words’ ‘[contra]-onto’ 3.

Each Sentence-unit, or Sentence-<<monad>>, is a ‘Meta-Word’ unit; a ‘Meta-Word <<monad>>’, or ‘meta-unit’, made up out of a [typically] heterogeneous multiplicity of Words; each made up out of a particular, definite sub-<<arithmos>> of the total possible-Words <<arithmos>>.

4. The ‘ideo-onto’/<<arithmos>> of Paragraphs as <<monads>> is ‘not-Sentences’ ‘[contra]-onto’ 4.

Each Paragraph unit, or Paragraph <<monad>>, is a ‘Meta-Sentence’ <<monad>>; a ‘meta-<<monad>>’, or ‘meta-unit’, made up out of a [typically] heterogeneous multiplicity of Sentences, that is, each is made up out of a particular, definite sub-<<arithmos>> of the total possible-Sentences <<arithmos>>.

5. The ‘ideo-onto’/<<arithmos>> of Chapters as <<monads>> is ‘not-Paragraphs’ ‘[contra]-onto’ 5.

Each Chapter unit, or Chapter <<monad>>, is a ‘Meta-Paragraph’ unit; each is a ‘meta-<<monad>>’, or ‘meta-unit’, made up out of a [typically] heterogeneous multiplicity of Paragraphs, i.e., is made up out of a particular, definite sub-<<arithmos>> of the total possible-Paragraphs <<arithmos>>.

6. The ‘ideo-onto’/<<arithmos>> of Books as <<monads>> is our ‘not-Chapters’ ‘[contra]-onto’ 6.

Each Book unit, or Book <<monad>>, is a ‘Meta-Chapter’ unit; is a ‘meta-<<monad>>’, or ‘meta-unit’, made up out of a heterogeneous multiplicity of Chapters. That is, each Book is made up out of a particular, definite sub-<<arithmos>> of the total possible-Chapters <<arithmos>>.



7. The 'ideo-onto'/ <<arithmos>> of Libraries as <<monads>> is our 'not-Books' '[contra]-onto' 7.

Each Library unit, or Library <<monad>>, is a 'Meta-Book' unit; each is a 'meta-<<monad>>', or 'meta-unit', made up out of a heterogeneous multiplicity of Books, i.e., each Library is made up out of a particular, definite sub-<<arithmos>> of the total existing/extant-and-possible-Books <<arithmos>>.

Category 7 is where experience of the [sub-]totality of *Phonetic Writings Systems* ends for many of us. We may have encountered, e.g., university "'Inter-Library Loan'" networks, or other, e.g., internet-based [partial] transcendences of the stand-alone Library unit, or Library <<monad>>. But, for our purposes herein, the <<arithmos>> of Libraries finishes our [ex][s]ample exposition. What, then, is the optimal order of presentation of these 7 categories?

What ordering will maximize the communication, the comprehension of this [sub-]totality for the 'presentees' as well as for the 'presentor'? What ordering best conveys, both 'liminally' and "'sub-liminally'", the "'inner interconnexion'" of the system of phonetic writing, via these seven categories, categories serving as the 'ideo-anatomy' and 'ideo-physiology' – the 'conceptual organs' – of our 'cognization' of our shared experience with this 'phenomic' phenomenon, and [sub-]totality?

Is that optimal ordering their order of appearance – the historical-sequential order of their first emergence within the "'Phenome'" of the human species as a whole?

But would that historical priority-sequencing, or 'seniority-sequencing' of these categories, as they emerged prior to their integration, as "'organs'", into an "'organ-ic system'", necessarily capture the priorities of the inter-relations among them in our contemporaneous, synchronic, "'organ-ized'", "'system-ized'" *Phonetic Writing Systems* [cf. *Grundrisse*, *ibid.*, p. 107]?

Is that optimal ordering just any, "random" ordering in which these categories come to mind for any one of us, in response to *ad hoc* inquiry, via "free association", etc., e.g.,

Books, Libraries, Chapters, Words, Sentences, Letters, Paragraphs?

Seems rather unsystematic, i.e., "chaotic" [cf. *Grundrisse*, *ibid.*, p. 100].

Is that optimal ordering their "alphabetical ordering" –

Books, Chapters, Letters, Libraries, Paragraphs, Sentences, Words?

Seems merely formal, external to the content to be comprehended, and thus rather arbitrary.

Is it a systematic ordering? Is it one that starts with the *most inclusive* category, the category that, by itself alone, best approximates, or epitomizes, because it already "contains", the full [sub-]totality, the full content, the system, of all seven categories thought together, as a whole? I.e., does it start with the most complex, most "'thought-concrete'" of the 7 categories; the one that is the most "concentrated", richest in explicit, organized "determinations"? Such an ordering then follows with the *next most inclusive/complex*/"concrete" category, and so on, consecutively, all the way down to, "*reducing*" to, and ending with, the *least inclusive/complex* category, viz. –

Libraries, Books, Chapters, Paragraphs, Sentences, Words, Letters?

Such an ordering is non-arbitrary, 'contental' ["'content-based'", rather than merely "external" and "formal", like an alphabetical ordering] and systematic, in that the categories are arranged in a sequence with a clear, consistent gradient from *more inclusive* to *less inclusive*, from *more complex* to *less complex*; from *more* "thought-concrete" to *less* "thought-concrete", from categories "containing" *greater* concentrations of determinations to categories "containing" *less*.



However, this ordering confronts the ‘presentees’, *firstly*, with the category that “contains” the *most* replete, most sophisticated, most inclusive, most elaborate phenomena of the *Phonetic Writing Systems* [sub-]totality, and only *lastly* with the simplest category. It does so *without* first introducing the relatively simpler categories [ $\ll\text{arithmoi}\gg$ ] and units [ $\ll\text{monads}\gg$ ] of that [sub-]totality. Thus, that ordering seemingly *maximizes the difficulty* of systematic communication and comprehension for the presenter and, especially, for the ‘presentees’.

Therefore, the exact reverse ordering appears to be the more promising systematic ordering –

Letters, Words, Sentences, Paragraphs, Chapters, Books, Libraries.

Our goal here is to reconstruct our experience of the [sub-]totality named *Phonetic Writing Systems* as systematic, scientific knowledge, via an implicit-to-explicit, “categorical progression” unfolding of the initial,  $\ll\text{arché}\gg$  category, of Letters or of Phonetic Characters. A view of this method, of “systematic dialectics”, is presented, in both its Hegelian and Marxian versions, in *The Logic of Marx’s Capital* by Tony Smith [see especially pp. 1-8].

How can we capture this ‘meta- $\ll\text{monad}\gg$ -ic’ structure in the *mnemonic, heuristic shorthand* of an  $\ll\text{aufheben}\gg$ -operation-encoding -- hence dialectical-mathematical -- holistic notation?

Can we discover a non-atomistic, non-reductionistic, but also classificatory, taxonomic -- systematic -- operatorial ideography? One capable of formulating this ‘meta-monadology’ as but one special case of the myriads of such ‘meta-monadologies’ that we encounter – as we shall see – so ubiquitously in this  $\ll\text{kosmos}\gg$ ? Each of which that holistic notation is also capable of formulating? Each as yet-another ‘ $\ll\text{speci}\gg$ -al’ case of the  $\ll\text{genos}\gg$  of dialectic?

We contend that these seven “‘ontological categories’”, appropriately ordered and inter-related, can provide comprehensive “‘coverage’” of, and a systematic reconstruction of, key content of the *Phonetic Writing Systems* [sub-]totality, at that level of “‘thought-concreteness’” of formulation for which the *first* dialectical algebra – the *least* “‘thought-concrete’”; the *least* “complex” – i.e., the Q dialectical algebra, has sufficient linguistic, representational capability.

Claim: We assume (1) the communicational context of a ‘dialogue-ic’, ‘inter-informing’ community of human minds that [e.g., sensuously, as well as conceptually] already *know* the content of this [sub-]totality of *Phonetic Writing Systems*, even “chaotically”, i.e., unsystematically. We assume (2) an appropriate choice of the *beginning* ontological category, or  $\ll\text{arché}\gg$  onto. So given, we claim that the Q algebra, applied to, or “interpreted for”, this context, this [sub-]totality, can model its structure-content. It can form a dialectical-mathematical model which intuitively, “intensionally”, connotationally, and/or heuristically evokes, progressively, in a series of steps, all of the *remaining* ‘ideo-ontological’ content; all of the *other* “‘ontological categories’” -- or ‘ontos’, for short – as its ‘successor categories’. It can so model this [sub-]totality from out of the self-iterated,  $\ll\text{aufheben}\gg$  ‘self-subsumptions’ of that single,  $\ll\text{arché}\gg$  ‘onto’. That means, in this case, from the “‘ontological category’” named ‘Letters’ as point-of-departure. That  $\ll\text{arché}\gg$  category-name names phonetic, ‘phonogramic’, alphabetical symbols, or “‘characters’”, as its  $\ll\text{monads}\gg$ , or [heterogeneous] *units*. Together, they form an “‘alphabet’”, as the  $\ll\text{arché}\gg$ - $\ll\text{arithmos}\gg$ , or originating assemblage, of  $\ll\text{monads}\gg$ , or *units*, of the synchronic, systematic *dialectic* of *Phonetic Writing Systems*.

Suppose we assign the symbol q<sub>L</sub>, functioning as an ideogram, to denote the ‘ontological qualifier’ that stands for the alphabetical  $\ll\text{arithmos}\gg$ , or *assemblage of units*, that has phonograms, phonetic characters, or Letters as its *units*, or  $\ll\text{monads}\gg$ ?



Suppose q<sub>L</sub> denotes the human-*phenomic*, '*meme-etic*', '*ideo-ontological*' category whose 'intension' is the totality and unity of the connotations implicit in the *Phonetic Writing Systems* category of phonograms, or of phonetic characters, or of Letters [of an alphabet]? If so, then we can evoke and systematically organize the total system of seven categories listed above -- 'Letters' through 'Libraries' -- as the iterated <<aufheben>> '*self-subsumptions*', of the q<sub>L</sub> category itself, alone.

We thereby model, in an abbreviated fashion, a dialectically-ordered -- including "'classificatory'", or "'taxonomic'" -- "'*categorical progression*'" *exposition*. We achieve a scientific [knowledge-producing], systematic *reconstruction* of that [sub-]totality, via that comprehensive 'space' of seven distinct but complexly-interrelated "'*ontological categories*'".

Thus, we write 'q<sub>L</sub> <--> q<sub>1</sub>', or 'Letters <--> q<sub>1</sub>', meaning that we are "*assigning*" the specific <<arché>> 'connotogram' q<sub>L</sub> to the generic <<arché>> 'meta-numeral' of the Q arithmetic, denoted q<sub>1</sub>. This means that we are "*interpreting*" q<sub>1</sub> as "standing for" the onto of Letters. We thereby attribute all of the arithmetic, algorithmic properties of q<sub>1</sub> to q<sub>L</sub>. Doing so, we can then summarize all steps of the systematic dialectical exposition for the *Phonetic Writing Systems* [sub-]totality via the formula  $[q_L]^{(2^s)}$ . This multi-ideogram formula uses the 'picto-ideo-gram' '^' to denote '*raising to a power*' [e.g.,  $3^2 = 3 \text{ times } 3 = 3\text{-squared} = 9$ ].

This 'hyper-power-ed' -- or '2-levels of exponentiation' -- formula signifies the "'intension'", or 'connotations-packet', denoted by 'q<sub>L</sub>', raised to the power resulting from already raising the Natural Number denoted by '2' to the power 's', where 's' denotes a Whole Number *variable*.

In the context of this expository dialectic, s is a 'countor' for the steps of exposition, or of expository argument. In this model, s ranges from step 0, the starting point of the exposition, in which only the <<arché>> category is explicit, through the final step of the exposition, step 6. Within / by step 6, all 7 categories, *plus all* "'*hybrids*'" or "'[partial] *syntheses*'" *among the first 6*, should have been rendered 'inter-mutually' co-explicit. The resulting 'ideo-cumulum' consists of a "'non-amalgamative sum'" of  $2^6 = 64$ , separate, qualitatively distinct '*categorigrams*', or '*connotograms*', in all, all by then concurrently co-positd and [potentially] co-comprehended. In general, raising any q<sub>x</sub> to power  $(2^s)$ , per Q multiplication, denotes a ["non-amalgamative"] "'sum'" of  $(2^s)$  qualitatively distinct, 'ontically-distinct' categories.

We can now lodge our further claim that the formula  $[q_L]^{(2^s)}$  generates a "Table of Contents" for a narrative exposition of the *Phonetic Writing Systems* [sub-]totality, as follows --

Mock-up of "*Table of Contents*" implied by  $[q_L]^{(2^s)}$  for steps s = 0 through s = 6

Title: The Synchronic Dialectic of Phonetic Writing Systems, Level 1 Taxonomy

[s = 0] Chapter I. Letters = q<sub>L</sub> <--> q<sub>1</sub>

[s = 1] Chapter II. [Letters, &.] Words = q<sub>w</sub> <--> q<sub>2</sub>

[s = 2] Chapter III. [Letters, Words, hybrids, &.] Sentences = q<sub>s</sub> <--> q<sub>4</sub>

[s = 3] Chapter IV. [Letters, Words, Sentences, hybrids, &.] Paragraphs = q<sub>p</sub> <--> q<sub>8</sub>

[s = 4] Chapter V. [Letters, Words, Sentences, Paragraphs, hybrids, &.] Chapters = q<sub>c</sub> <--> q<sub>16</sub>

[s = 5] Chapter VI. [Letters, Words, Sentences, Paragraphs, Chapters, hybrids, &.] Books = q<sub>b</sub> <--> q<sub>32</sub>

[s = 6] Chapter VII. [Letters, Words, Sentences, Paragraphs, Chapters, Books, hybrids, &.] Libraries = q<sub>r</sub> <--> q<sub>64</sub>



The cumulative, <<aufheben>> aspect of written narratives, and of their [potential] cognitive assimilation by a reader, is not often explicitly addressed in conventional Tables of Contents. Such Tables of Contents leave this ‘cumulativity’ in implicity -- for the sake of brevity, to avoid repetitiousness, etc. -- despite its cognitive salience.

This cumulative aspect arises from the usual practice of reading-through such a narrative in its [descending] “Table of Contents” order, so that any/all previous, ‘predecessor chapter’ content is already, to some degree, “in mind”, and still “present to mind” by the time that the reader starts to assimilate each ‘successor chapter’.

Thus, taking account of the at-least-partial memory-presence of the previous-chapter(s) [‘psycho-historical’] material, each subsequent chapter represents, in mind, a conjunction and compounding of previous chapter(s) content with its own, incremental content.

Moreover, in the cumulative <<aufheben>> content-structure of a ‘meta-<<monad>>-ological’, systematic dialectic, every predecessor category is still internally present within -- <<aufheben>> conserved within -- every successor category, in addition to being also externally co-present with, and [qualitatively] added to, every successor category. It is not simply that each immediate, “‘consecutive’” ‘successor category’ <<aufheben>>-contains its immediate ‘predecessor category’.

True, the units/<<monads>> of an <<arithmos>> of Libraries each contain, each Library unit/<<monad>> contains, a subset of all Books as its immediate sub-units/sub-<<monads>>.

But also, because each Library-<<monad>> contains Book sub-<<monads>>, it also contains, both at and as its ‘recedingly’ deeper sub-<<monad>>-ic layers, Chapter-<<monads>>, Paragraph-<<monads>>, Sentence-<<monads>>, Word-<<monads>>, & Letter-<<monads>>.

Indeed, each Library-unit contains and ‘enfolds’ – each Library-unit is, in content – Letter-units within Word-units within Sentence-units within Paragraph-units within Chapter-units within Book-units. Each Library-unit is, precisely, a six-fold “‘[self-]involution’” of the Letters onto.

Each <<arithmos>> of Library-units is therefore, per our model, a seven-scale ‘meta-fractal’, a finite, seven-level qualitative similitude structure.

Each is a seven-layer, nested ‘meta-<<arithmos>> of Letter-units sub-<<arithmoi>>, <<aufheben>>-contained to form Word-units sub-<<arithmoi>>, <<aufheben>>-contained to form Sentence-units sub-<<arithmoi>>, <<aufheben>>-internalized to form Paragraph-units, sub-<<arithmoi>>, <<aufheben>>-contained to form Chapter-units sub-<<arithmoi>>, <<aufheben>>-contained to form Book-units sub-<<arithmoi>>, <<aufheben>>-contained to form this particular Library-unit <<arithmos>>.

Each <<arithmos>> contains its own, distinctive, defining <<monads>>, or units.

But each <<arithmos>> may, itself, be grasped as, or may become, a <<monad>>, or unit, in its own right. Neither <<arithmoi>> nor <<monads>> can be “reduced” to their “‘sub-entities’” without qualitative loss; ontological loss – loss of meaning; loss of content; ‘contental loss’.

Moreover, sub-<<arithmoi>>, of each <<arithmos>>-of-<<monads>>, are seen to form new, inclusively-higher, “‘meta-’”, <<monads>>; new, “‘meta-’”, units of new, inclusively-higher, “‘meta-’” <<arithmoi>>.

Thus, and thereby, the dialectic process, the <<aufheben>> process, continues.



“‘Dialectic’” – “‘Systematic Dialectic’”, “‘Historical Dialectic’”, ‘Meta-Systematic Dialectic’, ‘Psycho-Historical Dialectic’; thus even ‘the Dialectic of the Dialectic Itself’ – is, at root, this process of [self-]<<aufheben>> [self-]‘meta-<<monad>>-ization’.

The “‘meta’” prefix, in our usage of it herein, means “higher” or “over”, i.e., “above *and* inclusive of”. It belongs to words which name/describe the result of an [a self-]<<aufheben>> operation, especially to its “*elevation*” and “*conservation*” moments. Indeed, the <<aufheben>> moment of “*negation*” is also implicitly included and evoked in this usage, because an “absenting” of aspects of the particularity, or individuality and concreteness, of the object of the <<aufheben>> operation, as of a “‘meta-’” prefix, are also implied in the “*elevation*” moment, and even, more subtly, in the “*conservation*” moment.

We have emphasized the cumulative character of the ‘self-iterated’ <<aufheben>> operation here, via the device of the ‘grayed-out parentheticals’, reduced in font-size, in the table above.

This cumulative aspect emerges with even greater explicitude when we translate the ‘phonogramic’ Table of Contents, as rendered above, into the ‘ideogramic’ Table of Contents, as rendered below, using the Q categorial calculus as we have interpreted it for, and applied it to, the *Phonetic Writing Systems* [sub-]totality:

‘Ideogramic’ Title: [ The Synchronic Dialectic Denoted: ]  $[q_L]^{(2^s)}$ ,  $s = 0, \dots, 6$ .

[s = 0] Chapter I.  $[q_L]^{(2^0)} = q_L$

[s = 1] Chapter II.  $[q_L]^{(2^1)} = q_L + q_W$

[s = 2] Chapter III.  $[q_L]^{(2^2)} = q_L + q_W + \dots + q_S$

[s = 3] Chapter IV.  $[q_L]^{(2^3)} = q_L + q_W + \dots + q_S + \dots + q_P$

[s = 4] Chapter V.  $[q_L]^{(2^4)} = q_L + q_W + \dots + q_S + \dots + q_P + \dots + q_C$

[s = 5] Chapter VI.  $[q_L]^{(2^5)} = q_L + q_W + \dots + q_S + \dots + q_P + \dots + q_C + \dots + q_B$

[s = 6] Chapter VII.  $[q_L]^{(2^6)} = q_L + q_W + \dots + q_S + \dots + q_P + \dots + q_C + \dots + q_B + \dots + q_R$

To quote Hegel on this <<aufheben>> ‘cumulativity’ of categorial-progression dialectic:

“... the **determinateness** which was a *result is itself*, by virtue of *the form of simplicity* into which it has withdrawn, *a fresh beginning*; as *this beginning is distinguished from its predecessor* precisely by that **determinateness**, *cognition rolls onward from content to content*. First of all, this advance is determined as beginning from **simple determinatenesses**, the succeeding ones becoming ever *richer and more concrete*. For *the result contains its beginning* and its course has enriched it by a fresh **determinateness**. The **universal** constitutes the foundation; *the advance is therefore not to be taken as a flowing from one other to the next other*. In *the absolute method* the Notion *maintains* itself in its otherness, the universal in its particularization, in judgment and reality; *at each stage of its further determination it raises the entire mass of its preceding content, and by its dialectical advance it not only does not lose anything or leave anything behind, but carries along with it all it has gained, and inwardly enriches and consolidates itself*.” [G. W. F. Hegel, *Science of Logic*, Volume Two, Section Three, Chapter 3, *The Absolute Idea* [*italic, bold, and bold-italic emphasis added by Anonymous*]].



The present presentation is not a systematic dialectical one. It is an unsystematic, “chaotic” narrative. It may, however, still aspire to an intuitive flow of topical succession and exposition.

Let us next “unpack” the meaning of this semantically dense, syntactically ‘hyper-compact’, ‘hyper-intensive’, “intensional” formula,  $[q_L]^{(2^s)}$ , to see how it achieves a dialectical model of a Marxian, systematic-dialectical, categorial-progression method of presentation of the *Phonetic Writing Systems* [sub-]totality, connoting and guiding the narrative elaboration thereof.

First, we need to put in place some background information on the algorithmic machinery of the Q ‘*qualitative calculus*’, ‘*onto-logical calculus*’, or ‘*categorial calculus*’.

### Background on Q-Algebraic ‘*Connotograms*’ as <<Aufheben>> Operators.

Background on the “Raw”, or “‘Minimally-Interpreted’”, Dialectical Meta-Numbers of Q. The “‘minimally interpreted’” ‘meta-numerals’ of the Q, or ‘unquantifiable ontological Qualifier’, arithmetic, combine an underscored, boldface letter  $q$  –  $q$  -- as generic ‘ontological qualifier sign’, combined with a Natural Number subscript or denominator – e.g., 1 -- yielding  $q_1$ . The “space” or “set” of Natural Numbers is  $N = \{1, 2, 3, \dots\}$ .

Therefore, the “space”, or “set”, of the Natural Numbers-based ‘Unquantifiable Ontological Qualifier Dialectical Meta-Numbers’ is  $\underline{Q} = \{q_1, q_2, q_3, \dots\}$ .

The Q calculus is a ‘*qualitative calculus*’, ‘*ontological calculus*’, or ‘*categorial calculus*’.

The Q ‘*qualitative arithmetic*’, or ‘*ontological*[-categories] *arithmetic*’, is, unlike typical “Standard Arithmetics”, not “Closed” to all of its operations. It is “Open” to all of its operations. Any arithmetic *operation* among Q ‘meta-numerals’ is an “‘outbreak’” from [a ‘diagonal transcendence’ of] their “space”  $\underline{Q} = \{q_1, q_2, q_3, \dots\}$ . Take, for example, the operation of ‘*qualitative multiplication*’, or of ‘*ontological*[-categories] *multiplication*’.

If  $j$  and  $k$  are any two distinct Natural Numbers, then  $q_j \times q_k = q_k + q_{j+k}$ , the product here being a ‘compound meta-number’, nowhere to be found within the set  $\underline{Q} = \{q_1, q_2, q_3, \dots\}$ .

Each Q meta-number is an <<aufheben>>-*negation* operation for any other Q meta-number. The meta-number  $q_j$ , operating as “‘*subject*’” upon the meta-number  $q_k$ , produces a product which *conserves*  $q_k$ , the “operand” – the *object* to which the “operator” here,  $q_j$ , was applied -- viz.,  $q_k$  +  $q_{j+k}$  – but which also *elevates/negates* that *object*, or operand,  $q_k$  – viz.,  $q_k$  +  $q_{j+k}$ .

Each Q meta-number – generically ‘denote-able’ by  $q_n$ , where  $n$  is a variable, denoting any element of  $N = \{1, 2, 3, \dots\}$  – is also an <<aufheben>>, *determinate-negation* to itself:

$$q_n \times q_n = q_n + q_{n+n} = q_n + q_{2n}.$$

Therein, the meta-number ‘*self-operator*’,  $q_n$ , operating upon the meta-number  $q_n$  itself again, produces a product which *conserves*  $q_n$ , the ‘*self-operand*’ – the very [*subject*]-*object* to which the “self-operator” *subject*[-*object*] here, i.e., also  $q_n$ , was applied -- viz.,  $q_n$  +  $q_{n+n}$  – but which also *elevates/negates* that *subject-object*, or *operator-operand*,  $q_n$  – viz.,  $q_n$  +  $q_{n+n}$ .



Indeed, as we shall see in the sequel, under the '[self-]meta-monorad-ization' interpretation of this operation of 'qualitative self-multiplication' qua <<aufheben>> [self-]negation – the interpretation we use for all of the models presented herein -- the q<sub>n+n</sub> elevation/negation term of the product itself also represents yet another, higher, “heightening” species of <<aufheben>>-conservation. Note that the “plus sign”, “+”, used above, denotes a generalized form of addition – ‘qualitative addition’, ‘ontological qualifier addition’, or ‘categorical addition’. It does so because every pair of Q meta-numbers, if their subscripts differ at all, are “apples vs. oranges” to one another; are qualitatively different, just as 1 and i [= the square root of minus one], are non-quantitatively different from one another – each is neither less than nor equal to nor greater than the other. They transcend the “trichotomy law” of ordinary arithmetic. The Q qualitative meta-numbers are also ‘unquantifiable’. Adding a pair of Q meta-numbers of identical subscript, gives you, not 2 times one instance of that meta-number, but just a single instance. Addition is ‘non-redundant’, or “idempotent”, in Q: q<sub>n</sub> + q<sub>n</sub> = q<sub>n</sub>, as in later Boolean addition, 1 + 1 = 1 and 0 + 0 = 0.

Background on “Interpreted”, or “Semantically-Assigned”, Q Dialectical Meta-Numbers. When it comes to “assigned” or “interpreted” Q meta-numbers, Capital Letter subscripts replace Natural Number subscripts, with the Capital Letter usually serving as a mnemonic abbreviation, e.g., the capitalized first Letter of a word that names the ontological category with which the “assigned” or “interpreted” dialectical meta-number has been identified.

We use q<sub>L</sub>, for example, to represent the ontological category of alphabetic Letters.

Suppose that X is the first letter of the word that names a given ontological category. Suppose further that Y is the first letter of a different word, one that names a successor ontological category to the former. Successor in the sense of its being more inclusive/more complex/more thought-concrete [richer in determinations]. Therefore, it is to be presented later on in a categorial progression, systematic-dialectical method of presentation. For example, consider the case in which X = L denotes the first letter in the category-name ‘Letters’, and in which Y = W denotes the first letter in the category-name ‘Words’. Then the F.E.D. rules of ‘categorical multiplication’ – i.e., the rules of the ‘inter-operation’ of highly-interpreted ideograms like q<sub>x</sub> and q<sub>y</sub> – are as follows:

$$\mathbf{q_y \times q_x} = \mathbf{q_y[q_x]} = \mathbf{q_y \textit{ of } q_x} = \mathbf{q_y \textit{ “times” } q_x} = \mathbf{q_y \textit{ operating on } q_x} = \mathbf{q_x + q_{yx}};$$

$$\mathbf{q_x \times q_x} = \mathbf{q_x[q_x]} = \mathbf{q_x \textit{ of } q_x} = \mathbf{q_x \textit{ “times” } q_x} = \mathbf{q_x \textit{ operating on } q_x} = \mathbf{q_x + q_{xx}}.$$

Such “interpreted” or “assigned” versions of Q meta-numerals, because of their “assignment” to or “interpretation” by specific ontological categories, have specific “meaning”, “intension”, or “connotation”. Such ideograms are therefore termed ‘connotograms’ and ‘categorigrams’. But how do we “interpret”, or “assign” ontological-categorial meaning to, such meta-numerals, when they have multiple letter subscripts, as with q<sub>yx</sub> and q<sub>xx</sub>? The categorigram q<sub>yx</sub> means an <<arithmos>> of <<monads>> which share characteristics of both the q<sub>y</sub> and the q<sub>x</sub> <<arithmoi>>. We adhere to a general interpretation of each Q meta-number as a specific <<aufheben>> operation/operator with respect to any [other] Q meta-number that it operates upon [or ‘ontologically multiplies’]. We may thus interpret q<sub>yx</sub> as denoting the category, or <<arithmos>>, of the “appropriation”, or “real subsumption” of the <<monads>> of category q<sub>x</sub> by the <<monads>> of category q<sub>y</sub>, or as the category of the conversion of <<monads>> of the category of the q<sub>x</sub> into <<monads>> of the category of the q<sub>y</sub>.



Applying the above-stated interpretation to the case of double/identical subscripts, we are led to interpret  $q_{xx}$  as denoting the category, or  $\langle\langle\text{arithmos}\rangle\rangle$ , of the SELF-subsumption of the  $\langle\langle\text{monads}\rangle\rangle$  of category  $q_x$  by the  $\langle\langle\text{monads}\rangle\rangle$  of category  $q_x$  itself, or as the category of the SELF-conversion of  $\langle\langle\text{monads}\rangle\rangle$  of category  $q_x$  into meta- $\langle\langle\text{monads}\rangle\rangle$  of the higher,  $q_{xx}$  category. We adhere to a 'meta-monadization' interpretation of such self- $\langle\langle\text{aufheben}\rangle\rangle$  operations in general, that we advocate herein throughout. The  $q_{xx}$  category is "higher" than the  $q_x$  category in the sense that each  $\langle\langle\text{monad}\rangle\rangle$  of the  $q_{xx}$   $\langle\langle\text{arithmos}\rangle\rangle$  is made up out of a [heterogeneous] multiplicity [and out of a particular sub- $\langle\langle\text{arithmos}\rangle\rangle$ ] of the  $\langle\langle\text{monads}\rangle\rangle$  of the  $q_x$   $\langle\langle\text{arithmos}\rangle\rangle$ . We usually assign a new, single letter to the new ontological category signified by  $q_{xx}$ , because  $q_{xx}$  typically connotes a new "antithesis", or 'contra-thesis', category; new ontology, a new  $\langle\langle\text{arithmos}\rangle\rangle$ , a new, "qualitatively different", "ontologically different", higher "kind of being". I.e., we define  $q_{xx} = q_z$ , where  $Z$  denotes the first letter of a word which names the category/ $\langle\langle\text{arithmos}\rangle\rangle$  of  $\langle\langle\text{monads}\rangle\rangle$ , or units, which are 'meta-Xs, each made up out of a heterogeneous multiplicity of Xs', i.e., each made up out of a particular X sub- $\langle\langle\text{arithmos}\rangle\rangle$  of the  $X$   $\langle\langle\text{arithmos}\rangle\rangle$  as a whole.

Thus, for example, if  $q_x = q_L$ , and if  $q_{LL} = q_W$ , we interpret  $q_{LL}$  as denoting the category of 'meta-Letters, each made up out of a [typically heterogeneous] multiplicity of Letters', which we further identify as the category of Words, or  $q_W$ .

So it can now be seen that the 'self-subsumptions' which ' $q_L$  of  $q_L$ ' – or 'Letters of Letters' – connotes; that the new, higher, more-inclusive units, or  $\langle\langle\text{monads}\rangle\rangle$ , called Words, to which that "qualitative, ontological, categorial product" directs the presentee's attention, can be grasped as so many 'self-internalizations' of Letter  $\langle\langle\text{monads}\rangle\rangle$ , or of Letter units. Each Word is a 'meta-Letter', made up out of a [generally] heterogeneous multiplicity of Letters.

The Letters, in their own category,  $q_L$ , appears as "outsides"; as 'externities' [although, given that we have taken  $q_L$  as our  $\langle\langle\text{arché}\rangle\rangle$  category, no "inside" or 'internity' for each Letter is explicitly posited in the model]. Now a formation of [usually] multiple, different Letters that we call a Word has Letters as its "inside", or 'internity'; Words are the new "outsides". Letters, the former 'externities', have "self-re-entered" to become 'internities' in the formation of the new, higher, more-inclusive  $\langle\langle\text{arithmos}\rangle\rangle$  of Word- $\langle\langle\text{monads}\rangle\rangle$ , or Word-units.

Letters, "[self-]internalized", form Words [or, at least, "character-strings", some denoting Words, others Word-level gibberish, at any given, synchronic moment of this [sub-]totality].

What, then, of the meaning of terms like  $q_{zx}$ ? For example, what category would  $q_{WL}$  mean?

In the context of the systematic dialectic of the Phonetic Writing Systems, Words times Letters minus Letters, or [ $q_W$  of  $q_L$  minus  $q_L$ ] -- both equal to  $q_{WL}$  -- means a category whose units, or  $\langle\langle\text{monads}\rangle\rangle$ , are both [single] Letters and [single] Words. It means the category of [single] Letter units appropriated by, subsumed by, or converted into, units of the category of Words. The "extension" of this category, of the "intension", denoted  $q_{WL}$ , is, for contemporary English phonetic written language, the following: { a, I, ... }. It is the set containing the "indefinite article", "a", as a Word in its own right, and the nominative case form of the "first person[al] singular pronoun", "I", as a Word in its own right, etc.



The symbol **qwl** thus denotes an *<<arithmos>>* of *<<monads>>* which represent a special *interconnexion* between the **Letters** level and the **Words** level of the chart of slide 25: *<<monads>>* which are both single **Letter**-units, in the **Letters** context/level, and also single **Word**-units, in the **Words** context/level. The symbol **qwl** thus represents an ‘upliftment’ [conversion] from the “**Letters**” level to the “**Words**” level, of categorization; a ‘hierarchy-transcending’ inter-connexion, or ‘re-connexion’, between two levels; two ‘meta-fractal scales’.

The diagram of slide 25 of –

[http://www.adventures-in-dialectics.org/Adventures-In-Dialectics/Dialectical\\_Pictography/Dialectical\\_Pictography.htm](http://www.adventures-in-dialectics.org/Adventures-In-Dialectics/Dialectical_Pictography/Dialectical_Pictography.htm)

-- does not include depiction of the progression of these “‘*hybrid uni-thesis*’”, or ‘*syn-thesis*’, categories, “‘partial’” or “‘full’”. It explicitly depicts only progressions of ‘*anti-thesis*’ or ‘*contra-thesis*’ – of ‘meta-*<<monad>>*-ically’ ‘contra-*onto*’ – ontological categories.

Remember that any two or more qualitatively distinct interpreted-**Q** meta-numbers are “*unaddible*”, forming an “‘*inhomogeneous sum*” or “‘*heterogeneous sum*”, i.e., are “‘*irreducible*”, or “‘*non-amalgamative*”, as with **1 + i** or “**apples + oranges**”. Thus, if **X** does not equal **Y**, there is no **qz** in **Q** such that **qx + qy** equals, or “‘*reduces to*’”, **qz**.

Finally, remember that interpreted-**Q** meta-numbers are ‘*unquantifiable*’: **qx + qx = qx**, and thus, again, in this other sense also, “‘*unaddible*”; in the sense that **x + x** does not equal **2x**.

**Q-Algebraic ‘Connotogram Self-Multiplication’ in the Context of ‘Synchronic Dialectics’.** ‘Ontological qualifier self-multiplication’, in the modeling context of ‘Diachronic Dialectics’, or “‘Historical Dialectics’” – as we shall see in the next Part – abstractly mirrors actual *<<aufheben>>* events of “‘*self-change*”; “‘*self-movement*”; ‘*self-meta-<<monad>>-izing*’ “‘*autokinesis*”, or ‘*meta-<<kinesis>>*’, by which a given *<<arithmos>>* of *<<monads>>* *adds to itself* the ‘*meta-<<arithmos>>*’ of its own ‘*meta-<<monads>>*’.

The cosmological *<<arithmos>>* of *pre-atomic “particles”*, for example, growing in population, i.e., ‘*expandedly self-reproducing*, in population-count quantitative terms, and locally concentrating, or ‘densifying’, within the “‘self-expanding fireball’” of the early *<<kosmos>>*, is thought to have eventually achieved sufficient physical-spatial density for *its* constituent *<<monads>>* to mutually *inter*-act, i.e., for *it* to *self-intra*-act. As a result, they “‘fused’”, or ‘*self-converted*’, into, e.g., Helium *atoms*, or, at least, into *ionized Helium atoms*; into Helium *nuclei*, all of which are ‘meta-monadic’ in relation to the immediately *pre-atomic “particles”*, e.g., to “electrons”, “protons”, and “neutrons”. I.e., each *atom* is a ‘*meta-pre-atomic*’ “particle”, made up out of a [typically heterogeneous] multiplicity of [out of a specific *sub-<<arithmos>>* of] *pre-atomic particles*. This is thought to have occurred even before the emergence of the first *stars* – i.e., of those *pre-atomics/atomics* ‘*hybrid*’ or “*synthesis*” formations that also convert *pre-atomic particles* [e.g., ionized Hydrogen “atoms”: protons] into *atoms*, Helium and beyond.

The resulting cosmological *<<arithmoi>>* of *atoms* as *<<monads>>*, grow their populations. Locally concentrating, or ‘densifying’, into cooler, galactic, inter-stellar, proto-stellar clouds -- clouds increasingly enriched with *atoms* from the accumulating “stellar nucleosynthesis” yield of the *self-exploding stars* – they are even today observed to achieve sufficient density for their *atom-<<monads>>* to mutually interact, i.e., for each such cloud to ‘*self-intra*act’ as a local *<<arithmos>>*. As a result, these *atoms* “‘combine’” -- they ‘*self-convert*’ -- into, *molecules*.



E.g., they ‘*internalize*’, into water molecules, diatomic Hydrogen molecules, diatomic Oxygen molecules, Carbon Dioxide molecules, Hydrogen Peroxide molecules, Cyanide molecules, etc. Such *molecules* are ‘meta-monadic’ with respect to *atoms*, -- to “Hydrogen” *atoms*, “Helium” *atoms*, “Oxygen” *atoms*, “Carbon” *atoms*, “Nitrogen” *atoms*, etc. *Molecules* are ‘*meta-atoms*’, each made up out of a [typically heterogeneous] multiplicity of -- a specific *sub-arithmos* of -- *atoms*. This is thought to have occurred even before the emergence of the first *planets*, i.e., of those *atomics/moleculars* ‘*hybrid*’ or “*synthesis*” formations, also converting *atoms* into *molecules* – into water, carbon dioxide, cyanide -- *and beyond*.

The above-cited are *dynamical* [& ‘*meta-dynamical*’], *evolutionary* [& ‘*meta-evolutionary*’], *systems-forming* [& ‘*meta-systems*’ forming], *diachronic*, natural-historical processes.

That is, in the *Q*-based dialectical modeling of the above cited processes, ‘*qx of qx*’, or *qx[qx]*, can be interpreted as connoting the *temporal self-confrontation* of the *qx* <<*arithmos*>> in the course of its processes of expanded self-reproduction of its monadic population, and of monadic population “‘self-condensation’” / “‘self-concentration’” / ‘self-densification’. The <<*monads*>> that constitute the *qx* <<*arithmos*>> interact with one another with increasing intensity as their population counts and physical-spatial concentrations rise. The <<*arithmos*>> named by *qx* acts, as *subject* [in the sense of an English sentence] upon itself, also named by *qx*, as [its own] *object* [also in the sense of an English sentence], acting upon itself in accord with a *verb* which also names its characteristic mode of action(s), and, thus, which also names *qx*. The ideogrammic symbol ‘*qx*’ functions as a ‘noun-verb’ unity, an “‘operator’”. No separate *ideographic* symbolization of both ‘noun’ and ‘verb’, or of ‘noun’ versus ‘verb’, is needed. Only ‘self-juxtapositioning’ of a single, ‘noun-verb identical’ ideogram, here *qx*, is required to signify such ‘*self-reflexion*’: a “‘subject-object identical’” ‘self-reflexive moment’; a ‘*self-function*’, ‘function-argument identical’, or ‘operator-operand identical’, that brings forth new ontology.

‘*Synchronic Dialectic*’, or “‘*Systematic Dialectic*’”, is modeled, herein, using symbolizations of ‘ontological qualifier self-multiplication’ that are similar to those used in the *F.E.D.* ‘*Historical-Dialectical*’ models, viz., *qL[qL]*, *qW[qW]*, *qS[qS]*, *qP[qP]*, *qC[qC]*, and *qB[qB]*. However, the context of ‘*dialectical systematics*’ is one in which historical time is, by thought-experiment, imagined to be momentarily suspended, or frozen – is “‘abstracted-from’”. What does *Q* ‘ontological qualifier self-multiplication’ mean in this, *synchronic*, context?

Take the expression *qW[qW]* for example. This expression signals us to *shift our attention* from the <<*arithmos*>>/category of *Words*, each of whose <<*monads*>> “‘contain’” *Letters*, to something “‘*diagonally*’” higher, e.g., in the ‘*diagonal*’ transcendence diagram of slide 25. It calls upon us to seek a “‘higher’” <<*arithmos*>>/category each of whose <<*monads*>> is a ‘*self-contain-ment*’ of *Words* – if, indeed, such an entity exists in our “*chaotic*” experience of this [sub-]totality of *Phonetic Writing Systems*, as we reconstruct it *systematically* in thought.

Or, take the expressions *qB[qB]* and *qR[qR]*. Each such ‘*self-reflexion*’, in each step of our model, like *qB[qB]*, in effect, “‘intends’” a question: “Is there any ontology left in our “chaotic” experience of the [sub-]totality being reconstructed in concept/theory which is still left out in the systematic categorial account up to and including the category *qB*?”. Or: “Do the categories, or <<*arithmoi*>>, leading up to and through category *qR* thoroughly systematize and exhaust our experience, to date, with this [sub-]totality?”. “Have we yet reached the ‘re-Boolean’ stopping point, where, per our experience, *qR* is really just *qR*, and ‘*qR of qR*’ equals just *qR* only?”.



Taken generically, each progressive instance of the form  $qx[qx]$ , asks the presentor, and the presentees, as follows: “OK, so you’ve successfully “minded” and “mined” the category, the  $\ll arithmos \gg$ , whose  $\ll monads \gg$  are named “ $qx$ ’s” [in our example, Letters, or Words, or Sentences, or Paragraphs, . . . , or Libraries, i.e.,  $q_L$ ’s, or  $q_W$ ’s, or  $q_S$ ’s, or  $q_P$ ’s, . . . , or  $q_R$ ’s] of its value in reconstructing the  $[sub-]$ totality in question. Is there a  $[meta-]\ll arithmos \gg$  that is of service in this reconstruction, such that ‘ $\ll monad \gg$ -izations’ of  $sub-\ll arithmoi \gg$  of the  $qx \ll arithmos \gg$  form its  $[meta-]\ll monads \gg$ , or  $[meta-]units$ ? Or: “You’ve grasped the role of the  $qx$  as  $\ll monads \gg$ , forming an  $\ll arithmos \gg$ . Is there a role, in this reconstruction, in thought, of the  $[sub-]$ totality in question, for a higher  $\ll arithmos \gg$ , i.e., of higher  $\ll monads \gg$ , of which  $sub-\ll arithmoi \gg$  of the  $qx$  constitute the  $sub-\ll monads \gg$ ?” [in our example, e.g.: “You’ve comprehended the function of Letters as  $units$ ; now, is there a role, in this thought-reconstruction of *Phonetic Writings Systems*, for a higher  $\ll arithmos \gg$ , i.e., of higher  $units$ , of which Letters constitute the  $sub$ -units [i.e., “Is there a role, in the ‘dialectical systematics’ of *Phonetic Writing Systems*, for the category/ $\ll arithmos \gg$  of Words?”].”].

It is a matter of predecessor  $\ll arithmoi \gg$  also supporting successor  $\ll monads \gg$ , hence successor  $\ll arithmoi \gg$ .

It is a matter of whether or not  $sub-\ll arithmoi \gg$  of the  $\ll arithmos \gg$  most recently placed in the ‘ $meta-\ll arithmos \gg$ -ology’ of the totality being systematically rebuilt in thought, in theory, also form the next-to-be-placed  $[meta-]\ll arithmos \gg$ , because those  $sub-\ll arithmoi \gg$  already constitute the  $[meta-]\ll monads \gg$  whose assemblage constitutes that  $[meta-]\ll arithmos \gg$ . The *systematic dialectic* of *Phonetic Writing Systems* does not stop with Letters, since subsets of the alphabet form  $units$  which are ‘ $meta$ ’ to Letters, namely, Words, units just as integral to the *Phonetic Writing Systems* as are Letters. This dialectic does not stop with Words, since subsets of the Words multitude form  $units$ , which are ‘ $meta$ ’ to Words, namely, Sentences, units just as integral to *Phonetic Writing Systems* as are Words. This dialectic does stop with Libraries, to the extent that  $units$  which are ‘ $meta$ ’ to Libraries reside outside our shared experience of this system/sub-totality.

#### ‘Metaphorizing’ [Ideo-|Ontological |Self-]Expansion via ‘Ontology Spaces’ of [Self-|Growing Dimensionality.

[Note to the Reader: This section is somewhat technical mathematically, and is also ‘presumptive’ of some background knowledge regarding the history of the ‘meta-evolution’ of the “Standard” systems of arithmetic, especially of the so-called “hypernumber” systems. It may be skipped by a reader not versed in this background knowledge without loss of continuity with respect to the main narrative].

This section aims to briefly begin to locate the  $Q$  ‘dialectors’, or ‘dialectical meta-numbers’, in (1) the history of mathematical systems leading up to the present ‘cumulum’ / super-system of mathematical systems, as well as (2) to locate them within that contemporaneous super-system.

Recall the opening paragraphs of the last section. Note that if we take the ontological category of the  $\ll arithmos \gg$  of the ‘pre-sub-atomic particles’ – e.g., the quarks – as our  $\ll arché \gg$   $\ll arithmos \gg$  category, denoted  $q_p$ , then the expression  $[q_p]^{(2^s)}$  describes “the dialectic of nature” as a whole, at “taxonomy level one”. I.e., it describes the ‘meta-monadological’ *historical dialectic* of “natural history”; the history of the self-construction of this  $\ll kosmos \gg$ .

That is, the expression  $[q_p]^{(2^s)}$  describes the progressive irruption of more and more new “*dimensions*” of cosmological ontology. It describes  $[ev]entities$  of *different* ‘intrinsic ontological dimensionality’ – of higher and higher degrees of ‘meta-fractal self-involution’ – all co-existing within the same *physical space*, as the  $\ll aufheben \gg$  process of “‘recursive” ‘meta- $\ll monad \gg$ -ization’ continues to ‘self-iterate’.



Thus –

[s = 0] stage 1.  $[q_p]^{(2^0)} = q_p = \text{pre-sub-atomics only};$

[s = 1] stage 2.  $[q_p]^{(2^1)} = q_p + q_s = \text{pre-sub-atomics} + \text{sub-atomics};$

[s = 2] stage 3.  $[q_p]^{(2^2)} = q_p + q_s + q_{sp} + q_a = \dots \text{sub-/pre-sub-atomics hybrids} + \text{atomics};$

[s = 3] stage 4.  $[q_p]^{(2^3)} = q_p + q_s + q_{sp} + q_a + q_{ap} + q_{as} + q_{asp} + q_m$

$= \text{pre-sub-atomics} + \dots + \text{sub-atomics} + \dots + \text{atomics} + \dots + \text{molecular}; \dots$

Let's pursue this metaphor, of conceptual “*spaces*” of differing ‘*ontological dimensionalities*’.

The <<arché>> ‘ur-dialector’ of the  $\underline{Q}$  dialectical arithmetic, named by the ‘meta-numeral’  $q_1$ , can be modeled, ‘analytic-geometrically’, by a one-dimensional, unit-length line segment, thus, by an idea-object conceived as being oriented in[to] a one-dimensional, imagined space.

Suppose that we advance a notch, in the *systematic dialectic* within the  $\underline{Q}$  arithmetic itself, from the  $\underline{Q}$  system-<<species>> based upon the “Natural Numbers”,  $N = \{1, 2, 3, \dots\}$ , or  $N\underline{Q}$ , to that next <<species>> of the  $\underline{Q}$  system-<<genos>>, the one based upon the “Whole Numbers”,  $W = \{0, 1, 2, 3, \dots\}$ , or  $w\underline{Q}$ ? We thereby incur the meta-number  $q_0$ , which is “Boolean” rather than ‘contra-Boolean’, as are the rest of the  $w\underline{Q}$  [ $q_0 + q_0 = q_0$ , and, therefore,  $q_0 \times q_0 = q_0 + q_{0+0} = q_0 + q_0 = q_0$ ];  $w\underline{Q} = \{q_0, q_1, q_2, q_3, \dots\}$ .

Then, in  $w\underline{Q}$ , the resulting new context, both, e.g.,  $q_1$  and  $q_2$  can be modeled as unit-length line segments, mutually-perpendicular, oriented into two different imagined-space dimensions, and joined only at  $q_0$ , the ‘an-anterior’ or “origin” end of each such unit-length segment. The “square”, i.e., the ‘self-product’, of  $q_1$ , namely,  $q_1 \times q_1 = q_1 + q_{1+1} = q_1 + q_2$ , can be modeled as the *diagonal* line segment of the two-dimensional plane framed by mutually perpendicular  $q_1$  &  $q_2$ , a diagonal whose ‘an-anterior’ also intersects theirs, at the  $q_0$  “origin”.

Thus, the <<arché>> step of the generic dialectic, step 0,  $[q_1]^{(2^0)} = q_1$ , can be ‘geometrized’ as a ‘*hypo*-diagonal’, implying a 1-dimensional ‘*hypo*-cube’, i.e., a “mere” line segment of one standard unit in length, and, thus also, a 1-dimensional, imagined, *ontological space*, with one *onto*, or *ontological category*,  $q_1$ , assigned to that one *ontological dimension*.

Then, the next step of the generic dialectic, step 1,  $[q_1]^{(2^1)} = q_1 + q_2$ , can be ‘geometrized’ as a *diagonal*, implying a 2-dimensional ‘*hypo*-cube’, and, therefore, a 2-dimensional, imagined, *ontological space*, with one *onto* assigned to each *ontological dimension*, and with this *diagonal* representing their [“vector”] sum/“superpositioning”.

Next, the third step of the generic dialectic, step 2,  $[q_1]^{(2^2)} = q_1 + q_2 + q_3 + q_4$ , can be ‘geometrized’ as a ‘*hyper*-diagonal’ – as the “diagonal” of a “4-dimensional *hyper*-cube” -- implying a four-dimensional, imagined, *ontological space*, with one *onto* assigned to each *ontological dimension*.

This pattern continues, as the  $s$  in  $[q_1]^{(2^s)}$  escalates beyond  $s = 2$ .



There is something very reminiscent, in these ‘dialectors’, of “vectors”, and, more specifically, of the “non-amalgamative sums” of the “basis” unit-vectors of the “orthonormal” vector “basis” of a ‘statical’,  $n$ -dimensional space, e.g.,  $\underline{e}_1 + \underline{e}_2 + \underline{e}_3$  as “orthonormal” vector “basis” of a 3D space. However, there are differences as well.

None of the traditional vector products -- neither the “scalar product” nor the “vector product” -- can formulate the *dimensionally-expanding*, ‘dynamical’ space generated by  $[\underline{q}_1]^{(2^s)}$  as  $s$  rises in value. The “scalar product” produces a non-vector. The “vector product” is designed to keep always within the same 3-dimensional model of physical space, ‘based’ by  $\underline{e}_1 + \underline{e}_2 + \underline{e}_3$ . Moreover, e.g.,  $\underline{e}_1 + \underline{e}_1 = 2\underline{e}_1$ , whereas  $\underline{q}_1 + \underline{q}_1 = \underline{q}_1$ .

The  $w\underline{Q}$  also have resonances with other “hypernumbers”, including, especially, with the “Clifford numbers” and the “Grassmann numbers”. The “[William Kingdon] Clifford numbers” involve  $m$ -dimensional spaces for the various values of  $m$  in  $N$  --

“There are Clifford algebras with units,  $1, \underline{e}_1, \dots, \underline{e}_{n-1}$  such that the square of each  $\underline{e}_i = -1$  and  $\underline{e}_{ij} = -\underline{e}_{ji}$  for  $i \neq j$ . Each product of two or more units is a new unit and so there are  $2^n$  different units.” [Morris Kline, *Mathematical Thought from Ancient to Modern Times*, vol. 2, p. 792].

-- But the spaces of each different  $n$ -dimensionality are ‘statical’ and dirempt. That is, operations within a “Clifford space” of dimension  $n$  do not induce a transition into a “Clifford space” of dimension  $> n$ . The “Grassmann numbers”, on the contrary, produce entities of higher dimensionality -- new units -- by means of “outer product” operations within a model of physical space “previously” -- ‘pre-product-ion’ -- inhabited only by entities of lower dimensionality --

“While Hamilton was developing his quaternions, another mathematician, Hermann Günther Grassmann (1809-77), who showed no talent for mathematics as a youth and who had no university education in mathematics . . . was developing *an even more audacious generalization of complex numbers*. Grassmann had his ideas before Hamilton, but did not publish until 1844, one year after Hamilton announced his discovery of quaternions. In that year he [Grassmann – *Anonymous*] published his *Die lineale Ausdehnungslehre (The Calculus of Extension)*. . .” [Ibid., p. 792, *emphasis added by Anonymous*].

-- such that the Grassmann “hypernumbers” generate *a dimensionally-expanding geometry*, generating idealized geometrical objects of ever-greater dimensionality, part of the reason for their utility in modeling the hyper-dimensional physical spaces posited by “super-symmetric string theory” --

“Though *Grassmann’s exposition was inextricably bound up with geometrical ideas* -- he was in fact concerned with *n-dimensional geometry* -- we shall *abstract the algebraic notions* that proved to be of lasting value. His basic notion, which he called *an extensive quantity (extensive Grösse)*, is one type of *hypernumber* with *n components*. To study his ideas we shall discuss the case  $n = 3$ . Consider two *hypernumbers*  $\underline{a} = a_1\underline{e}_1 + a_2\underline{e}_2 + a_3\underline{e}_3$  and  $\underline{b} = b_1\underline{e}_1 + b_2\underline{e}_2 + b_3\underline{e}_3$ , where the  $a_i$  and  $b_i$  are real numbers and where  $\underline{e}_1, \underline{e}_2$ , and  $\underline{e}_3$  are primary or *qualitative units* represented *geometrically* by *direct[ed] line segments* of *unit length* drawn from a *common origin* so as to determine a right-handed *orthogonal* system of axes. The  $a_i\underline{e}_i$  are *multiples* of the primary units and are represented geometrically by lengths  $a_i$  along the respective axes, while  $\underline{a}$  is represented by a directed line segment in space whose projections on the axes are the lengths  $a_i$ . The same is true for  $b_i$  and  $\underline{b}$ . Grassmann called the directed line segments or line-vectors *Strecke*. The addition and subtraction of these *hypernumbers* are defined by

$$(7) \quad \underline{a} \pm \underline{b} = (a_1 \pm b_1)\underline{e}_1 + (a_2 \pm b_2)\underline{e}_2 + (a_3 \pm b_3)\underline{e}_3.$$



Grassmann introduced two kinds of multiplications, the inner product and the *outer product*. . . . For the *outer product*

$$(9) \quad [e_i e_j] = -[e_j e_i], [e_i e_i] = 0.$$

These brackets are called *units of the second order* and are *not reduced* by Grassmann (whereas Hamilton does) to *units of the first order*, that is, to the  $e_i$ , . . . With the aid of the *outer product rule* (9) the outer product  $P$  of the *hypernumbers*  $a$  and  $b$  can be expressed as follows:

$$(10) \quad P = [ab] = (a_2 b_3 - a_3 b_2)[e_2 e_3] + (a_3 b_1 - a_1 b_3)[e_3 e_1] + (a_1 b_2 - a_2 b_1)[e_1 e_2].$$

This product is *a hypernumber of the second order* and is expressed in terms of *independent units* of the *second order*.” [Ibid., pp. 782-783, *bold-italics and underline emphasis added by Anonymous*].

We – to get the flavor of the ‘dimensionality escalation’ that Grassmann’s “‘outer multiplication’” produces – extract below a translation from Grassmann’s own narrative summary thereof, for geometrical points viewed as ‘Grassmannian’ hypernumbers/operators –

“If  $A, B, C, D$ , are points, then we mean by

- (1)  $A \times B$ , the *line*, which has  $A$  and  $B$  as extremities, regarded as a definite part of the infinite right [*1-dimensional – Anonymous*] *line* determined by  $A$  and  $B$ ;
- (2)  $A \times B \times C$ , the *triangle*, whose vertices are  $A, B$ , and  $C$ , regarded as a definite part of the infinite [*2-dimensional – Anonymous*] *plane* determined by  $A, B, C$ ;
- (3)  $A \times B \times C \times D$ , the *tetrahedron*, whose vertices are  $A, B, C, D$ , regarded as a definite part of infinite [*3-dimensional – Anonymous*] *space*.” [Michael J. Crowe, *A History of Vector Analysis: The Evolution of the Idea of a Vectorial System*, p. 75, *emphasis added by Anonymous*].

However, the Grassmann system is organized around its interpretation for  $n = 0, 1, 2, 3$ , and larger dimensionalities of *geometry*, of physical-like spaces. The idea of a generalized, ‘*ontological dimensionality*’ is absent. The  $\mathbf{Q}$  ‘meta-numbers’ are also related to recent, circa 1977-1994, work on hypernumbers by Charles Musès. Musès used “*power-orbits*” to characterize each <<*genos*>> of hypernumbers. The square-root of  $-1$ , or so-called “*imaginary*”, hypernumber, standardly denoted  $i$ , and known from Renaissance times, has, as its power-orbit, the locus of  $i^t$ , from  $t = 0$  through  $t = \dots$ , wherein  $t$  denotes the “continuous”, “real” time variable. The  $i$  power-orbit is (1) a repeating perfect-*circular* orbit in the two dimensional space framed by mutually-perpendicular “real” and “imaginary” axes, or is (2) a right-cylindrical, upward advancing *helix* in the three-dimensional space framed by the three, ‘inter-mutually’ perpendicular “real”, “imaginary”, and “time” axes.

Meta-numbers of the form  $q_n$ , where  $n$  is any element of  $\mathbf{N}$ , as arguments of Seldon Functions of the form  $[q_n]^{(2^t)}$ , or even just of the single-exponent form  $[q_n]^{(t)}$ , generate, in place of “power-orbits” – instead -- ‘power *meta*-orbits’, ‘power *meta*-expansions’, or ‘qualitative-size dimensionality-escalations. These ‘meta-paths’, ‘meta-trajectories, or ‘meta-courses’ are capable of modeling dialectical categorial progressions – “‘superpositions’” of ‘*ontological qualifiers*’; ‘*multi-ontic cumula*’ -- such as we have seen above, as a *dimensionally*-[self]-expanding space.

Ever since Russell and Whitehead’s *Principia Mathematica*, at least, it has become traditional to define numbers set-theoretically; to re-express numbers as sets, or to “*reduce*” numbers to sets. Perhaps the best way to characterize the  $\mathbf{Q}$  meta-numbers in terms of sets and of set theory is *not* to re-express them by any *static* sets [of sets of . . .].



Rather, it is to point out that the Q meta-numbers express, or model, the ‘meta-dynamical set’, the *dialectical*, “*mental object*” *self-movement*; the ‘ideo-<<autokinesis>>’, i.e., the *qualitative*, *ontological self-expansion process*, that IS the [finitary] “‘*Set Of All Sets*’”.

That set-object itself should be the primary object of set theory. It is the set-theoretical definition of “set”. Instead, this set has been outlawed and banished from Set Theory, due to the “contradictions” it entails. “‘*The Set Of All Sets*’” begins from the power-set of the “universal set”. That is, it begins from the set of all [idea-]objects forming a given, “‘*realistic*’”, i.e., *finite*, universe of discourse -- as <<arché>> set. We denote the universal set by U, and its power-set by  $2^U$ , or by  $S_0$ , both denoting the <<arché>> set of the “‘*The Set Of All Sets*’” self-progression. The Seldon Function  $[2^U]^{(2^s)}$ , and the solution-equation  $S_s = [S_0]^{(2^s)}$ , which solves the set equation  $S_{s+1} = [S_s]^2$ , model this “‘*The Set Of All Sets*’”, by way of ‘*The Power-Set Product of Sets*’ product-rule, whereby, for any set, S, denoting the power-set of S by  $2^S$ , we define:  $S^2 = S \text{ union } 2^S = S + 2^S$ .

Not a “‘propositional contradiction’”, but what F.E.D. terms an ‘ideo-ontological’, “‘existential’”, *definitional self-contradiction* -- a special sort of ‘self-duality’ -- afflicts every attempt at statically forming this finitary “‘*Set of All Sets*’”, starting from the very start of such attempts, with the step 0., initial, or <<arché>> attempt:  $S_0 = 2^U$ .

No such attempt can ever include “‘*All Sets*’” as its members/elements.

Whatever step of self-inclusion/subsets-inclusion any such attempt has attained, the set that constitutes this attempt always still excludes every single one of the subsets of itself -- among which is its “improper” subset, the attempt-set itself -- as elements or content(s) of itself. That is, every single member/element of the set of all subsets -- of the “power-set” -- of that attempt-set is always a new, unprecedented element, never before seen *as such*, and thus not “yet” included in that attempt-set. So, that attempt-set must *internalize itself* -- it’s own “improper” subset -- plus all of its other subsets, again. But it thereby transforms itself into yet a newer, unprecedented, set of “higher logical type”, a more inclusive attempt-set, whose [new] power-set is therefore, also -- “again”, “still” -- not yet included in its membership, from the very moment that this new/next attempt-set is constituted. This “‘*Set of All Sets*’” thus epitomizes ‘[ideo-]<<auto-kinesis>>’ -- i.e., “‘*self-change*’” [Marx]; *self-transformation*; *self-induced* qualitative evolution; ontic self-development; continuing ‘self-revolutionization’ -- as a potentially perpetual [progressive mental *self-]motion*. What accumulates inside the ever-self-expanding content of this “‘*Set of All Sets*’” mental ‘eventivity’ is a burgeoning of ever more explicit, ever more nuanced *extensional predicates*, elaborating the *potential being* already contained implicitly in U into ever greater explicitude. Thus, this Set, denoted  $S_s$ , as *s* grows ever larger, expresses the “*Being*” of that Universe in a way about which, increasingly as *s* increases, “*Nothing*” can be said which can adequately encompass or comprehend the overall, total, joint “intension” of so vast an ensemble of “extensions”; of so diverse a range of “predicates” or “‘determinatenesses’”, other than vacuously, as just “*Being*”.

[Note to the Reader Interested in Following, in Detail, the ‘*Qualitative Calculations*’ to Follow: You will soon need -- specifically, after Step 1. -- the Q ‘<<aufheben>> evolute product’ non-distributive “shortcut” ‘qualitative multiplication’ rule for “‘non-amalgamative sums’” of Q qualifiers, operating upon each other, or upon themselves [i.e., for the “‘squaring’” of such Q sums]. Suppose that the qualifiers in the ‘operator-sum’, ‘function-sum’, or ‘multiplier-sum’,  $[q_a + \dots + q_z]$ , summing  $n > 1$  distinct qualifiers, are ordered from the lowest “Natural” Number subscript to the highest, so that  $z > a$ . Suppose that no such constraint is imposed upon the ordering of the ‘operand-sum’, ‘argument-sum’, or ‘multiplicand-sum’, consisting of  $m > 1$  distinct qualifiers,  $[q_x + \dots + q_y]$ . Then that rule is --

$$[q_a + \dots + q_z] \times [q_x + \dots + q_y] = [ [q_x + \dots + q_y] + [ [q_z \times q_x] + \dots + [q_z \times q_y] ] ]$$

-- in which the qualifier-pair multiplication rule given already above is applied *m* times. Reminder: Don’t forget to “cancel out” additional occurrences of any qualifier in the result you obtain after applying the rule above, recalling the “non-addibility”, ‘unquantifiability’, or “additive idempotency” of the Q meta-numbers.].



### The Dimensionally-Expanding Space 'Explicitized' by $[q_1]^{(2^s)}$ as a 'Possibility-Space'.

We have seen that the successive values of  $[q_1]^{(2^s)}$ , for the successive values of  $s$ , represent, 'analytic-geometrically', a progression of '[hyper-]diagonals', and, thereby, a progression of conceptual spaces of escalating [hyper-]dimensionality, in which those '[hyper-]diagonals' are embedded, with each successive space being a space of dimension  $(2^s)$ .

It works best to interpret these successive spaces, not as 'actuality spaces', nor even as "'probability spaces'", but as "'possibility spaces'".

The expansion of interpreted  $[q_1]^{(2^s)}$ , as  $s$  escalates, takes the "'algebraic'" form of an expanding "non-amalgamative" sum of connotative 'categorigrams'. Individual 'categorigram' terms in each such sum each represent a particular "'combination'", or 'self-combination', of the various, single-letter-abbreviated, successively surfacing categorial, ontological "'intensions'" / meanings, or, ultimately, of the <<arché>> ontological "'intension'" / meaning.

Each 'categorigram' term may best be interpreted as representing, not an ontological category that must actualize in the self-unfolding of the modeled universe[-of-discourse]. Nor is it an ontological category that will probably instantiate, as part of that self-unfolding. Each 'categorigram' term denotes no more than a category which might instantiate – as one which is possible only – in the self-unfolding of the universe[-of-discourse] being modeled. It denotes a category whose viability in any particular instantiation of that universe remains in doubt.

The formulation of probability, let alone of necessity, belongs to later, more expressively capable categories, and systems, of dialectical ideography. Those later systems arise for high values of  $s$  within the 'meta-systematic dialectic' of 'Natural Arithmetic'. The <<arché>> 'categorigram' term of this dialectic is denoted by  $\underline{N}$ , or by  $\underline{q_N}$ . This is a dialectic that can be modeled, in the  $\underline{Q}$ , or  $\underline{q_Q}$ , language, by  $[q_N]^{(2^s)}$ . Within this dialectic,  $\underline{q_Q}$  denotes only the second 'categorigram' term; merely the first explicitly dialectical, arithmetical, ideographical language.

For example, the 'categorigram'  $\underline{q_{WL}} \leftrightarrow \underline{q_3}$  represents a single Letter that also serves, or that can be 'converted' into, a Word in itself. That, at least, is how we interpret the meaning of this term, one that combines the connotations of  $\underline{q_W}$  and of  $\underline{q_L}$ , and that, generically, denotes the 'uni-thesis', i.e., the "'complex unity'", of  $\underline{q_W}$  and  $\underline{q_L}$ , in the context of this specific dialectic. There is a very short list of such 'Word-Letters' – such as 'I' and 'a' – in the English Phonetic Writing System, and some instances of Phonetic Writing Systems might eschew such entities entirely. That is, the instantiation of the  $\underline{q_{WL}}$  category is possible in general in Phonetic Writing Systems. Some individual instances of such Systems may instantiate it, others may not.

The instantiation of the hybrid, 'uni-thesis', ontological categories of "'complex unity'" that arise later in the categorial progression exposition of Phonetic Writing Systems also remain possible, but become, perhaps, increasingly improbable, the later in the progression we look.

The 'categorigram'  $\underline{q_{SW}} \leftrightarrow \underline{q_6}$ , denoting the category of the 'complex unity' of the Sentence category and the Word category, of  $\underline{q_S}$  and  $\underline{q_W}$ , connotes, per our interpretation, the <<arithmos>> of Sentences that consist of a single Word. E.g., in contemporary English --

{Yes!, No!, Stop!, Go!, Why?, What?, When?, Where?, Which?, How?, Who?, Damn!, ... }.

The 'categorigram'  $\underline{q_{SWL}} \leftrightarrow \underline{q_7}$ , denoting the category of the "'synthesis'" of the Sentence category, the Word category, and the Letter category, connotes the <<arithmos>> of Sentences that consist of a single Word that consists of a single Letter, and is much scarcer of instances in English: {I!, I?, ... }. Category  $\underline{q_{BCPSWL}} \leftrightarrow \underline{q_{63}}$ , we suspect, is without any instances at all.



**Choice of <<Arché>>, or Initiating 'Onto', for a Systematic-Dialectical Exposition, is Key.** The ontological category “<<Letters>>”, denoted, in loan-phonogramic ideogramic shorthand form, by  $q_1$ , is the starting step of our *systematic, dialectical* exposition of the *Phonetic Writing Systems* [sub-]totality.

It corresponds to the ontological category named “<<Commodities>>” in Marx’s *systematic-dialectical* exposition of the “[Capital-based] World Market” human-species social totality in his *Capital, A Critique of Political Economy*.

In the latter, the category of human-social ontology named “<<Commodities>>”, or, to be more specific, the “<<Elementary or Accidental Form of [Commodity] Value>>”, serves as the <<arché>>-<<arithmos>>/category; i.e., as the initial, initiatory monadic category, representing “the economic cell-form” of the capital-based human-societal totality.

Likewise, ‘Being’, ‘Being-in-general’, or ‘Indeterminate Being’ served as the <<arché>>-category for the *systematic dialectic*-of-exposition of universal categories attempted by Hegel in his *Science of Logic*.

Here, in the context of the *systematic*, categorial comprehension of the *Phonetic Writing Systems* [sub-]totality, the ontological category denoted by  $q_1$ , which stands for the <<arithmos>> of *phonograms*, and, thereby, for the ‘phonogram-in-general’, for the *phonetic character* as a <<species>> of the <<genos>> of human symbols – i.e., for the *kind* of written symbol whose *value* is a specific ‘sound-element’ of human utterance – supplies the <<arché>> category. This <<arché>> category is the starting category for our exposition of the *Phonetic Writing Systems* [sub-]totality. It is so because it constitutes the ultimate “cell form” of that [sub-]totality.

With that proviso in place, we are ready to lodge the following partial sample – containing much ellipsis – of an application of a *systematic-dialectical method of presentation* to the topic of the *Phonetic Writing Systems* [sub-]totality.

This method of exposition “answers to” – “corresponds to” -- the “intensions” and “connotations” denoted by the progressions of ‘connotograms’ or ‘categorigrams’ that are generated by the dialectical-ideographic model of the *synchronic dialectic* of that [sub-]totality. That prose presentation translates and elaborates the ideographically-expressed “intensions” and “connotations” -- of the model denoted  $[q_1]^{(2^s)}$ , as  $s$  rises from 0 to 6 -- into a phonetic, ‘phonogramic’ narrative form, as interpreted, via the meaning(s)/connotation(s) assigned to  $q_1$ .

Note that, while the “uninterpreted”, or ‘minimally-interpreted’, Seldon Function,  $[q_1]^{(2^s)}$ , is completely algorithmic and determinate in its unfolding, any given *interpreted* version, such as the  $[q_1]^{(2^s)}$  of our present example, is not. The categorial progression that  $[q_1]^{(2^s)}$  generates, as  $s$  increases in value, is, precisely, a matter of *interpretation*, of *connotation*, of *intuitive comprehension*, and of *heuristic perception*, all of which may differ for different observers – for different ‘experiencers’ of “the same” totality that is being modeled, and “systematized”, thereby. The symbols generated by  $[q_1]^{(2^s)}$  are “intensional” symbols, not “extensional” ones. They denote “meanings”, or ‘bundles of connotations’. These symbols, in themselves, leave their “extensions” – i.e., the exact *list* of aspects, attributes, characteristics, facets, features, predicates, or qualities intended – unspecified; indefinite; merely “suggested”. The choice of <<arché>> is crucial in conveying the connotations of all subsequent ‘categorigrams’ that are intended by the modeler. This is because the <<arché>>-<<arithmos>> -- and its <<arché>>-<<monads>> -- are ingredient in all of the subsequently surfaced <<arithmoi>> and <<monads>>. All subsequent categories thus <<aufheben>>-“inherit”, in however attenuated a form, the connotations of the <<arché>> category.



Step 0.  $s = 0$ . Focusing awareness upon the Letters category/«*arithmos*», as [sub-]totality «*arché*».

$$[q_L]^{(2^0)} = [q_L]^1 = q_L \text{ [Note: } 2^0 = 2^{(+1-1)} = 2^{(+1)} \times 2^{(-1)} = 2/2 = 1\text{].}$$

... Letters, phonograms – symbols which stand for sounds of speech-utterance -- are the most elementary key to the “magick” of *Phonetic Writing Systems*, whereby Thomas Astle’s question may be answered:

“Whence did the wond’rous  
mystic art arise  
Of painting speech, and  
speaking to the eye?  
That we by tracing magic  
lines are taught  
How both to colour, and  
embody thought?”

[T. Astle, *The Origin and Progress of Writing*, (London: T. Bentley, Bolt Court, 1803), p. ii]. ...

Transition. We come, in the course of expositing the  $q_L$ -form, to reflect [“with” the  $q_L$ -form] upon the  $q_L$  form [itself], juxtaposing and confronting  $q_L$  with itself, and *critiquing*  $q_L$  in terms of itself, *immanently*, in the conceptual context of our prior experience and cognition of the *Phonetic Writing Systems* [sub-]totality, “chaotic” or otherwise. Do we not find, in so doing, that this category, of Letters, of Phonogrammic Symbols, denoted  $q_L$ , is *inadequate*, in itself, in its own explicitude, alone and *by* itself, to capture and exhaust our experience and cognition of this [sub-]totality? Do we not find that it is *incomplete* as a reconstruction of our experience of this *Phonetic Writing Systems* [sub-]totality? Do we not find that the comprehension, *as a totality*, of this [sub-]totality cannot be *reduced* to the comprehension of its elementary constituents – of the Letters of an “alphabet” -- as its “*atoms*”? Do we not find that another category, a *next* category, implicitly «*aufheben*»-related to the  $q_L$  category, is evoked by, and thus arises *immanently* into our awareness from, that ‘*reflexion*’ of  $q_L$  upon  $q_L$  itself that we mentally simulate, and ‘mentally embody’, in this inquiry into the *completeness* of our exposition? Do we not find that this inquiry arises quite naturally, as and after the 0th step of our exposition has been enacted? Do we not find that this next category is different *in kind*, *in quality*, and is not *reducible* to, its predecessor category(y)(ies)? That this new category/‘«*arithmos*»-of-«*monads*»’ exhibits collective ‘*emergent qualities*’; conceptual and perceptual “‘*emergent properties*’”, which are not explicitly exhibited by, and which therefore cannot be *reduced* to, its predecessor(s)?



Step 1.  $s = 1$ . The Evocation, and Emergence into Focus, of the Words category/ <<arithmos>>.

$$[q_L]^{(2^1)} = [q_L]^2 = q_L\text{-squared} = q_L \times q_L = q_L[q_L] = q_L \text{ of } q_L =$$

$$q_L + \text{delta-}q_L = q_L + q_{LL} = q_L + q_W. \text{ [Note: for any } n \text{ in } N, n^1 = n]$$

... The category of Letters, denoted  $q_L$ , has a ‘*supplementary opposite*’ category, a ‘*successor* ideo-ontological category’, one that makes explicit another key dimension of the *determinations* of the *Phonetic Writing Systems* universe[-of-discourse].

That supplementary, successor category is noneother than the category called Words.

The ‘meta-<<arithmos>>’ of Words is <<aufheben>>-related to the <<arithmos>> of Letters.

Each of the ‘meta-<<monads>>’ constituting the Words <<arithmos>> is an <<aufheben>> ‘self-internalization’ of the <<monads>> of a sub-<<arithmos>> of the Letters <<arithmos>>.

Each <<monad>>, or Word-unit, of the Words <<arithmos>> is an <<aufheben>> of a *specific* sub-<<arithmos>> of Letters <<monads>>.

Each Word <<monad>> is (1) a *negation* of an ensemble of Letter <<monads>> as mere Letter <<monads>>, (2) an *elevation* of that ensemble of Letter <<monads>>, to – i.e., by *constituting* an instance of -- the new, higher, more-inclusive level, of Words, and (3) a *conservation* of that ensemble of Letter <<monads>>, as the content “‘inside’” that Word-unit; as the ‘internity’ of that Word-unit. Each Word-<<monad>> is a meta-<<monad>> of a sub-<<arithmos>> of the Letter-<<monads>> <<arithmos>>, because each Word, as a unit or <<monad>>, is made up out of a [usually] *heterogeneous* multiplicity of Letters, as the *immediate* sub-units, the *immediate* sub-<<monads>>, of that Word-unit, or Word-<<monad>>.

Thus, we say that the ‘self-reflexion’ of this Letters ontological category, denoted ‘ $q_L$  of  $q_L$ ’, not only ‘re-intends’, ‘re-attends’, and re-emphasizes itself, re-implicating the Letters category, as an aspect of the *conservation* moment of  $q_L$  as an <<aufheben>> operation/operator. We say that this ‘self-reflexion’ also shifts our attention to something new and higher, or more-inclusive, denoted  $q_{LL}$  or  $q_W$  – which represents the other aspect of the *conservation* moment of  $q_L$  as an <<aufheben>> operation/operator. The connotation or intension of  $q_{LL}$  calls our attention to  $q_L$ ’s own, ‘self-conservation’ via the ‘self-internalization’ of the  $q_L$  category or <<arithmos>> – of it itself -- in the form of the Words category or <<arithmos>>. That Words category is thus ‘meta-monic’ in relation to the Letters category, as we have seen above.

Transition. We come, in the course of expositing the  $q_W$ -form, to reflect [“with” the  $q_W$ -form] upon the  $q_W$  form [itself], juxtaposing and confronting  $q_W$  with itself, and *critiquing*  $q_W$  in terms of itself, *immanently*, in the conceptual context of our prior experience and cognition of the *Phonetic Writing Systems* [sub-]totality, “chaotic” or otherwise. Do we not find, in so doing, that this category, of Words, denoted  $q_W$ , is *inadequate*, in itself, in its own explicitude, alone and by itself, to capture and exhaust our experience and cognition of this [sub-]totality. Do we not find that it is *incomplete* as a reconstruction, in thought, in theory, of our experience of this *Phonetic Writing Systems* [sub-]totality?

Do we not find that another category, a *next* category, implicitly <<aufheben>>-related to the  $q_W$  category, is evoked by, and thus arises *immanently* into our explicit awareness from, that ‘reflexion’ of  $q_W$  upon  $q_W$  itself that we mentally simulate, and ‘mentally embody’, in this inquiry into the *completeness* of our exposition, arising as and after its 1st step is enacted?



Step 2.  $s = 2$ . The Evocation, and Emergence into Focus, of the Sentences category.

$$[q_L]^{(2^2)} = [q_L]^4 = [q_L + q_W]\text{-squared} = [q_L + q_W] \times [q_L + q_W] = \\ [q_L + q_W] \text{ of } [q_L + q_W] = [q_L + q_W] + \text{delta-}[q_L + q_W] = q_L + q_W + q_{WL} + q_{WW} = \\ q_L + q_W + q_{WL} + q_S.$$

... The category of Words, denoted  $q_W$ , has a 'supplementary opposite' category, a 'successor ideo-ontological category', one that makes explicit another key dimension of the determinations of the *Phonetic Writing Systems* universe[-of-discourse].

That supplementary, successor category is noncoter than the category called Sentences.

The <<arithmos>> of Sentences is <<aufheben>>-related to the <<arithmos>> of Words.

Each 'meta-<<monad>>' co-constituting the Sentences <<arithmos>> is an <<aufheben>> 'self-internalization' of the <<monads>> of a sub-<<arithmos>> of the Words <<arithmos>>. Each <<monad>>, or Sentence-unit, of the Sentences <<arithmos>> is an <<aufheben>> of a specific sub-<<arithmos>> of Words <<monads>>.

Each Sentence <<monad>> is (1) a negation of a specific ensemble of Word <<monads>> as mere Word <<monads>>, is (2) an elevation of that specific ensemble of Word <<monads>>, by creating from them a new, higher, more-inclusive level, of Sentences, of Sentence-<<monads>>, and is (3) a conservation of that ensemble of Word <<monads>>, as the content "'inside'" that Sentence-unit; as the 'internity' of that Sentence-unit. Each such Sentence-<<monad>> is a meta-<<monad>> of an <<arithmos>> of Word-<<monads>>, since each Sentence, as a unit or <<monad>>, is made up out of a [usually] *heterogeneous* multiplicity of Words, as the sub-units, or sub-<<monads>>, of that Sentence-unit, or Sentence-<<monad>>.

Thus, we say that the 'self-reflexion' of this Words ontological category, denoted ' $q_W$  of  $q_W$ ', not only 're-intends', 're-attends', and re-emphasizes itself, re-implicating the Words category, as an aspect of the conservation moment of  $q_W$  as an <<aufheben>> operation/operator. We say that this 'self-reflexion' also shifts our attention to something new and higher, or more-inclusive, denoted  $q_{WW}$  or  $q_S$  – which represents the other aspect of the conservation moment of  $q_W$  as an <<aufheben>> operation/operator. The connotation or intension of  $q_{WW}$  calls our attention to  $q_W$ 's own, 'self-conservation' via the 'self-internalization' of the  $q_W$  category or <<arithmos>> – of it itself – in the form of the Sentences category or <<arithmos>>. That Sentences category is 'meta-monadic' in relation to the Words category, as we have seen above.

Transition. We come, in the course of expositing the  $q_S$ -form, to reflect ["with" the  $q_S$ -form] upon the  $q_S$  form [itself], juxtaposing and confronting  $q_S$  with itself, and *critiquing*  $q_S$  in terms of itself, *immanently*, in the conceptual context of our prior experience and cognition of the *Phonetic Writing Systems* [sub-]totality, "chaotic" or otherwise. Do we not find, in so doing, that this category, of Sentences, denoted  $q_S$ , is *inadequate*, in itself, in its own explicitude, alone and by itself, to capture and exhaust our experience and cognition of this [sub-]totality. Do we not find that it is *incomplete* as a reconstruction in thought of our experience of this [sub-]totality?

Do we not find that another category, a *next* category, implicitly <<aufheben>>-related to the  $q_S$  category, is evoked by, and thus arises *immanently* into our explicit awareness from, that 'reflexion' of  $q_S$  upon  $q_S$  itself that we mentally simulate, and 'mentally embody', in this inquiry into the *completeness* of our exposition, as and after its 2nd step is enacted?



Step 3.  $s = 3$ . The Evocation, and Emergence into Focus, of the Paragraphs category/«*arithmos*».

$$\begin{aligned}
 [q_L]^{(2^3)} &= [q_L]^8 = [q_L + q_W + q_{WL} + q_S]\text{-squared} = \\
 [q_L + q_W + q_{WL} + q_S] \times [q_L + q_W + q_{WL} + q_S] &= \\
 [q_L + q_W + q_{WL} + q_S] \text{ of } [q_L + q_W + q_{WL} + q_S] &= \\
 [q_L + q_W + q_{WL} + q_S] + \text{delta-}[q_L + q_W + q_{WL} + q_S] &= \\
 q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_{SS} &= \\
 q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P. &
 \end{aligned}$$

... The category of Sentences, denoted  $q_S$ , has a 'supplementary opposite' category, a 'successor' ideo-ontological category, that makes explicit another key dimension of the determinations of the *Phonetic Writing Systems* universe. That supplementary, successor category is noneother than the category called Paragraphs. The «*arithmos*» of Paragraphs is «*aufheben*»-related to the «*arithmos*» of Sentences. Each of the 'meta-«*monads*»' which co-constitute the Paragraphs «*arithmos*» is an «*aufheben*» 'self-internalization' of the «*monads*» of a sub-«*arithmos*» of the Sentences «*arithmos*». Each «*monad*», or Paragraph-unit, of the Paragraphs «*arithmos*» is an «*aufheben*» of a specific sub-«*arithmos*» of Sentences «*monads*». Each Paragraph «*monad*» is (1) a negation of an ensemble of Sentence «*monads*» as mere Sentence «*monads*», (2) an elevation of that ensemble of Sentence «*monads*», by constituting from out of them a new, higher, more-inclusive level, of Paragraphs, and (3) a conservation of that ensemble of Sentence «*monads*», as the content "inside" that Paragraph-unit; as the 'internity' of that Paragraph-unit. Each Paragraph-«*monad*» is a meta-«*monad*» of an «*arithmos*» of Sentence-«*monads*», because each Paragraph, as a unit or «*monad*», is made up out of a [usually] heterogeneous multiplicity of Sentences, as the immediate sub-units, as the immediate sub-«*monads*», of that Paragraph-unit, or Paragraph-«*monad*». Thus, our mentally simulated 'self-reflexion' of this Sentences category, denoted ' $q_S$  of  $q_S$ ', not only 're-intends', 're-attends', and re-emphasizes itself, re-implicating the Sentences category as a focus of our attention, as an aspect of the conservation moment of  $q_S$  as an «*aufheben*» operation/operator. This 'self-reflexion' also shifts our attention to something new and higher, or more-inclusive, denoted  $q_{SS}$  or  $q_P$ . The latter represents the other aspect of the conservation moment of  $q_S$  as an «*aufheben*» operation/operator. The ideographical 'connotation-gram', or 'intension-gram', denoted  $q_{SS}$ , re-directs our attention to  $q_S$ 's own, 'self-conservation' via the 'self-internalization' of the  $q_S$  category or «*arithmos*» – of it itself – in the form of the Paragraphs category or «*arithmos*». That Paragraphs category is thus 'meta-monadic' in relation to the Sentences category, as we have seen above.

Transition. We come, in the course of expositing the  $q_P$ -form, to reflect ["with" the  $q_P$ -form] upon the  $q_P$  form [itself], juxtaposing and confronting  $q_P$  with itself, and critiquing  $q_P$  in terms of itself, immanently, in the conceptual context of our prior experience and cognition of the *Phonetic Writing Systems* [sub-]totality. Do we not find that this category, of Paragraphs, denoted  $q_P$ , is inadequate, in itself, to capture and exhaust our experience of this [sub-]totality? That it is incomplete as a reconstruction -- in and for thought -- of our experience and cognition of this [sub-]totality? That another category, a next category, implicitly «*aufheben*»-related to the  $q_P$  category, is evoked by, and thus arises immanently into our explicit awareness from, that 'reflexion' of  $q_P$  upon  $q_P$  itself [that we mentally simulate, and 'mentally embody', in this inquiry into the completeness of our exposition, as and after its 3rd step is enacted]?



Step 4.  $s = 4$ . The Evocation, and Emergence into Focus, of the Chapters category/ <<arithmos>>.

$$\begin{aligned}
 [q_L]^{(2^4)} &= [q_L]^{16} = [q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P] \text{-squared} = \\
 &= [q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P] \times \\
 &= [q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P] \text{ of} \\
 &= [q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P] + \\
 &= \text{delta-}[q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P] = \\
 &= q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + \\
 &= q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C.
 \end{aligned}$$

. . . The category of Paragraphs, denoted  $q_P$ , has a 'supplementary opposite' category, a 'successor' ideo-ontological category', that makes explicit another key dimension of the determinations of the *Phonetic Writing Systems* universe. That supplementary, successor category is noneother than the category called Chapters. The <<arithmos>> of Chapters is <<aufheben>>-related to the <<arithmos>> of Paragraphs. Each of the 'meta-<<monads>>' which co-constitutes the Chapters <<arithmos>> is an <<aufheben>> 'self-internalization' of the <<monads>> of a sub-<<arithmos>> of the Paragraphs <<arithmos>>. Each <<monad>>, or Chapter-unit, of the Chapters <<arithmos>> is an <<aufheben>> of a *specific* sub-<<arithmos>> of Paragraphs <<monads>>. Each Chapter <<monad>> is (1) a *negation* of an ensemble of Paragraph <<monads>> as mere Paragraph <<monads>>, (2) an *elevation* of that ensemble of Paragraph <<monads>>, by constituting out of them an instance of a new, higher, more-inclusive level, of Chapters, and (3) a *conservation* of that ensemble of Paragraph <<monads>>, as the content "inside" that Chapter-unit; as the 'internity' of that Chapter-unit. Each Chapter-<<monad>> is a meta-<<monad>> of an <<arithmos>> of Paragraph-<<monads>>, because each Chapter, as a unit/<<monad>>, is made up out of a heterogeneous multiplicity of Paragraphs, as the immediate sub-units, or sub-<<monads>>, of that Chapter-unit, or Chapter-<<monad>>. Thus, the 'self-reflexion' of this Paragraphs category, denoted ' $q_P$  of  $q_P$ ', not only 're-intends', 're-attends', and re-emphasizes itself, re-implicating the Paragraphs category, as an aspect of the *conservation* moment of  $q_P$  as an <<aufheben>> operation/operator. We say that this 'self-reflexion' also shifts our attention to something new and higher, or more-inclusive, denoted  $q_{PP}$  or  $q_C$  – which represents the other aspect of the *conservation* moment of  $q_P$  as an <<aufheben>> operation/operator. The ideographical 'connotogram', or 'intensiogram',  $q_{PP}$ , re-directs our attention to  $q_P$ 's own, 'self-conservation' via the 'self-internalization' of the  $q_P$  category or <<arithmos>> – of it itself -- in the form of the Chapters category or <<arithmos>>. That Chapters category is thus 'meta-monadic' in relation to the Paragraphs category, as we have seen above.

Transition. We come, in the course of expositing  $q_C$ , to reflect ["with"  $q_C$ ] upon  $q_C$  [itself], confronting  $q_C$  with itself, *critiquing*  $q_C$  in terms of itself, *immanently*, in the context of our prior experience of *Phonetic Writing Systems*. Do we not find that this category, of Chapters, is *inadequate* to capture our experience of this [sub-]totality? That a *next* category is evoked by this 'reflexion' of  $q_C$  upon  $q_C$  itself that we 'mentally embody', in this inquiry into the *completeness* of our exposition, as and after its 4th step is enacted?



Step 5.  $s = 5$ . The Evocation, and Emergence into Focus, of the Books category / <<arithmos>>.

$$[q_L]^{(2^5)} = [q_L]^{32} =$$

$$[q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C] \text{-squared} =$$

$$[q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C] \times [q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C] =$$

$$[q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C] \text{ of } [q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C] =$$

$$[q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C] + \text{delta-} [q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C] =$$

$$q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C + q_{CL} + q_{CW} + q_{CWL} + q_{CS} + q_{CSL} + q_{CSW} + q_{CSWL} + q_{CP} + q_{CPL} + q_{CPW} + q_{CPWL} + q_{CPS} + q_{CPSL} + q_{CPSW} + q_{CPSWL} + q_{CC} =$$

$$q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C + q_{CL} + q_{CW} + q_{CWL} + q_{CS} + q_{CSL} + q_{CSW} + q_{CSWL} + q_{CP} + q_{CPL} + q_{CPW} + q_{CPWL} + q_{CPS} + q_{CPSL} + q_{CPSW} + q_{CPSWL} + q_B.$$

. . . The category of Chapters, denoted  $q_C$ , has a 'supplementary opposite' category, a 'successor ideo-ontological category', one that makes explicit another key dimension of the determinations of the *Phonetic Writing Systems* universe[-of-discourse].

That supplementary, successor category is noneother than the category of Books. The <<arithmos>> of Books is <<aufheben>>-related to the <<arithmos>> of Chapters.

Each of the 'meta-<<monads>>' which co-constitute the Books <<arithmos>> is an <<aufheben>> 'self-internalization' of the <<monads>> of a <<speci>>-fic sub-<<arithmos>> of the <<arithmos>> of possible Chapters. Each Book-<<monad>>, or Book-unit, of the Books <<arithmos>> is an <<aufheben>> of a sub-<<arithmos>> of Chapters <<monads>>.

Each Book <<monad>> is: (1) a negation of an ensemble of Chapter <<monads>> as mere Chapter <<monads>>, (2) an elevation of that ensemble of Chapter <<monads>>, to – i.e., by *constituting* an instance of -- the new, "higher", i.e., more-inclusive level/scale, of Books, and (3) a conservation of that ensemble of Chapter <<monads>>, as the content "inside" that individual Book-unit; as the 'internity' of that individual Book-unit.



Each Book-<<monad>> is a meta-<<monad>> of an <<arithmos>> of Chapter-<<monads>>, because each Book, as a unit, or <<monad>>, is made up out of a [usually] *heterogeneous* multiplicity of Chapters, as the *immediate sub*-units, or *sub*-<<monads>>, of that Book-unit, or Book-<<monad>>. Ideographically, in F.E.D.'s shorthand --

$$q_c \times q_c = q_c[q_c] = q_c \text{ of } q_c = q_c + \text{delta-}q_c = q_c + q_{cc} = q_c + q_b.$$

We therefore say that the '*self-reflexion*' of this Chapters category, denoted '*q<sub>c</sub> of q<sub>c</sub>*', first of all, 're-intends', 're-attends', and re-emphasizes itself, re-implicating the Chapters category, as one of two aspects of the *conservation* "'moment'" of q<sub>c</sub> as an <<aufheben>> operation/operator.

We say also that this '*self-reflexion*' shifts our attention to something new and higher, or more inclusive, denoted q<sub>cc</sub> or q<sub>b</sub> – which represents the other aspect of the *conservation* moment of q<sub>c</sub> as an <<aufheben>> operation/operator.

The ideographical 'connotation-gram', or 'intension-gram', denoted q<sub>cc</sub>, re-directs our attention to q<sub>c</sub>'s own, 'self-conservation' via the '*self-internalization*' of the q<sub>c</sub> category or <<arithmos>> – of it itself -- in the form of the Books category or <<arithmos>>.

That Books category is thus '*meta-monadic*' in relation to the Chapters category, as we have seen above.

Transition. We come, in the course of exposing the q<sub>b</sub>-form, to reflect ["with" the q<sub>b</sub>-form] upon the q<sub>b</sub> form [itself], juxtaposing and confronting q<sub>b</sub> with itself, and *critiquing* q<sub>b</sub> in terms of itself, *immanently*, as a category of completed comprehension, in the conceptual context of our prior experience, and cognition, of the *Phonetic Writing Systems* [sub-]totality.

Do we not find, in so doing, that this category, of Books, denoted q<sub>b</sub>, is *inadequate*, in itself, in its own explicitude, alone and by itself, to capture and exhaust our experience and cognition of this [sub-]totality? Do we not find that it is *incomplete* as a reconstruction of our experience of this *Phonetic Writing Systems* [sub-]totality?

Do we not find that the comprehension, *as a totality*, of this [sub-]totality cannot be *reduced* to the comprehension of its elementary constituents – of Books -- as its "*atoms*"?

Do we not find that another category, a *next* category, implicitly <<aufheben>>-related to the q<sub>b</sub> category, is evoked by, and thus arises *immanently* into our awareness from, that '*reflexion*' of q<sub>b</sub> upon q<sub>b</sub> itself that we mentally simulate, and 'mentally embody', in this inquiry into the *completeness* of our exposition?

Do we not find that this inquiry arises quite naturally, as and after the 5th step of this systematic, dialectical exposition has been enacted?

Do we not find that this *next* category is different *in kind*, *in quality*, and is not *reducible* to, its predecessor category(y)(ies)? That this new category, this new <<arithmos>>-of-<<monads>>, exhibits collective '*emergent qualities*', conceptual and perceptual "'*emergent properties*'", which are not explicitly exhibited by, and which therefore cannot be *reduced* to, its predecessor categories – which cannot be *reduced* to its predecessor <<arithmoi>> and their <<monads>>?



Step 6.  $s = 6$ . The Evocation, & Emergence into Focus, of the Libraries category/ <<arithmos>>.

$$[q_L]^{(2^6)} = [q_L]^{64} =$$

$$[q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C + q_{CL} + q_{CW} + q_{CWL} + q_{CS} + q_{CSL} + q_{CSW} + q_{CSWL} + q_{CP} + q_{CPL} + q_{CPW} + q_{CPWL} + q_{CPS} + q_{CPSL} + q_{CPSW} + q_{CPSWL} + q_B] \text{-squared} =$$

$$[q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C + q_{CL} + q_{CW} + q_{CWL} + q_{CS} + q_{CSL} + q_{CSW} + q_{CSWL} + q_{CP} + q_{CPL} + q_{CPW} + q_{CPWL} + q_{CPS} + q_{CPSL} + q_{CPSW} + q_{CPSWL} + q_B] \times [q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C + q_{CL} + q_{CW} + q_{CWL} + q_{CS} + q_{CSL} + q_{CSW} + q_{CSWL} + q_{CP} + q_{CPL} + q_{CPW} + q_{CPWL} + q_{CPS} + q_{CPSL} + q_{CPSW} + q_{CPSWL} + q_B] =$$

$$[q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C + q_{CL} + q_{CW} + q_{CWL} + q_{CS} + q_{CSL} + q_{CSW} + q_{CSWL} + q_{CP} + q_{CPL} + q_{CPW} + q_{CPWL} + q_{CPS} + q_{CPSL} + q_{CPSW} + q_{CPSWL} + q_B] \text{ of}$$

$$[q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C + q_{CL} + q_{CW} + q_{CWL} + q_{CS} + q_{CSL} + q_{CSW} + q_{CSWL} + q_{CP} + q_{CPL} + q_{CPW} + q_{CPWL} + q_{CPS} + q_{CPSL} + q_{CPSW} + q_{CPSWL} + q_B] =$$

$$[q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C + q_{CL} + q_{CW} + q_{CWL} + q_{CS} + q_{CSL} + q_{CSW} + q_{CSWL} + q_{CP} + q_{CPL} + q_{CPW} + q_{CPWL} + q_{CPS} + q_{CPSL} + q_{CPSW} + q_{CPSWL} + q_B] +$$

$$\text{delta-}[q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C + q_{CL} + q_{CW} + q_{CWL} + q_{CS} + q_{CSL} + q_{CSW} + q_{CSWL} + q_{CP} + q_{CPL} + q_{CPW} + q_{CPWL} + q_{CPS} + q_{CPSL} + q_{CPSW} + q_{CPSWL} + q_B] =$$

$$q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P + q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C + q_{CL} + q_{CW} + q_{CWL} + q_{CS} + q_{CSL} + q_{CSW} + q_{CSWL} + q_{CP} + q_{CPL} + q_{CPW} + q_{CPWL} + q_{CPS} + q_{CPSL} + q_{CPSW} + q_{CPSWL} + q_B + q_{BL} + q_{BW} + q_{BWL} + q_{BS} + q_{BSL} + q_{BSW} + q_{BSWL} + q_{BP} + q_{BPL} + q_{BPW} + q_{BPWL} + q_{BPS} + q_{BPSL} + q_{BPSW} + q_{BPSWL} + q_{BC} + q_{BCL} + q_{BCW} + q_{BCWL} + q_{BCS} + q_{BCSL} + q_{BCSW} + q_{BCSWL} + q_{BCP} + q_{BCPL} + q_{BCPW} + q_{BCPWL} + q_{BCPS} + q_{BCPSL} + q_{BCPSW} + q_{BCPSWL} + q_{BB} =$$



$q_L + q_W + q_{WL} + q_S + q_{SL} + q_{SW} + q_{SWL} + q_P +$   
 $q_{PL} + q_{PW} + q_{PWL} + q_{PS} + q_{PSL} + q_{PSW} + q_{PSWL} + q_C +$   
 $q_{CL} + q_{CW} + q_{CWL} + q_{CS} + q_{CSL} + q_{CSW} + q_{CSWL} + q_{CP} +$   
 $q_{CPL} + q_{CPW} + q_{CPWL} + q_{CPS} + q_{CPSL} + q_{CPSW} + q_{CPSWL} + q_B$   
 $q_{BL} + q_{BW} + q_{BWL} + q_{BS} + q_{BSL} + q_{BSW} + q_{BSWL} + q_{BP} +$   
 $q_{BPL} + q_{BPW} + q_{BPWL} + q_{BPS} + q_{BPSL} + q_{BPSW} + q_{BPSWL} + q_{BC} +$   
 $q_{BCL} + q_{BCW} + q_{BCWL} + q_{BCS} + q_{BCSL} + q_{BCSW} + q_{BCSWL} + q_{BCP} +$   
 $q_{BCPL} + q_{BCPW} + q_{BCPWL} + q_{BCPS} + q_{BCPSL} + q_{BCPSW} + q_{BCPSWL} + q_R$

↔

$q_1 + q_2 + q_3 + q_4 + q_5 + q_6 + q_7 + q_8 +$   
 $q_9 + q_{10} + q_{11} + q_{12} + q_{13} + q_{14} + q_{15} + q_{16} +$   
 $q_{17} + q_{18} + q_{19} + q_{20} + q_{21} + q_{22} + q_{23} + q_{24} +$   
 $q_{25} + q_{26} + q_{27} + q_{28} + q_{29} + q_{30} + q_{31} + q_{32}$   
 $q_{33} + q_{34} + q_{35} + q_{36} + q_{37} + q_{38} + q_{39} + q_{40} +$   
 $q_{41} + q_{42} + q_{43} + q_{44} + q_{45} + q_{46} + q_{47} + q_{48} +$   
 $q_{49} + q_{50} + q_{51} + q_{52} + q_{53} + q_{54} + q_{55} + q_{56} +$   
 $q_{57} + q_{58} + q_{59} + q_{60} + q_{61} + q_{62} + q_{63} + q_{64}.$

... The category of Books, denoted  $q_B$ , has a 'supplementary opposite' category, a *successor* category of *Phonetic Writing Systems* 'ideo-ontology', one that makes explicit another key dimension of the *determinations* of the *Phonetic Writing Systems* universe[-of-discourse].

That supplementary, successor category is noneother than that of Libraries.

The <<arithmos>> of Libraries is <<aufheben>>-related to the <<arithmos>> of Books.

Each of the 'meta-<<monads>>' which co-constitute the Libraries <<arithmos>> is an <<aufheben>> 'self-internalization' of the <<monads>> of a *specific sub*-<<arithmos>> of the Books <<arithmos>>. Each Library-<<monad>>, or Library-unit, of the Libraries <<arithmos>> is an <<aufheben>> of a *sub*-<<arithmos>> of the Books <<monads>>.

Each Library <<monad>> is (1) a *negation* of an ensemble of Book <<monads>> as mere Book <<monads>>, (2) an *elevation* of that ensemble of Book <<monads>>, to – i.e., by *constituting* an instance of -- the new, higher, more-inclusive level, of Libraries as units/<<monads>>, and (3) a *conservation* of that ensemble of Book <<monads>>, as the content "‘inside’" that Library-unit; as the 'internity' of that Library-unit.

Each Library-<<monad>> is a meta-<<monad>> of an <<arithmos>> of Book-<<monads>>. Each Library, as a unit, or <<monad>>, is made up out of a [usually] *heterogeneous* multiplicity of Books, as the *immediate sub*-units, as the *immediate sub*-<<monads>>, of that Library-unit, or Library-<<monad>> [A *homogeneous* multiplicity of books – a multitude of copies of *the same* book – is a mere Inventory or Stock, not a Library]. Ideographically, in F.E.D.'s shorthand:

$$q_B \times q_B = q_B [q_B] = q_B \text{ of } q_B = q_B + \text{delta-}q_B = q_B + q_{BB} = q_B + q_R.$$

Thus, our mentally-simulated 'self-reflexion' of the Books category, ' $q_B$  of  $q_B$ ', 're-intends', 're-attends', and re-emphasizes  $q_B$  itself, re-implicating the Books category, as the "‘moment’" of "‘simple reproduction’" of its idea, which is one of the two aspects of the *conservation* "‘moment’" of the action of  $q_B$  as an <<aufheben>> operation/operator.



This ‘*self-reflexion*’ also shifts our attention to something new and higher, i.e., something more [self-]inclusive, denoted  $q_{BB}$  or  $q_R$ . The latter represents the other aspect of the *conservation* “‘moment’” of the mental action of  $q_B$  as  $\ll\text{aufheben}\gg$  operation; the “‘moment’” of the [qualitatively, ‘ideo-ontologically’] “‘*expanded* reproduction’” of its idea. The ideographical-symbolic ‘connotation-gram’, or ‘intension-gram’,  $q_{BB}$ , re-directs our attention to another “‘moment’” of  $q_B$ ’s ‘self-*conservation*’, one *via* the ‘self-*internalization*’ of the  $q_B$  category or  $\ll\text{arithmos}\gg$  – of it itself -- in the form of the *Libraries* category or  $\ll\text{arithmos}\gg$ . That *Libraries* category is thus ‘*meta-monadic*’ in relation to the *Books* category, as we saw above.

Concluding [Non-]Transition: “‘Transition’” to Terminus. We will *pretend* that, reflecting [“with” the  $q_R$ -form] upon the  $q_R$  form [itself], in the context of our prior-to-present *experience* of the *Phonetic Writing Systems* [sub-]totality, ‘re-Boolean-izes’ for us. We will pretend that it “‘simply-reproduces’” only this category, *Libraries*, therefore denoted  $q_R$ , as in Boole’s “Fundamental Law of Thought”; i.e., as if:  $q_R \times q_R = q_R$ , à la  $1 \times 1 = 1$ , and  $0 \times 0 = 0$ .

We will *pretend* that, even though we can *imagine* an ‘ideo-ontology’, and a corresponding practical human-social actuality, ‘capture-able’ by a psych-historical category of human-social ontology ‘denotable’ by  $q_{RR} = q_X$ , that not only the *actuality*, but the very *possibility*, of any such socio-cultural, psycho-historical category resides beyond our sensuous/thought-experience to-date. We will *pretend* that any such actuality resides beyond the temporal, historical “‘thickness’” of the ‘synchronic slice’ of natural/human history we selected to be reconstructed in thought by our ‘*synchronic dialectic*’ of the *Phonetic Writing Systems* [sub-]totality.

Thus, this scientific, empirical data-based, experience-based, thought-experiment-based, *systematic-dialectical*, categorial-cumulum reconstruction, in mind, of our known *Phonetic Writing Systems* [sub-]totality must end with the 64-category ‘*ideo-cumulum*’, ‘denotable’ by –

$$[q_L]^{(64)} = q_L + q_W + \dots + q_S + \dots + q_P + \dots + q_C + \dots + q_B + \dots + q_R$$

$$\longleftrightarrow q_1 + q_2 + \dots + q_4 + \dots + q_8 + \dots + q_{16} + \dots + q_{32} + \dots + q_{64}.$$

The above is its expression in the dialectical-ideographic language of the “‘*Non-Standard*’”, second system of arithmetic, second after N, i.e., in the ‘*first contra-thesis*’, Q-based system, namely  $q_Q$ , the first system of *explicitly dialectical* arithmetic. That “‘*Non-Standard*’”, ‘*first contra-thesis*’, Q-based, or  $q_Q \longleftrightarrow q_2$ , system of dialectical arithmetic arises consecutively next, after the ‘zeroth’,  $\ll\text{arché}\gg$ -thesis, namely the “Standard”, N-based, or  $q_N \longleftrightarrow q_1$ , system of arithmetic – all as per the Q-based, “‘categorial-progression’”, ‘systems-progression’ model of this ‘*meta-system-atic dialectic*’ of the systems of dialectical arithmetic, compactly denoted by  $[q_N]^{(2^s)}$ ,  $s = 0$ , to  $s = \dots$ . The N-based system, namely  $q_N$ , is only an *implicitly* and *degenerately* dialectical one. Steps one and two of this ‘Dialectic of the Systems of Dialectical Mathematics’ are --

Step 1.  $[q_N]^{(2^1)} = [q_N]^{(2)} = q_N + q_{NN} = q_N + q_Q =$

Generic *Quantifiers*, “Natural” Numbers + *Ontological Qualifiers*, ‘Meta-Natural Numbers’ =  
purely-quantitative system + purely-qualitative system.

Step 2.  $[q_N]^{(2^2)} = [q_N]^{(4)} = q_N + q_Q + q_{QN} + q_{QQ} =$

purely-quantitative system + purely-qualitative system + qualo-quantitative system + ... =

Pure *Quantifiers* System + Pure *Ontic Qualifiers* System + Hybrid, ‘*Onto-Quantic*’ System + Pure *Metrical Qualifiers* System.



## What This “Complete” Reconstruction Still Leaves Out.

The ‘Homeomorphic Defect’ Inherent in the First Dialectical-Ideographic Language. The language of the **Q** ideography exhibits a capability to model the progression of categories for comprehending the *Phonetic Writing Systems* [sub-]totality, or “universe of discourse”, at what **F.E.D.** terms “taxonomy level 1”. That is, the **Q** language can capture the progression of the “top-level”, “maximal” categories, describing the overall ‘*meta-monadology*’ of that “universe”.

However, the **Q** language lacks the capability to concurrently ‘co-explicitize’ “taxonomy level 2” for this, or for any, “universe of discourse”; likewise for “taxonomy level 3” and greater.

The **Q** language lacks the capability to ‘co-explicitize’, e.g., both the **Letters** “‘division’” and the “‘sub-divisions’” *within* it, plus the “‘sub-sub-divisions’” *within* each of those “‘subdivisions’”, etc.

Examples of this ‘Sub-Division Description Defect’. For example, within the **Letters** category, where, in our **Q** model, is there a place for such sub-categories as vowels vs. consonants?

Within the **Words** category, where is there “‘room’” for such sub-categories as nouns vs. verbs, or as synonyms vs. antonyms, or as plurals vs. singulars, or as bold vs. italics vs. underline vs. capitalization vs. color single-word *emphasis*, or as contractions, and abbreviations, or as word-components like prefixes vs. suffixes, or as apostrophe possessives?

Within the **Sentences** category, where is there “‘room’” for the sub-categories addressing such “grammatical”, sentence-structure phonetic writing phenomena as subject vs. object, or as subordinate clauses, or as prepositional phrases, or as embedded ideograms, embedded pictograms, & other embedded non-phonograms [\$, %, #, &, \*, @, (, ), [, ], {, }, +, -, /, \, <, =, >, ^, ...], or as punctuation [e.g., ‘.’, ‘;’, ‘:’, ‘;’, ‘!’, ‘?’, ‘...’, ...], or as ellipsis dots, or as first-letter-of-first-word capitalization?

Moreover, how would we even begin to find a place, in such models, for such exotic, complex “‘hybrid’” phenomena as acronyms, synecdoche, hyperbole, and ‘hypobole’?

An Acronym replaces several Words by their lead Letters, using those Letters to form a new Word. ‘Helically’, by way of converting Words back to Letters, ‘acronymization’ returns to the Words level, to form new Words, often designed for connotative resonance with existing Words.

The <<genos>> category for the ‘meta-<<monads>>’ of Letter-<<monads>> is that of ‘character-strings’. Words belong to a <<species>> category of that <<genos>> category that we might call the <<species>> of “‘well-formed’” character-strings, as opposed to a contrary <<species>> category of that <<genos>> category – the category of [Word-level] “‘gibberish’”.

The <<genos>> category “Collections of Books” connotatively-contains a <<species>>-level distinction, or opposition, between *heterogeneous* versus *homogeneous* collections of books. Any *heterogeneous* collection of books would tend to sort to one of the sub-<<species>> categories of the Libraries <<species>>-category. A *homogeneous* collection of books, on the contrary, i.e., a collection consisting of *multiple copies of the same book* – would tend to sort to a category at the sub-<<species>> level of the Book Inventories <<species>>-category.

Within the **F.E.D.** progression of the systems of dialectical mathematics, we must look further than the **Q** arithmetic’s ‘first contra-thesis’ -- contra the **N** arithmetic’s <<arché>>-thesis – to the ‘first uni-thesis’ arithmetic, **U**, and well beyond it, for the linguistic, expressive capabilities identified above, that are missing in **Q**.



Later systems of dialectical mathematics, that emerge in that 'meta-systematic-dialectical', categorial-progression-modeled systems-progression, can 'co-explicitize' any given number of levels of division, sub-division, sub-sub-division, ... and sub-sub-sub-...-division, while still concurrently capturing the 'taxonomy level one' process of 'meta-monadization'.

Such capability emerges in the **24<sup>th</sup>** system of dialectical ideography, which has the wherewithal to 'co-explicitize' both 'taxonomy level 1' divisions, and 'taxonomy level 2' divisions -- a level of "sub-divisions" for each "division", e.g., a multiplicity of <<*species*>> for each <<*genos*>>.

Such descriptive capability deepens with the **56<sup>th</sup>** system of dialectical ideography, which can 'co-explicitize' taxonomy levels **1**, **2**, and **3** – divisions, sub-divisions, and sub-sub-divisions. The **120<sup>th</sup>** system can co-explicitize all the way to 'taxonomy level four'.

Further detail on these later systems of dialectical arithmetic can be found on pages **7** and **11** of the PDF of the document entitled *Dialectical Pictography*, reachable via the following link –

<http://www.dialectics.org/archives/pdf/F.E.D.,%20Dialectical%20Pictography,%20I.,%20Systematic%20Dialectics,%20Parts%20I.-III.,%2018MAY2008.pdf>

““Placement”” for more complex, exotic categorial hybridizations may be facilitated by applying the more deeply non-commutative variants of the “product rules” for ‘*qualitative multiplication*’, ‘*ontological qualifier multiplication*’, or ‘*categorial multiplication*’. More detail regarding these alternative product rules may be found on p. **A-47** of the primer document PDF, reachable via –

<http://www.dialectics.org/archives/pdf/F.E.D.%20Intro.%20Letter,%20Supplement%20A3,%20v.2.pdf>

-- including, especially, more detail regarding the so-called “Gödelian” product-rules.

The “Gödelian” product-rules use a prime-factorable number-based, i.e., a composite-number-based “Gödel-numbering” scheme to encode the exact syntax of the multiplication-expression into the subscript of the ‘ontological increment term’ – the “*delta*” term -- of the resulting product-expression.

Reversing the syntactical order – interchanging the *multiplier* and *multiplicand*, the *operator* and *operand*, or the *function* and *argument* roles -- in a **Q** *multiplier*-“times”-*multiplicand* expression therefore changes the subscript value of the ‘ontological-increment term’ of the resultant ““product””-expression. That term can therefore reflect the syntactical order of those two mutually-multiplied meta-number factors within the syntax of that ‘incremental ontology’ component of that product-expression or ‘resultant-expression’.



**Marxian Systematic Dialectic & Dialectical Immanent Critique [Determinate Self-Negation] of the Bourgeois-Ideological-Science of Political Economy.**

We have illustrated at length the **Q** modeling of *systematic dialectic* for a familiar [sub-]totality, that of *Phonetic Writing Systems*.

Now, with that experience “under our belts”, and before transitioning to the models of *historical dialectic* of the next Part, let’s *briefly* consider another **Q**-based model. Let’s consider a model of Marx’s at least partly *systematic-dialectical* rendering of his *immanent critique* [or determinate *self*-negation] of the bourgeois-ideological-science of political economy, and of the positive theoretical fruition of this critique, in his *Capital, A Critique Of Political Economy*.

Take the <<*arithmos*>>/category of **Commodities** as our <<*arché*>> category for this experiment [cf. *Capital*, I., Chapter I., Commodities], denoting it by the **Q** symbol  $q_c \leftrightarrow q_1$ . Then our “‘Table of *Content*’” model for a Marxian critique of political economy becomes:

‘Ideogramic’ Title: [ **The Synchronic Dialectic of Capital:** ]  $[q_c]^{(2^s)}$ ,  $s = 0, \dots, 3$ .

[ $s = 0$ ]: Chapter I.  $[q_c]^{(2^0)} = q_c$

[ $s = 1$ ]: Chapter II.  $[q_c]^{(2^1)} = q_c + q_m$

[ $s = 2$ ]:

Chapter III.  $[q_c]^{(2^2)} = q_c + q_m + q_{mc} + q_k$

[ $s = 3$ ]:

Chapter IV.  $[q_c]^{(2^3)} = q_c + q_m + q_{mc} + q_k + q_{kc} + q_{km} + q_{kmc} + q_{kk}$ .

Translating the intensions of the ‘connotograms’ set forth above into phonetic form, we obtain --

Mock-up of “*Table of Contents*” implied by  $[q_c]^{(2^s)}$  for steps  $s = 0$  through  $s = 3$

Title: **The Synchronic Dialectic of Capital, Level I Antitheses & [Partial] Syntheses**

[ $s = 0$ ]: Ch. I. **Commodities** =  $q_c \leftrightarrow q_1$  [cf. *Capital* I., Chapter I., Commodities]

[ $s = 1$ ]: Ch. II. **Money** =  $q_m \leftrightarrow q_2$  [cf. *Capital* I., Chapter III., Money, or the Circulation of Commodities]

[ $s = 2$ ]:  $q_{mc} \leftrightarrow q_3$  [cf. *Capital* I., Chapter II., Exchange] --

Section 1. Money-Mediated **Exchange** -- of *Money for Commodities*, and of *Commodities for Money*

Section 2. The Money-Mediated, Money-Subsumed **Circulation** of Commodities

Ch. III. **Capital** =  $q_k \leftrightarrow q_4$

[ $s = 3$ ]: Section 1. **Commodity-Capital** =  $q_{kc} \leftrightarrow q_5$  [cf. *Capital* II., Chapter III., The Circuit of Commodity-Capital]

Section 2. **Money-Capital** =  $q_{km} \leftrightarrow q_6$  [cf. *Capital* II., Chapter I., The Circuit of Money-Capital]

Section 3. **Capital-Process as a Whole** =  $q_{kmc} \leftrightarrow q_7$  [cf. *Capital* II., PART III., The Reproduction and Circulation of the Aggregate Social Capital; *Capital* <<*Buch*>> III., [originally] *Formations of the Process as a Whole*]

Ch. IV. **Revolution** =  $q_{kk} \leftrightarrow q_8$  [cf. *Vol* I., Ch. XXXII., Historical Tendency of Capitalist Accumulation]



Marx described the <<arché>> category(y)(ies) of his *dialectical systematics of capital* in his preface to the first German edition of *Capital*, as follows:

“Every *beginning* is difficult, holds in *all sciences*. To understand *the first chapter*, especially the section that contains *the analysis of commodities*, will, therefore, present the greatest difficulties. That which concerns more especially the analysis of the substance of value and the magnitude of value, I have, as much as it was possible, popularized. The *value-form*, whose *fully developed* shape is the *money-form*, is very *elementary* and *simple*. Nevertheless, the human mind has for more than 2,000 years sought in vain to get to the bottom of it, whilst on the other hand, to the successful analysis of much more *composite* and *complex* forms, there has at least been an approximation. Why? Because the body, as an *organic whole*, is more easy of study than are the *cells* of that body. In the analysis of economic forms, moreover, neither microscopes nor chemical reagents are of use. *The force of abstraction* must replace both. But in bourgeois society the *commodity-form* of the *product* of labor – or *the value-form of the commodity* – is the *economic cell-form*. To the superficial observer, the analysis of these *forms* seems to turn on minutiae. It does in fact deal with minutiae, but they are of the same order as those dealt with in microscopic anatomy. With the exception of the section on *value-form*, therefore, this volume cannot stand accused on the score of difficulty. I pre-suppose, of course, a reader who is willing to learn something new and therefore to think for himself”. [*Capital* I., International Publishers, [NY: 1967], pp. 7-8, *emphasis added* by Anonymous].

The <<arché>> category as described above is either **Commodities**, the topic of the first chapter as a whole, or, more “microscopically”, **The Value-Form of the Commodity**, starting with Section 3., “The Form of Value or Exchange-Value”, and its first sub-section, sub-section A., entitled “Elementary or Accidental Form of Value”. We have tested the category of **Commodities**, as <<arché>>-category, above. If we wish to test the consequences of choosing a ‘deeper’ <<arché>>-category for the *systematic dialectic* of Capital, we can set  $q_1 \leftrightarrow q_A =$  **The Elementary Form of Value**, expanding  $[q_A]^{(2^s)}$  to:

$$\begin{aligned} & \text{[The Synchronic Dialectic of Capital:]} \quad [q_A]^{(2^s)}, \quad s = 0, \dots, 4. \\ [s = 0]: & \quad [q_A]^{(2^0)} = q_A. \\ [s = 1]: & \quad [q_A]^{(2^1)} = q_A + q_B. \\ [s = 2]: & \quad [q_A]^{(2^2)} = q_A + q_B + [q_{BA} = q_C] + [q_{BB} = q_M]. \\ [s = 3]: & \quad [q_A]^{(2^3)} = q_A + q_B + q_C + q_M + q_{MA} + q_{MB} + q_{MC} + [q_{MM} = q_K]. \\ [s = 4]: & \quad [q_A]^{(2^4)} = q_A + q_B + q_C + q_M + q_{MA} + q_{MB} + q_{MC} + q_K + \\ & \quad q_{KA} + q_{KB} + q_{KC} + q_{KM} + q_{KMA} + q_{KMB} + q_{KMC} + q_{KK}. \end{aligned}$$

Translating the intensions of the ‘connotograms’ set forth above into phonetic form, we obtain --

Title: <b>Synchronic Dialectic of Capital, Level I Antitheses &amp; [Partial] Syntheses</b>	
[s = 0]: Ch. 1. <b>Commodity</b>	
Sec. A. <b>Elementary Value-Form</b>	= $q_A \leftrightarrow q_1$ [cf. <i>Capital</i> I., PART I., Ch. I., Sec. 3. A.]
[s = 1]: Sec. B. <b>Expanded Value-Form</b>	= $q_B \leftrightarrow q_2$ [cf. <i>Capital</i> I., PART I., Ch. I., Sec. 3. B.]
[s = 2]: Sec. C. <b>General Value-Form</b>	= $q_C \leftrightarrow q_3$ [cf. <i>Capital</i> I., PART I., Ch. I., Sec. 3. C.]
Sec. D. <b>Money Value-Form</b>	= $q_M \leftrightarrow q_4$ [cf. <i>Capital</i> I., PART I., Ch. I., Sec. 3. D.]
[s = 3]: Ch. 2. <b>Money</b>	
Sec. 1. <b>Measure of Values</b>	= $q_{MA} \leftrightarrow q_5$ [cf. <i>Capital</i> I., PART I., Ch. III., Sec. 1.]
Sec. 2. <b>Medium of Circulation</b>	= $q_{MB} \leftrightarrow q_6$ [cf. <i>Capital</i> I., PART I., Ch. III., Sec. 2.]
Sec. 3. <b>Means of Payment</b>	= $q_{MC} \leftrightarrow q_7$ [cf. I., PART I., Ch. III., Sec. 3.b.]
Ch. 3. <b>Capital</b>	= $q_K \leftrightarrow q_8$ [cf. I., PART II.]
[s = 4]: Sec. 1. <b>Commodity-Capital</b>	= $q_{KA,B,C} \leftrightarrow q_{9,10,11}$ [cf. II., PART I., Ch. I.]
Sec. 2. <b>Money-Capital</b>	= $q_{KM,A,B} \leftrightarrow q_{12,13,14}$ [cf. II., PART I., Ch. III.]
Sec. 3. <b>Total Social Capital</b>	= $q_{KMC} \leftrightarrow q_{15}$ [cf. II., PART III., & Vol. III.]
Ch. 4. <b>Revolution</b>	= $q_{KK} \leftrightarrow q_{16}$ [cf. Vol I., Ch. XXXII., Historical Tendency of Capitalist Accumulation]



### Dialectical Modeling Using Another «Species» of the Generalized “Seldon Function”.

**F.E.D.** designates functions like  $[q_1]^{(2^s)}$ , the functions it uses to model dialectical processes in general – to model “‘dialectic’”, of whatever <<species>>, whether of the “‘Systematic’”, the “‘Historical’”, the ‘Meta-Systematic’, or the “‘Psycho-Historical’” <<species>> -- by the name “‘Seldon Functions’”. These functions, in general, have the form  $[q_1]^{(n^s)}$ , where **n** denotes *any* “Natural” Number. But only the values **n** = 2 and **n** = 3 seem widely efficacious.

When **n** = 2, the “dyad”, the ‘series of series’ of which the modeled categorial progressions consist – the series of “non-amalgamative” sums of ever greater numbers of ‘categorigrams’ as **s** escalates – takes the form of a dyad [for **s** = 1], followed by a ‘dyad of dyads’ [for **s** = 2], followed by a ‘dyad of ‘dyads of dyads’” [for **s** = 3], and so on.

Moreover, the leading ‘categorigram’, the ‘meristemal’ ideogram, the ‘onto’ of highest index, representing the category of highest inclusiveness in each series, in each non-amalgamative sum step, is the one that represents the newest, next “antithesis” or ‘contra-thesis’. That onto also represents only the stage of the “‘formal subsumption’” of all previously extant ‘ontos’ by this latest emergent ‘onto’. Formulae of the form  $[q_1]^{(2^s)}$  generate ‘progressions of antitheses’.

When **n** = 3, the “triad”, the ‘series of series’ of which the modeled categorial progressions consist – the series of “non-amalgamative” sums of ever greater numbers of ‘categorigrams’ as **s** escalates – takes the form of a triad [for **s** = 1], followed by a ‘triad of triads’ [for **s** = 2], followed by a ‘triad of ‘triads of triads’” [for **s** = 3], and so on.

Moreover, the leading ‘categorigram’, the ‘meristemal’ ideogram, the ‘onto’ of highest index, representing the category of highest inclusiveness in each series, in each non-amalgamative sum step, is the one that represents the newest, next full “synthesis” or ‘uni-thesis’. That onto also represents the stage of the full, “‘real subsumption’” of all previously extant ‘ontos’ by the latest emergent ‘onto’. Formulae of the form  $[q_1]^{(3^s)}$  generate ‘progressions of syntheses’.

The process of the  $[q_1]^{(3^s)}$  Seldon Function goes as follows. The self-multiplication – the self-operation – of each new full “synthesis” generates the next “antithesis”. Then, next, the ‘inter-multiplication’ – the ‘inter-operation’ – of that new “antithesis” with its source “synthesis” generates the next full “synthesis”. Increasing numbers of ‘partial synthesis’ categories/terms are also generated, and ‘inter-populate’ between the successive “antitheses” and full “syntheses” as **s** escalates.

Viewed more closely, what happens, within each unit-increment escalation of the **s** “independent variable” or ‘drivor’ of this Seldon Function, as assigned to a given universe of discourse, is this:

The <<arché>>-thesis ontological categorigram, call it **q<sub>A</sub>**, is squared, thereby ‘combining with itself’, to form the first ‘meta-monadic’, ‘meta-ontic’ *antithesis* to that *thesis*, call it **q<sub>AA</sub>**, or **q<sub>B</sub>**.

Next, this first antithesis categorigram, **q<sub>B</sub>**, multiplies, thereby combining with, the first thesis categorigram, **q<sub>A</sub>**, to form the combination **q<sub>BA</sub>**, denoting the first [full] synthesis.

Thereafter, this process repeats in an ever-expanding sense, on an ever-expanding scale, with the inclusion of ever more ‘partial syntheses’.

Each successive ‘full synthesis’ is reconceptualized as a fresh, new thesis. Operating upon itself, that thesis produces the new current antithesis. Then, that thesis combines with its new antithesis, producing the new, current ‘full synthesis’.



More and more 'partial syntheses' are also produced, in between each new antithesis and 'full synthesis', resulting from the multiplicative combinations of each new antithesis with all earlier full and partial syntheses as well as with all earlier antithesis terms.

The '**s**-epoch' emergence of each new antithesis signifies its “‘formal subsumption’” of all previously-positing ontology. The emergence, in the immediately-succeeding '**s**-epoch', of the full spectrum of 'partial synthesis' combinations with that new antithesis, crowned with its new 'full synthesis', signifies the advent of its “‘real subsumption’” of all previous ontology.

Recasting the 'exemplificatory' model of the dialectic of *Phonetic Writing Systems* in the idiom of the  $[ql]^{(3^s)}$  species of the *Seldon Function* is left as an exercise for the interested reader.



As stated at the outset of this Part, I hold that the new, heuristic <<organon>> of the Q dialectical ideography portends a cognitive revolution. I hold further that such a revolution is prerequisite to a successful social revolution against the gathering totalitarian darkness of late -- tendentially state- -- capitalist society. The Q ideography is but the first such -- the simplest, the least ““thought-concrete”” in its expressive power -- in a whole dialectical progression of ““dialectical ideographies””. The full ground from which this conviction grows cannot be entered into evidence on the basis of the application of this new ideographical <<organon>> to the modeling of systematic dialectics alone. We must -- to exemplify the experiences that supply the fuller forces which birth this conviction -- drive deeper into the terrain of ‘*The Dialectic of the Dialectic Itself*’, i.e., into the terrain of the categorial exposition expressible as follows:

Synchronic Dialectics ---) Synchronic Dialectics + Diachronic Dialectics ---)

Synchronic Dialectics + Diachronic Dialectics + Diachronico-Synchronic Dialectics +

Psycho-Historical Dialectics,

With the curved arrow-head arrow symbol, ‘---)’, standing for “*goes to*”, or “*becomes*” in the context of conceptual, expository, presentational progression;

or:

Systematic Dialectics ---) Systematic Dialectics + Historical Dialectics ---)

Systematic Dialectics + Historical Dialectics + Meta-Systematic Dialectics +

Psycho-Historical Dialectics,

i.e.,

$q_s \text{ ---) } q_s + q_{ss} \text{ ---) } q_s + q_{ss} + q_{sss} + q_{ssss} = q_s + q_H + q_M + q_P,$

or simply,

$[Dialectical\ Systematics]^{(2^s)},$

or,

$[Synchronic\ Dialectics]^{(2^s)},$

or, more compactly still,

$[q_s]^{(2^s)}, \text{ for } s = 0 \text{ through } s = 2.$

Only by entering into at least the domain of Diachronic Dialectics, or Historical Dialectics, can we further evince this conviction.

That entering-in is planned as the work of the next Part(s) of this text.



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## *Brief #2*

# Meta-Monadology:

## The Universality Of The «Aufheben» Process

by Anonymous

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### *About the Author*

**Anonymous.** The author is a user of the [www.dialectics.org](http://www.dialectics.org) and of the [www.adventures-in-dialectics.org](http://www.adventures-in-dialectics.org) websites, who wishes to remain anonymous, and who has graciously donated this text to the **Foundation**.

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## Contents Map

*Title Page. Meta-Monadology: The Universality Of The «Aufheben» Process.*  
*Omni-Copyright Notice.*  
*About the Author.*

## Contents Map

1. Part I.: The «Aufheben» Meta-Monadology of Platonic «*Arithmoi Eidetikoi*» Dialectics.
2. Part II.: A Model for *Systematic Dialectics*.
3. Part III.: Three Models in *Historical Dialectics*.
  - A. The *Historical Dialectic* of Human-Social Formation(s).
  - B. The “‘*Dialectic of Nature*’” -- The *Historical Dialectic* of Cosmological Natural History.
  - C. The *Historical Dialectic* of the ‘Meta-Evolution’ of the Human-Social Relations Of Production.