

Foundation Encyclopedia Dialectica

<u>Centers of Operation</u>: Stars' End, New York Terminious, California

Webmaster, www.dialectics.org

June 09, 2009 C.E. / B.U.E.

Subject: Eight Axioms for the NQ Dialectical Ideography

Dear www.dialectics.org Webmaster,

Greetings to you from F.E.D.!

The emergent *Global Crisis of Humanity*, in which the 'Seldonian Alternatives' of *Global Renaissance* versus *New/Final Dark Age* are being directly posed, must claim priority one on all F.<u>E.D</u>. resources for the present.

The resulting re-allocation of F.<u>E</u>.<u>D</u>. activities is the context of the dearth of our transmissions to this website since December 2008.

Nevertheless, the General Council of F.E.D. is committed to continuing our communications to your website.

In <u>Encyclopedia Dialectica</u> Brief #1, transmitted in March 2007 for posting to your website, I promised as follows: "You have my promise to provide, at a later date, a "cookbook" full of "worked examples" of the uses of Dialectical Ideography – examples mostly not treated elsewhere in the F.<u>E.D</u>. writings extant so far, and, in many cases, elicited on a more mundane, less grandiose scale than are the three main examples of this Brief."

The General Council has decided that the time to fulfill this promise has arrived.

The next series of letters that we plan to transmit to you will each contain the exposition of a dialectical-ideographic model of the kind described in the quote above.

Some of these models have also been posted elsewhere by students of this site.

This "Oth" letter of that series specifies the dialectical-arithmetic rules of operation that will apply to all of these models.

Background. The following eight axioms have been compiled here, for the first time, from a number of texts posted to this website, none of which assert all of these axioms together.

However, the axioms-system specified below is intended to include a fair representation of the axioms necessary to the "calculus of discovery" described on this site, and to achieve a fulfillment of the Leibniz quest for a *<<Characteristica Universalis>>*, a "universal character-language" [universal ideography] for philosophical and scientific inquiry.

The calculus specified by these axioms is a "purely-qualitative", "heuristic", and "intensional/connotative" one, rather than a "purely-quantitative" or explicit-lists-based, "extensional" one.

That is, this calculus, when its generic symbols are "interpreted" or "assigned" to a given "ontological category", or "kind of being" category, in order to model some aspect of conceptual ["internal"/non-sensuous] experience, and/or of external/sensuous experience, are *purely connotative*, even though the operations of the undergirding, generic calculus are purely deterministic and algorithmic.

The underlying algorithm generates a progression of new "ontological categories" in a "mechanical" way.

However, for a model written in this language to "*work*", the connotations of the interpreted symbols must "make sense of" the algorithmic progression so as to recapitulate the "psycho-history" of the domain of experience being modeled.

This process of "connotative decipherment" of the new symbols generated by the algorithm often -- in my observation of the discoveries being presented on this <u>www.dialectics.org</u> website, and in my own, direct experience in applying this new universal ideographical language -- leads to startling new discoveries and hypotheses.

Below, I provide links to some of the models/discoveries posted on this site.

The most rudimentary version of this dialectical calculus involves a new kind of number, which these texts characterize as "meta-Natural meta-Number", and which is built on the set of standard "Natural Numbers", usually denoted by \mathbb{N} , where $\mathbb{N} = \{1, 2, 3, ...\}$, but which appear to be, qualitatively, the *exact opposite* of their corresponding "Natural" Numbers.

That is, if the standard Natural Numbers can be characterized as forming an axiomatic system of arithmetic based upon

ontologically "unqualified pure quantifiers",

then the "meta-Naturals", which these texts denote by --

NQ, where the "number-space" of that axiomatic-system of arithmetic is denoted by $\mathbb{N}Q \equiv \{ \underline{q}_1, \underline{q}_2, \underline{q}_3, \dots \}$

-- forming an arithmetic which the site characterizes as being one of

"pure, unquantifiable ontological Qualifiers".

The Axioms.

0. If **n** denotes a **N** atural Number, then $\underline{\mathbf{q}}_n$ denotes a "meta-**N** atural meta-Number".

Ideographical shorthand version [using ' \in ' to denote the phrase "is an \in lement of the set...", and ' \Rightarrow ' to denote "implies"]:

$n \in N \Rightarrow \underline{q}_n \in \underline{NQ}$.

1. **<u>q</u>**₁ is a "meta-**N** atural meta-Number".

[Corollary of Axiom 0., \underline{NQ} version of Axiom 1 of the first order Peano Postulates for the Standard Natural Numbers] Ideographical shorthand version: $\underline{q}_1 \in \underline{NQ}$. 2. THE SUCCESSOR OF ANY "META-NATURAL META-NUMBER" IS ALSO A "META-NATURAL META-NUMBER".

[NQ version of Axiom 2 of the first order Peano Postulates for the Standard Natural Numbers]

Ideographical short hand version [where s denotes the Standard Natural Numbers' Peano "successor function" --

s(n) = n+1

-- and where s denotes the "meta-N atural meta-Numbers" "successor function" --

<u>s[q_n] ■ q_n+1</u>:

 $[n \in \mathbb{N} \Rightarrow \underline{q}_n \in \underline{NQ}] \Rightarrow \underline{s}[\underline{q}_n] = \underline{q}_{s(n)} = \underline{q}_{n+1} \in \underline{NQ}.$

3. NO TWO "META-N ATURAL META-NUMBERS" HAVE THE SAME SUCCESSOR.

[\underline{NQ} version of Axiom 3 of the first order Peano Postulates for the Standard Natural Numbers] Ideographical short hand version --

 $[[j, k \in \mathbb{N} \& j \neq k \Rightarrow] \underline{q}_{j}, \underline{q}_{k} \in \underline{NQ}] \Rightarrow \underline{s}[\underline{q}_{j}] \underbrace{\frac{1}{\xi} \underline{s}[\underline{q}_{k}]}$

-- wherein the ideogram ' + ' denotes the relation of <u>mon</u>-quantitative, or qualitative, inequality.

4. **<u>Q1**</u> IS <u>NOT</u> THE SUCCESSOR OF ANY "META-**N**ATURAL META-NUMBER".

[NQ version of Axiom 4 of the first order Peano Postulates for the Standard Natural Numbers]

Ideographical short hand version

[using '¬∃x |' to denote "there does not ∃xist a value x such that", and '|' to denote "such that", and '¬' for "not"]:

 $[[\neg \exists x | x \in \mathbb{N}] \& [\neg \exists \underline{g}_x \in \underline{NQ}]] | [\underline{s}[\underline{g}_x] - \underline{g}_1].$

5. ANY TWO "META-NATURAL META-NUMBERS" DIFFER QUALITATIVELY, IF THEIR SUBSCRIPTS DIFFER QUANTITATIVELY.

Ideographical shorthand version [using ' \gtrsim ' to denote "is less than or greater than", i.e., "is quantitatively unequal to", and ' $\frac{1}{2}$ ' to denote "is not greater than, <u>and</u> not equal to, <u>and</u> not less than", i.e., "is <u>non-quantitatively different than</u>", or "is <u>qualitatively unequal to</u>"]:

 $[[j,k \in \mathbb{N}] \& [j \gtrsim k]] \Rightarrow \underline{q}_{j} \notin \underline{q}_{k}$

6. SELF-ADDITION [OR "DOUBLING"] OF ANY "META-NATURAL META-NUMBER" IS REDUNDANT.

[THE PRINCIPLE OF "ADDITIVE IDEMPOTENCY", OR OF "UNQUANTIFIABILITY"].

Ideographical shorthand version [using ' $[\forall n]$ ' to denote "*for every* value denoted by the variable n"]:

 $[\forall n] | [n \in N]: [\underline{q}_n + \underline{q}_n = \underline{q}_n].$

[Note similarity to "Boolean addition": $0_B + 0_B = 0_B$, and, more surprisingly, $1_B + 1_B = 1_B$].

Corollaries.

 $2\underline{\mathbf{q}}_{n} = \underline{\mathbf{q}}_{n}$ $[\forall n][\forall m]|[n, m \in N]: [m \times \underline{\mathbf{q}}_{n} = m\underline{\mathbf{q}}_{n} = \underline{\mathbf{q}}_{n}].$

• 7. THE ADDITION OF ONE "META-NATURAL META-NUMBER" TO A DIFFERENT ONE *DOES NOT REDUCE* TO ANY SINGLE "META-NATURAL META-NUMBER" VALUE.

Ideographical shorthand version:

 $j, k \in \mathbb{N} \ \& j \stackrel{>}{\underset{<}{\atop}} k \implies \neg \exists x \in \mathbb{N} \mid \underline{q}_j + \underline{q}_k = \underline{q}_x.$

8. [MUTUAL] *MULTIPLICATION ONTOLOGICAL* <u>QUALIFIERS MULTIPLES ONTOLOGY</u> [ADDS NEW ONTOLOGY]. Ideographical shorthand version:

 $j, k \in \mathbb{N} \& j \stackrel{>}{\underset{<}{\atop}} k \implies \underline{q}_j \times \underline{q}_k \equiv \underline{q}_k + \underline{q}_{j+k}.$

["«Aufheben» Evolute Product Rule" for Unquantifiable Ontological Qualifier Meta-Numbers].

Sample Applications.

Texts posted to this site set forth a large number of natural-scientific -- and social-scientific, or "psycho-historical" -- models, all constructed using the calculus whose rules are summarized above, with many startling results, For example --

a. A model of the "taxonomy level one" evolution & "meta-evolution", of the cosmos as a whole: Pages B-20 ff., Link --

http://www.dialectics.org/archives/pdf/F.E.D.%20Intro.%20Letter,%20Supplement%20B-1,%20pp.%2012-22,%20v.2.pdf

b. A "psycho-historical" model of human social evolution, and "meta-evolution", in terms of human "social relations [of [social re-]production]", or "forms of [human-social] intercourse": Pages **B-24** ff., Link --

http://www.dialectics.org/archives/pdf/F.E.D.%20Intro.%20Letter,%20Supplement%20B-1,%20pp.%2023-33,%20v.2.pdf

c. A "psycho-historical" model of human social evolution, and "meta-evolution", in terms of "human socio-geography": Page **B-23**, link --

http://www.dialectics.org/archives/pdf/F.E.D.%20Intro.%20Letter,%20Supplement%20B-1,%20pp.%2023-33,%20v.2.pdf

d. A "psycho-historical" model of the progressive emergence of the various "fields", or «Gene», of human inquiry -

<u>Mythopoeia</u> \rightarrow <u>Religions</u> \rightarrow <u>Philosophies</u> \rightarrow <u>Sciences</u> \rightarrow the "meta-Sciences" of "<u>Psycho-History</u>" itself:

Pages B-9 ff., Link --

http://www.dialectics.org/archives/pdf/F.E.D.%20Intro.%20Letter,%20Supplement%20B-1,%20pp.%2001-11,%20v.2.pdf

e. A "meta-systematic-dialectic presentation", or "pedagogical" dialectical model of the progression of the dialectical *<<Characteristica Universalis>>* systems of dialectical mathematics, starting with the Natural Numbers arithmetic of $N = \{1, 2, 3, ...\}$, of "<u>unqualified</u> generic quantifiers", as "*<<arche'>>* thesis", thence also thereby provoking the emergence of the arithmetic of ${}_{N}Q \equiv \{\underline{q}_{1}, \underline{q}_{2}, \underline{q}_{3}, ...\} = \{\underline{q}_{N}\}$, of "<u>unquantifiable</u> generic ontological <u>qualifiers</u>", as "*contra*-thesis", thereby and thence provoking the emergence, as '*contra-antithesis*', "<u>uni</u>-thesis", or "<u>syn</u>thesis", of ${}_{N}\underline{U} \equiv \{\underline{N}\underline{u}_{1}, \underline{N}\underline{u}_{2}, \underline{N}\underline{u}_{3}, ...\} = \{\underline{N}\underline{u}_{N}\}$, the arithmetic of "quantifiable generic ontological <u>qualifiers</u>", or of "generic, *ontologically <u>qualifiable</u> quantifiers*", thence onwards from there, step by step, into an indefinite, potentially infinite expansion of the horizons of mathematical/ideographical languages' expressive power: Pages **B-6** ff., Link --

http://www.dialectics.org/archives/pdf/F.E.D.%20Intro.%20Letter,%20Supplement%20B-1,%20pp.%2001-11,%20v.2.pdf I plan to illustrate the applications of this axiomatic system of "Dialectical-**N**atural Arithmetic" via a series of "sample dialectical models" from <u>Encyclopedia</u> <u>Dialectica</u>, and from dialectical models recently posted elsewhere on the World Wide Web by some of your site's students, in the series of letters set to follow this one.

Dialogically yours,

Aoristos Dyosphainthos

Member, General Council Foundation <u>Encyclopedia</u> <u>Dialectica</u>