THE DIALECTICA MANIFESTO: *The Dialectic According to* **Plato**.

The Dialectica Manifesto

Dialectical Ideography and

the Mission of **F**.*E*.*D*.

by

Foundation *Encyclopedia Dialectica*

The _Dialectic_ According to Plato.

We of **F**.**E**.**D**. are embarked upon a project that has bridged, across the abyss of the last **Dark Age**, the most advanced «_problematiques_» of the ancient and modern worlds.

This project appropriates the _'meta-fractal'_ self-similarity of those two different, successive scales of «_problematique_» so as to resume some final and neglected, zenith breakthroughs within the ancient Alexandrian flowering of humanity's ancient Mediterranean civilization, in relation to what has developed subsequently, and in a way which assimilates, also, the wealth of that subsequent development.

This has led to a rediscovery, in a higher, modernized, and less Parmenidean, more Heraclitean form, of Plato's lost «_arithmos eidetikos_», his _"arithmetic of ideas"_ -- his 'ideo-_systematic'_, 'ideo-_taxonomic' assemblages_ of _idea_-«_monads_»; his "_arithmetic of dialectics_".

This «_arithmos_» is alluded to in his extant writings, but its full exposition is nowhere to be found in those portions of Plato's opus which survived the **last Dark Age**.

It has been _'psycho-archaeologically'_ reassembled in a seminal study, by Jacob Klein, as follows:

"While the numbers with which the arithmetician deals, the **_arithmoi_** [_assemblages_ of **units** — **F**.**E**.**D**.] **_mathema_**_tikoi_ or **_monad_**_ikoi_ [_abstract_, _generic_, idealized, **_qual_**_itatively_ **homogeneous** "**_monads_**" or [idea[ized]] **units** — **F**.**E**.**D**.] are capable of being counted up, i.e., added, so that, for instance, eight **_monads_** [eight _abstract_ idea[ized]- **units**, **unities**, or _idea-**a**-toms_ — **F**.**E**.**D**.] and ten **_monads_** make precisely eighteen **_monads_** together, the **_assemblages_** of **_eide_** [of 'mental _seeings'_ or mental _visions_; of "_ιδεας_" — **F**.**E**.**D**.], the "**_arithmoi eide_**_tikoi_" [**_assemblages_**, **ensembles**, "'**_sets_**'", or [**sub-**]**_totalities_** of **_qual_**_itatively_ **heterogeneous** **ideas** or «**_eide_**» — **F**.**E**.**D**.], cannot enter into any "**_community_**" with one another [i.e., are '**_non_**-**_reductive_**', "'**_nonlinear_**'", "_non-superpositioning_", "_non-additive_", '_non-_ **_addable'_** [Plato's word: «**_asumbletoi_**»], or "_**non**-amalgamative_" [cf. Musès] — **F**.**E**.**D**.]."

"_Their_ **_monads_** _are all_ **_of_** **_different_** **_kind_** [i.e., are '**_categorially_**', **ontologically**, **_qual_**_itatively_ **_unequal_** — **F**.**E**.**D**.] and can be brought "together" only "partially", namely only insofar as they happen to **_belong_** to one and the same assemblage, whereas insofar as they are "entirely bounded off" from one another ... they are incapable of being thrown together, **_in-comparable_** [incapable of being _counted_ as replications of **_the_** _same_ **_unit_**[y] or **_monad_**; incomparable **_quant_**_itatively_ — **F**.**E**.**D**.] ... ."
The **_monads_** which constitute an "_eidetic number_", i.e., **_an assemblage of ideas_**, are nothing but a conjunction of _eide_ which **_belong together_**.

They *belong together* because they belong to one and the same *eidos* [singular form of «*eide*»: *one particular 'internal / interior seeing', vision*, or «*ιδεα*» — **F**.*E*.*D*.] *of a* **higher** **order**, namely a "class" or *genos* [akin to the grouping of multiple *species* under a single *genus* in classical '''taxonomics''' — **F**.*E*.*D*.].

But all will together be able to "partake" in this **genos** (as for instance, "human being", "horse", "dog", etc., partake in "animal") *without "partitioning" it among the (**finitely**) many eide and without losing their indivisible unity only if the genos itself exhibits the mode of being of an* **arithmos** [singular form of «*arithmoi*»: a single *assemblage* of *units*/«*monads*» — **F**.*E*.*D*.].

Only the **arithmos** structure with its special *koinon* [commonality — **F**.*E*.*D*.] character is able to guarantee the essential traits of the community of *eide* demanded by **dialectic**; the indivisibility [*a*-*tom*-icity or '*un*-*cut*-ability' — **F**.*E*.*D*.] of the single "monads" which form the **arithmos** *assemblage*, the limitedness of this **assemblage of monads** as expressed in the joining of many monads into one assemblage, i.e., into one idea, and the *untouchable* **integrity** of this **higher idea** as well.

What the single *eide* have "in common" is theirs only *in their community* and is not something which is to be found "beside" and "outside" ... them. ... .

The unity and determinacy of the **arithmos** *assemblage* is here rooted in the **content** of the idea..., that **content** which the *logos* [*word; rational speech; ratio* — **F**.*E*.*D*.] reaches in its characteristic activity of uncovering foundations *"analytically"*.

A special kind of [*all-of-one-kind, generic-units-based* — **F**.*E*.*D*.] number of a particular nature is not needed in this realm, as it was among **the dianoetic numbers** [the «*arithmoi* *monadikoi*» — **F**.*E*.*D*.]..., to provide a foundation for this **unity**.

In fact, it is impossible that any kinds of [*homogeneous units* — **F**.*E*.*D*.] number corresponding to those of **the dianoetic realm** [*the realm of 'dia-noesis' or of '«dianoia»', of rigid, radically-dualistic, categorically "either/or" thinking, lacking any capability for the reconciliation, via 'complex unification', of opposites, i.e., the realm of 'pre-/sub-dialectical' thinking* — **F**.*E*.*D*.] should exist here, since each **eidetic number** *is*, by virtue of its **eidetic character** [«*eide*»-*character* or *idea-nature* — **F**.*E*.*D*.], **unique in kind** [i.e., *qualitatively* unique/distinct/*heterogeneous* in comparison to other «*eide*» — **F**.*E*.*D*.], just as each of its *"monads"* has not only **unity** but also **uniqueness**.

For each **idea** is characterized by being always the same and simply **singular** [therefore *additively idempotent* — **F**.*E*.*D*.] in contrast to the unlimitedly many **homo**geneous monads of the realm of *mathematical* **number**, which can be rearranged as often as desired into definite **numbers**. ... .

The "pure" mathematical monads are, to be sure, differentiated from the single objects of sense by being outside of change and time, but they are not different in this sense — that they occur in

multitudes **and are of the *same* *kind*** (Aristotle, Metaphysics B 6, 1002 b 15 *f*.: [Mathematical objects] differ not at all in being *many* and of the *same kind*...), whereas each *eidos* is, by contrast, ***unreproducible*** [*hence modelable by idempotent addition, or 'non-addability' —* **F**.*E*.*D*.] and truly *one* (Metaphysics A 6, 987 b 15 *ff*.: "***Mathematical objects*** differ from ***objects of sense*** in being everlasting and unchanged, from ***the eide***, on the other hand, in being many and alike, while ***an eidos is each by itself one only***"...).

In consequence, as Aristotle reports (e.g., Metaphysics A 6, 9876 b 14 *ff.* and N 3, 1090 b 35 *f*.), there are ***three kinds of arithmoi***: (1) the ***arithmos eidetikos*** — ***idea***-***number***, (2) the *arithmos aisthetos* — sensible number, (3) and "between"...these, the ***arithmos mathematikos*** or ***monad***ikos — mathematical and ***monadic number***, which shares with the first its "purity" and "changelessness" [here Aristotle reflects only the early, more 'Parmenidean', Plato, not the later, «*autokinesis*» Plato — **F**.*E*.*D*.] and with the second its manyness and reproducibility.

Here the *"aisthetic"* [*"sensible"* or *sensuous* — **F**.*E*.*D*.] *number* represents nothing but the things themselves which happen to be present for ***aisthesis*** [*sense perception* — **F**.*E*.*D*.] in this number.

The mathematical numbers form an independent domain of objects of study which the ***dianoia*** [*the faculty of 'pre-/sub-dialectical thinking' —* **F**.*E*.*D*.] reaches by noting that its own activity finds its exemplary fulfillment in "reckoning [i.e., account-giving] and counting"....
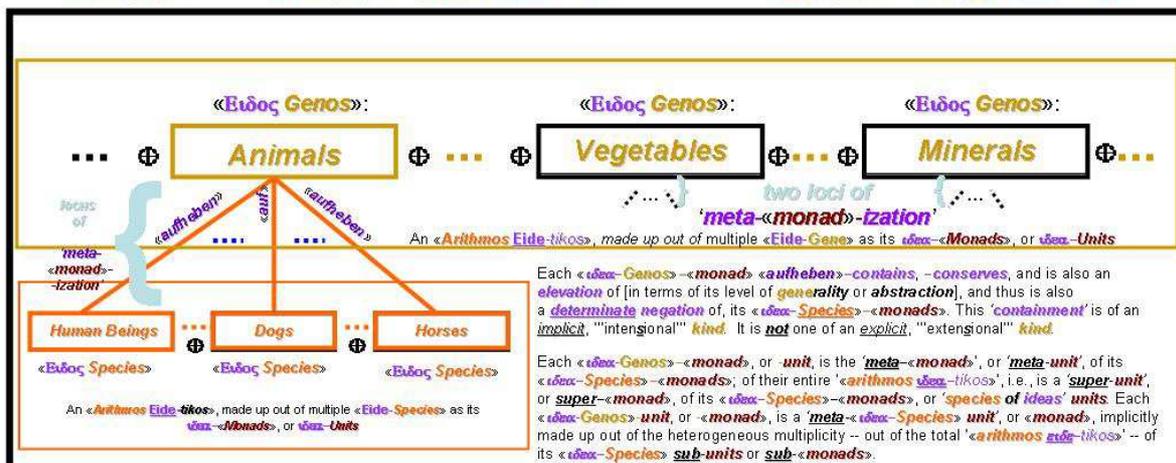
The ***eidetic number***, finally, indicates the *mode of being of the **noeton*** [that which exists *"for"* thought; that which thought "beholds"; the ***object of thought***; the ***idea***[*l*]***-object*** — **F**.*E*.*D*.] *as such* — *it defines the* eidos ***ontologically*** *as a being which has* **multiple relations** *to other* eide ***in accordance with their particular nature*** [i.e., *in accord with their* ***content*** — **F**.*E*.*D*.] *and which is nevertheless in itself altogether* ***indivisible***.

The Platonic theory of the ***arithmoi eide***tikoi *is **known** to us in these terms **only from the Aristotelian polemic against it*** (*cf*., above all, Metaphysics M 6-9)."

[Excerpted from: Jacob Klein; *Greek Mathematical Thought and the Origin of Algebra*; Dover [New York: **1992**]; pages **89-91**; **bold**, *italic*, underline, and **col**or emphasis, [and square-bracketed parenthetical comments] added by **F**.*E*.*D*.].

«Arithmoi Eide-tikoi» formed by an «Arithmos Eide-tikos» of «Eide-Gene»-«Monads», or -units, together with a [connected] «Arithmos Eide-tikos» of «Eide-Species»-«Monads», or -units.

«Εἶδος Genos»:   «Εἶδος Genos»:   «Εἶδος Genos»:

Animals ⊕ ··· ⊕   Vegetables ⊕···⊕   Minerals ⊕···

locus of 'meta-«monad»-ization'   two loci of 'meta-«monad»-ization'

An «Arithmos Eide-tikos», made up out of multiple «Eide-Gene» as its idea-«Monads», or idea-Units.

Human Beings ⊕   Dogs ··· ⊕   Horses

«Εἶδος Species»   «Εἶδος Species»   «Εἶδος Species»

An «Arithmos Eide-tikos», made up out of multiple «Eide-Species» as its idea-«Monads», or idea-Units.

Each «idea-Genos»-«monad» «aufheben»-contains, -conserves, and is also an elevation of [in terms of its level of generality or abstraction], and thus is also a determinate negation of, its «idea-Species»-«monads». This 'containment' is of an implicit, "'intensional'" kind. It is not one of an explicit, "'extensional'" kind.

Each «idea-Genos»-«monad», or -unit, is the 'meta-«monad»', or 'meta-unit', of its «idea-Species»-«monads»; of their entire '«arithmos idea-tikos»', i.e., is a 'super-unit', or super-«monad», of its «idea-Species»-«monads», or 'species of ideas' units. Each «idea-Genos»-unit, or -«monad», is a 'meta-«idea-Species» unit', or «monad», implicitly made up out of the heterogeneous multiplicity -- out of the total '«arithmos idea-tikos»' -- of its «idea-Species» sub-units or sub-«monads».

This depiction of an «Arithmoi Eidetikoi» is based upon the example invoked in Jacob Klein's book **Greek Mathematical Thought and the Origin of Algebra**. Two key definitions, relevant throughout that passage, and throughout this treatise, are also supplied below:

"'Ontology'" [«Onto»-«Logy»: "'being-knowledge'"; "'discourse about being'"] ≡ The knowledge of, or the word-narrated [«Logos»] accounting for / description of, the kinds of being [«On»] that are "be-ing"', that are extant, or existent, in any given moment, or epoch, of the history of the finite, manifest being / existence of this «kosmos», including both 'physio-being', or «physis»-being, and also human-'phenomic' «ideo»-being, or «idea»-being, i.e., including human-cultural / "'memetic'" idea-objects", or "'idea'-matter"', with the [ideo-]"'materiality'" of such "idea-objects" here meant to be grasped in accord with the principles of our perspective, that of "'Psychohistorical Materialism'".

"'Ontodynamics'" [«Onto»-«Dynamis»: "'being squared'", "'being-potential'", "'being-power'", "'being-change'", "'change of being'"; "'power of being to change [itself, and other being]'"] ≡ Emergence of new, successor kinds of being – of new «species», and new «gene», of being, etc. – of higher "'power'"; of higher "'degree'"; of higher intrinsic "'dimensionality'", relative to that of their predecessor kinds of being, from out of the inter-action, and from out of the "'intra-action'", of the «monads» of the «arithmoi» of their predecessor kinds of being; i.e., of kinds of being of lower "'power'", "'degree'", or inner "'dimensionality'".   183

Plato may have already embarked upon an axiomatization of these three arithmetics, *circa* **380** B.C.E., even prior to Euclid of Alexandria's axiomatization of geometry, *circa* **300** B.C.E.:

"Plato seems to have realized *the gulf between arithmetic and geometry*, and it has been *conjectured* that he may have tried to bridge it by *his concept of number* and by the *establishment of number upon a firm axiomatic basis similar to that which was built up in the nineteenth century independently of geometry*; but we cannot be sure, because *these thoughts do not occur in his exoteric writings* and *were not advanced by his successors*.

If Plato made *an attempt to arithmetize mathematics* in this sense, *he was the last of the ancients to do so*, and the problem remained for modern analysis to solve.

The thought of Aristotle we shall find diametrically opposed to any such conceptions.

It has been suggested that Plato's thought was so opposed by the polemic of Aristotle that it was not even mentioned by Euclid.

Certain it is *that in Euclid there is no indication of such a view of the relation of arithmetic to geometry*; *but the evidence is insufficient to warrant the assertion that*, in this connection, *it was the authority of Aristotle which held back for two thousand years a transformation which the Academy sought to complete*."

[Carl B. Boyer; *The History of the Calculus and its Conceptual Development*; Dover (NY: **1949**); page **27**].

We term *'Peanic'* any progression of entities which conforms to the first four, "first-order logic" Dedekind/(Giuseppe) Peano postulates, first formulated *circa* **1889**, which were constructed with the intent to axiomatize ***just*** the "<u>standard</u> natural numbers", but which later came to be known to have "<u>non</u>-standard models".

'Dialectic' is a *'logic'*, or a [*'Qualo-Peanic'* *'Meta-Peanic'*] *'pattern of what **follows** from what'*, more general than the *"formal logic"* of content-independent *'propositional followership'*.

'Dialectic' generalizes about how *natural **populations**, **ensembles**, **systems**, [sub-]**totalities*** — both concrete, physical-'''"external"'' «***arithmoi***», and '''"internal"''', human-conceptual «***arithmoi***» — change, including, especially, of how they ***change themselves***.

'Dialectic' is about '[***allo-***]*flexion'* or '[***allo-***]*flexivity'* — the *'**bending**'*, or '''"alteration"''', of the *'course of development'* of one '[*ev*]*ent*ity' by the actions of ***other*** '[*ev*]*ent*ities'.

But *'Dialectic'* is also, and especially, about *'**self**-**re**-fl**ex**ivity'*, *'**self**-**re**-fl**u**xivity'*, *'**self**-dialogue'*, *'**self**-controversion'*, ***self-activity***, ***self**-change*, or "***self**-**contra**-kinesis*" [in summary, about '''"***self-bending***"''': the 'self-induced', self-determining '''"bending"''' of the *'course of development'* of an '''"*eventity*"''' as a result of its own, immanent, '''"inertial"''', '''"ballistic"''', *'**intra**-**dual**'*, 'essence-ial', *'**self**-force'*].

'Dialectic' is the name for the fundamental [and ever self-developing] *modus operandi* of nature, *including* that of human[ized] nature, but also including that of <u>pre</u>-human and <u>extra</u>-human nature.

'Dialectic' is about the subject/verb/object-identical ***meta-dynamic*** of *'**quanto**-**qual**itatively'*, *'**quanto**-**ontologically**'* [***self***-]*changing*, [***self***-]*developing*, *via-'**metafinite**'-singularity* '[***self-***]*bifurcating **meta**-systems'* or *'process-entities'* [*'**eventities**'*], manifested in all levels, at all '[meta-]scales', for all '''"orders"''' of 'natural history', including **that part of** '**natural history**' which we call Terran human history, and, by hypothesis, in the history of humanoid species generally, throughout this cosmos ['**human**-**natur**[e-]**al history**'].

For Plato, «*Dialektikê*», '*dialectical thought-technology*', as manifested in his «*arithmos eidetikos*», names a higher form of *human cognition*. It is higher than that of «*Doxa*», mere opinion. It is also higher than that of «*Dianoia*» or '«*Dianoesis*»'; higher than that which Hegel termed «*Verstand*», "The Understanding" [*cf.* Plato].

"Dialectical thought" names *a higher stage of human cognitive development*, a higher "state" of human [*self-*]*awareness*, a higher form of **human self**-*identity*, and of '''human **subject**-ivity''' -- of human agency -- beyond even those associated with the most advanced possible forms of *axiomatic, deductive, mathematical* logic, still '«*dianoetic*»', and partly sub-rational, due to the frequent arbitrariness, authoritarianism, and dogmatism of their unjustified axioms and primitives, as well as due to their categorical rigidity and "either/or" radical dualism --

"...***disputation and debate*** may be taken as a ***paradigmatic model*** for the general process of ***reasoning in the pursuit of truth***, thus making the transition from rational *controversy* to rational *inquiry*."

"There is nothing new about this approach."

"Already the *Socrates* of *Plato's Theaetetus* conceived of ***inquiring thought as a discussion or dialogue that one carries on with oneself***."

"***Charles Saunders Peirce*** stands prominent among those many subsequent philosophers who held that discursive thought is always *dialogical*."

"But ***Hegel***, of course, was the prime exponent of the conception that all *genuine* knowledge must be *developed dialectically*. ..."

"These conclusions point in particular towards ***that aspect*** of the *dialectic* which lay at the ***forefront of Plato's concern***."

"He insisted upon two fundamental ideas: (1) that a starting point for *rational* argumentation cannot be merely assumed or *postulated*, but ***must itself be justified***, and (2) that the *modus operandi* of such a ***justification can be dialectical***."

"Plato accordingly mooted the prospect of *rising above* a *reliance* on *unreasoned first principles*."

"He introduced a special device he called *"dialectic"* to **overcome** this **dependence** upon **unquestioned axioms**."

"It is worthwhile to see how he puts [F.E.D.-- this] in his own terms:"

"There remain geometry and those other allied studies which, as we have said, do in some measure apprehend reality; but we observe that they cannot yield anything clearer than a dream-like vision of the real so long as they leave the assumptions they employ *unquestioned* and can *give no account of them*."

"If your premise is something you do not really know and your conclusion and the intermediate steps are a tissue of things you do not really know, *your reasoning may be consistent with itself*, *but how can it ever amount to knowledge?* ..."

"So... the **method** of *dialectic* is the only one which takes this course, *doing away with assumptions*. ..."

"*Dialectic* will *stand* as the *coping-stone* of the *whole structure*; there is *no other study that deserves to be put above it*."

"Plato's writings do not detail in explicit terms the exact nature of this crucial enterprise of dialectic."

"Presumably we are to gain our insight into its nature not so much by way of explanation as by way of *example* — the example of Plato's own **practice** in the **dialogues.**"

[Nicholas Rescher; *Dialectics: A Controversy-Oriented Approach to the Theory of Knowledge*; SUNY Press (Albany, NY: **1977**); pages **46-48**; **bold**, *italic*, underline, and **color** emphasis added by F.E.D.].

The procedure of formal proof, of deductively deriving theorems from axioms and postulates, is the exercise of '«*dianoesis*»' *«par excellence»*.

But the process of *discovery, formulation, selection, refinement,* and *optimization of the individual axioms themselves*, and of systems of axioms, resides beyond the «*dianoetic*» *realm*.

Formal and mathematical logic provide it with no algorithmic guidance.

That process belongs to the realm of *dialectics*.