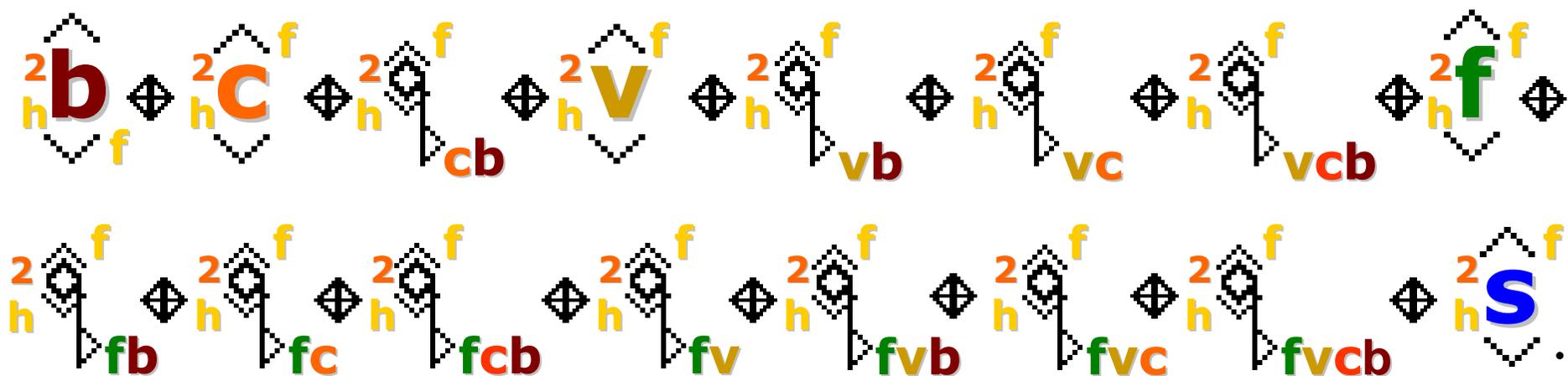


Dialectical 'Meta-Model' --

The [Psycho]Historical Dialectic of human-social formation(s).

001

$$\begin{matrix} 2 \\ h \end{matrix} \mathbf{X} \begin{matrix} f \\ 4 \end{matrix} = \left(\begin{matrix} 2 \\ h \end{matrix} \mathbf{b} \begin{matrix} f \\ 2 \end{matrix} \right)^4 \approx^* \begin{matrix} 2 \\ h \end{matrix} \mathbf{b} \begin{matrix} f \\ 16 \end{matrix} \equiv \equiv$$



*[Throughout this text, when a *two*-level 'dyadic exponent' is reduced to a *single*-level exponent, a 'dyadic expansion' is intended. 'Non-dyadic expansion' is likely to generate a 'categorical expansion' with 'subscript epithets' in a *non*-mnemonic order.].

The [Psycho] Historical Dialectic of human-social formation(s) – Connotations of Key ‘Self-Hybrid’, ‘Self-Conversion’ Terms.

$\begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{b}$ ≡ ‘«Arché-memo-physis» socio-ontological’ category of human-social formation; «arithmos» of hunting/gathering “band” units /«monads»;
 $\begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{b} \mapsto \begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{1}$;

$\begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{c}$ ≡ **1st** ‘meta-memo-«physis» socio-ontological category’ of human-social formation; of the «arithmos» of “camp” units /«monads»;
 $\begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{bb} \mapsto \begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{c} \mapsto \begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{2}$; Each camp unit may be a ‘meta-band’ unit, which *may be* [initially] made up out of a heterogeneous multiplicity of band units, or otherwise of a single “band” unit, that grows/converts itself into a camp unit; “‘primitive accumulation’” of camp units;

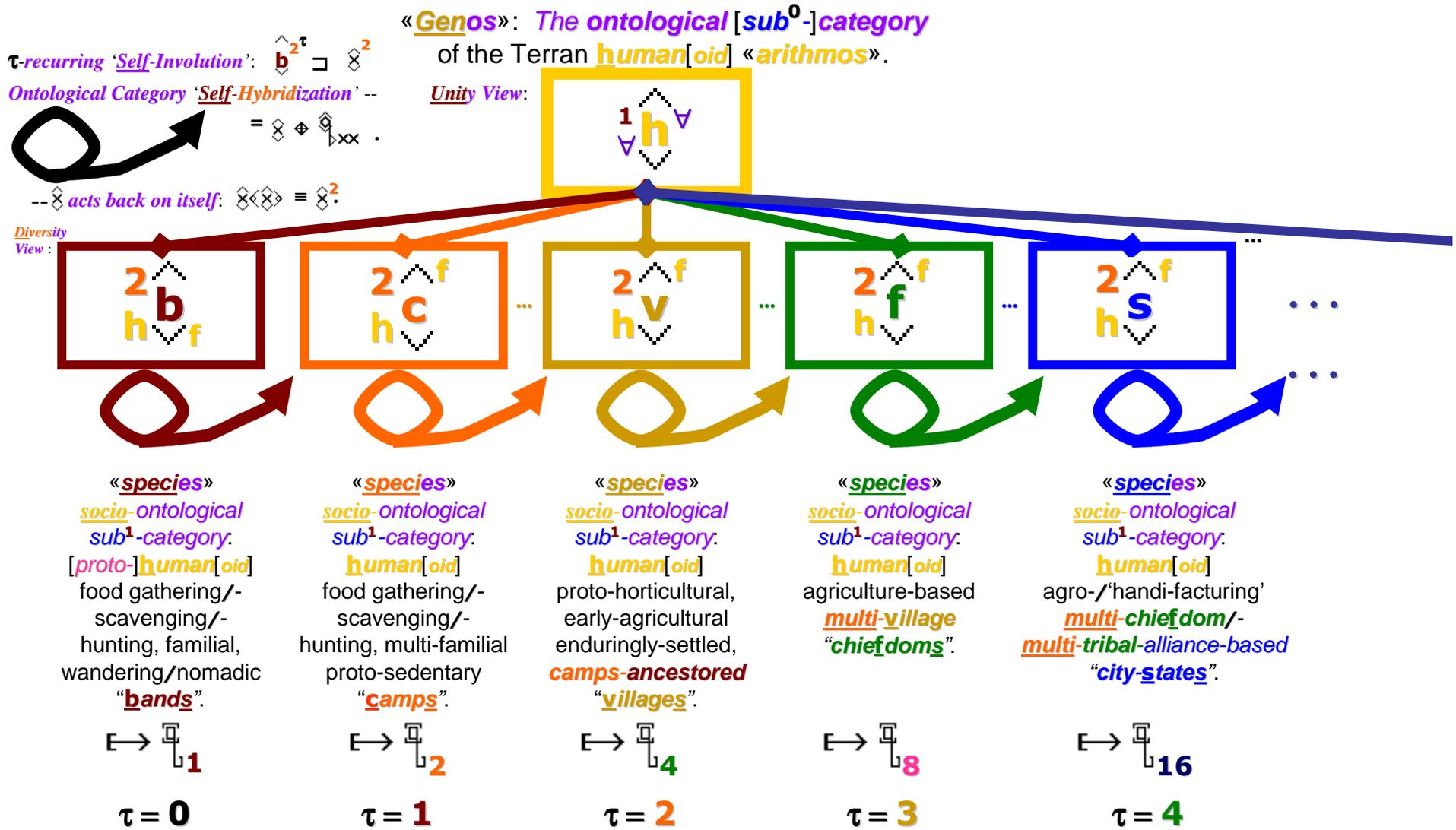
$\begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{v}$ ≡ **2nd** ‘meta-memo-«physis» socio-ontological category’ of human-social formation; of the «arithmos» of “village” units /«monads»;
 $\begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{cc} \mapsto \begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{v} \mapsto \begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{4}$; Each village unit is a ‘meta-camp’ unit, which *may be* [initially] made up out of a heterogeneous multiplicity of camp units, or otherwise of a single “camp” unit, that grows/converts itself into a village unit; “‘primitive accumulation’” of villages units;

$\begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{f}$ ≡ **3rd** ‘meta-memo-«physis» socio-ontological category’ of human-social formation; of the «arithmos» of “chiefdom” units /«monads»;
 $\begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{vv} \mapsto \begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{f} \mapsto \begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{8}$; Each chiefdom unit is a ‘meta-village’ unit, [initially] made up out of a heterogeneous multiplicity of village units; “‘primitive accumulation’” of chiefdoms units;

$\begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{s}$ ≡ **4th** ‘meta-memo-«physis» socio-ontological category’ of human-social formation; of the «arithmos» of “city-state” units /«monads»;
 $\begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{ff} \mapsto \begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{s} \mapsto \begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{16}$; Each city-state unit is a ‘meta-chiefdom’ unit, [initially] made up out of a heterogeneous multiplicity of chiefdom units; “‘primitive accumulation’” of city-states units;

$\begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{e}$ ≡ **5th** ‘meta-memo-«physis» socio-ontological category’ of human-social formation; «arithmos» of multi-city-state “empire” units /«monads»;
 $\begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{ss} \mapsto \begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{e} \mapsto \begin{matrix} 2 \\ h \\ f \end{matrix} \mathbf{32}$; Each [ancient] empire unit is a ‘meta-city-state’ unit, made up out of a heterogeneous multiplicity of city-state units; “‘primitive accumulation’” of empires units.

The [Psycho]Historical Dialectic of human-social formation(s) – Mapped Algebraically as a Cumulative Self-Progression of «Arithmoi»/«Species», or of “Kinds”, of Ontology/of «Monads», i.e., of [socio-]Ontological Categories.



SUB-«Species»-for-«Species» SYNECDOCHE in Initial Partial Solutions for Dialectical-Algebraic Category-Unknowns Formed Algorithmically.

004

Often, in our initial, intuitively-evoked “‘solutions’” for the *meanings* of *algebraic terms generated algorithmically* in the dialectical ‘meta-model meta-equations’ presented throughout these texts, we will be, in effect, substituting the name of the *one* most widely familiar sub-category, or the sub-category upon which we wish to focus *reader attention*, for the *full category/sub-categories list* implied by the subscripts of the ‘*categorogram*’ so generated, which will typically comprise *not* just *one*, but *multiple* such sub-categories. This is “synecdoche”, in the sense of *one sub-category* name substituting for the *entire category’s* name; for the *totality of all of its other* apt sub-categories’ names. This happened when, elsewhere, we identified ‘Dialectical Meta-Axiomatics’, involving **2** parallel/bound-together *expository streams*, as if *representing* the sole ‘sub-«species»’ of the *complex unity* of the *Newtonian/Euclidean with the Marxian/Hegelian methods of presentation*. That presentation ignored, for *example*, another ‘sub-«species»’ of that same, general ‘uni-category’ «species». This *other ‘sub-«species»*’ does *not involve two parallel, interconnected*, but ‘ideo-ontologically’, *qualitatively different streams of exposition*. Instead, *it involves* a single expository narrative stream, interweaving, ‘alternatingly’, a Marxian/Hegelian passage, followed by a Newtonian/Euclidean passage, plus, after each such pair of passages, a third passage, one that is neither/both Marxian/Hegelian nor/& Newtonian/Euclidean. The *third passage* houses reflections upon **&** comments about the *specific interconnection, ‘inter-reflection’, & ‘inter-representation’ of its preceding 2 passages, including a «begrifflichkeit»*, or “‘*conceptualization*’”, of the ‘*intuitional*’ meaning, *import, & implication(s)* of *the second passage’s deductive proof(s)*, in light of *the first passage*. This *threefold succession of kinds of expository passages*, in this *kind of presentation-method*, is reconstituted repeatedly, *once for each step/stage* of the *Marxian/Hegelian, intuitive/algorithmic, heuristic, ‘meta-equation meta-model’-systematized presentation*. Our more “‘encyclopedic’” presentations strive to catalogue all sub-categories of *each* evoked *category*.

There is at least *one kind* of ‘co-category’ that is always *implicitly*, ‘*possibilistically present*’, whether *actualized* or not, for *each* ‘mere *hybrid*’ *category-symbol* that is generated in any *solved/interpreted- $\mathbb{N}\mathbb{Q}$ ‘meta-model meta-equation’ expansion*. It is *a kind* of ‘*retrograde counter-category*’ to the *main*, “‘*progressive*’” *category* that is *connoted* by the generated ‘categorogram’. It ties to the same *generic ordinal category* -- it has the *same ordinal subscript* as the *main category*. It is *formed* by “permuting” the *solved/interpreted* subscripted epithets -- *reversing their order* in cases of a *two*-epithet subscript. For *example*, in the *taxonomy level 1* [$\mathbb{1}$], synchronic dialectic of Nature, main category $\mathbb{1}\mathbb{Q}_{hp}$, solving the generic $\mathbb{N}\mathbb{Q}$ category ordinal qualifier \mathbb{Q}_{272} , connotes the general category of, e.g., modern humanity appropriating/harnessing bacteria, as in making, for human consumption, fermented foods: yogurts, cheeses, wines, etc. But *reversing the order* of *its 2* subscripts *yields* $\mathbb{1}\mathbb{Q}_{ph}$, *also solving specifically the same generic ordinal qualifier, \mathbb{Q}_{272}* . However, this “commuted” ‘*categorogram*’ *connotes* a very *different category*, that of, e.g., *bacteria “appropriating” [part of] the human population* e.g., *each* winter, by *creating “toxic colds”* [*catarrhal jaundice*], whereby *bacteria eat human*, e.g. *sinus*, etc., *tissues, converting parts* of *human bodies* into *their own, & into more of their own, bacterial bodies*. The ‘gödel# product rule’ *versions* of the Q arithmetics, gQ, not detailed in *this* text, explicitly separate such ‘co-categories’, with *computer app help* in *computing large primes’ products*.

The [Her-][His-] Story of human-social formation(s).

005

“Archaeologists speak of six “pristine” civilizations -- states that arose indigenously, and weren’t merely copied from a nearby civilization, or imposed on the populace by conquest. The standard six are: Mesopotamia, Egypt, Mesoamerica, South America, China, and the civilization of the Indus River valley (about which relatively little is known) in south Asia. Some scholars throw in West Africa as well. Calling West African civilization pristine is something of an exaggeration, given earlier contact with states to the north. Then again, calling some of the standard six “pristine” states is a bit of a stretch. ...Still, even after granting these early and occasionally momentous contacts, we are left with three large realms of ancient civilization, quite removed from each other: China, the Near East, and the New World. The scholarly consensus is that each developed its energy and information technologies -- farming and writing -- indigenously. And each then underwent its early civilizational history in essential isolation from the others.”

“*Yet in all three cases, the same thing happened.* Namely: more of the same.”

“The trend that got humanity to the verge of civilization -- bands getting big enough to qualify as villages, which then got bigger and more complex and combined to form chiefdoms -- continued. The chiefdoms’ villages evolved into something more like towns, which themselves then got bigger and more complex. In all three regions, loosely defined city-states -- urban cores surrounded by farmlands and villages and towns -- seem to have evolved (though in some places, such as Egypt and the Andes, the “city” part of the state may have been so small as to stretch the definition of the term). And these city-states merged, forming multicity states, and these multicity states grew into empires.”

“Sure, there were setbacks aplenty -- droughts, barbarian hordes, and other catalysts of epic collapse -- but in the long run the setbacks proved temporary. (Indeed, the setbacks attest to ongoing progress; their increasing vastness charts the growing magnitude of the systems that are being set back). So there you have it -- ancient history in a nutshell: onward and upward, to higher levels of social complexity.”

Robert Wright, *Nonzero: The Logic of Human Destiny*, New York: Pantheon Books, 2000, pp. 108-109; see also p. 20; p. 353, note to p. 20, ***bold italic*** underlined shadowed emphasis added by F.E.D.; see also the web site where excerpts from this book are available to read free-of-charge, via the following URL -- <http://nonzero.org/toc.htm>.

OBJECTIVE: The Purpose of this 'Meta-Model'.

006

The term “social formation” is used frequently, by Marx, in his surviving writings -- both those published and those *not* published, by him, during his lifetime -- as well as in the posthumous *secondary* literature on Marx’s work. It is used to name or describe *many distinct aspects* of the *human-social phenomenon*. *Herein*, we use this *term*, “[*human*]-*social formation*”, to refer to an ever more “geo-physical”, and “geo-morphological” aspect of Terran *human history* -- to the “*shapes*” of the “physical plants” of *human social constructions*, on the face of the Earth, and in spaces excavated just beneath that surface, forming, as it were, a *new geological layer*, atop the *earlier-built layers* of *pre-human-natural/geological formations*; *geological “strata”* [cf. Chardin; cf. Vernadsky].

Our goals thereby *include illustrating* how an *N_Q* ‘*dialectical-mathematical meta-equation meta-model*’, *presenting a core categorial progression* of ‘*self-«aufheben» self-meta-«monad»-izations*’, modeling a “*psycho-physical*” [*psycho*]*historical progression*, can *describe main features* of the *history* of such ‘*human-social formation(s)*’ on Earth. Excerpts from Robert Wright’s synthesis of the *archaeological & historical* literature on this *story*, in his book *Nonzero: The Logic of Human Destiny* [New York: Pantheon Books, 2000] provide *key ‘thematics’*, *anchoring* this *presentation throughout*.

This ‘*meta-equation meta-model*’ was chosen for this text *also* because it *well-exemplifies key principles* of *our ‘unified theory of universal, cosmological meta-evolution’, or ‘dialectical theory of everything’*, i.e., *key principles* of the *singular “dialectic of Nature”*. *One* of *those* is that of ‘*evoluteness*’, the *experience-based expectation* that ‘*meta-evolution*’, at *all scales*, for *all ‘sub^w-universes’ within our universe as a whole*, as well as that *universe itself, as a whole*, will exhibit ‘*evolute*’, *or, better, ‘covolute*’, rather than ‘*convolute*’, ‘*content-structure*’: that *earlier ontology* will *tend to continue* to be *extant*, at least episodically & recurrently, «*aufheben*»-*outside, externally, alongside, as well as «aufheben»-inside*, the *subsequent ontology* that *supersedes it*. For example, not only are *hunting bands, & their camps*, still *extant* in the “least developed”, *tribal periphery* of *contemporary global society*. *Modern variants* of this *most ancient bands species* transiently, episodically & recurrently *re-appear*, even in the *heartlands* of *modern nation-state social formations*, e.g., when vacationing *modern humans* “go on a hunting trip”. *Modern variants* of the “*Camps*” *social formation re-appear*, transiently & recurrently, even annually, within the same *heartlands*, when, e.g., vacationing *families “camp”* in the [*relative*] wilderness.

This ‘*meta-equation meta-model*’ *also illustrates* the *key principle* of the “*original accumulation*”, *or “primitive accumulation”* of a *new [socio-]ontology*, *vis-a-vis its later ‘reproductive accumulation’* [cf. Marx]. E.g., *it illustrates* the ‘*meta-dynamical*’ *difference* between (1) *processes* of the *initial auto-catalytic self-conversions* of *Camps* into the *first Villages* [*Δq_{cc}*], vs. (2) the *processes* which ‘*ongoingly*’ *reproduce new, offspring Villages* in a “mitotic”/“budding” way, from out of *expanded self-reproducing “parent Villages”* [*Δq_{vv}*], vs. (3) those which, “*cross-catalytically*”, *convert/incorporate Camps*, by *catalysis* of *already existing Villages*, into *old or new Villages* [*Δq_{vc}*]. Lastly, this ‘*meta-equation meta-model*’ *instantiates* the *key principle* of the *initial* merely “*formal subsumption*” of *extant earlier-born [socio-]ontology* by *newest-born [socio-]ontology*, vs. the *later “real subsumption”* of *extant earlier-born [socio-]ontology* by *newest-born [socio-]ontology*, in the *course* of ‘*[socio-]onto-dynamasis*’ at *all ‘sub^w-universes’ levels, as well as* at the *whole-universe level: ‘taxonomy level 1’* [cf. Marx]. [For *further definition* of these *principles*, see *Encyclopedia Dialectica*, vol. 0.].

'Meta-Model' SYNOPSIS: The [Psycho]Historical Dialectic of human-social formation(s).

007

This 'meta-model' takes as *its* 'arché' category, the category/«arithmos» of "bands" -- of primeval, quasi-familial/"extended-familial" units of nomadic, hunting-and-gathering, foraging, scavenging 'proto-human[oid]s'. By a widely-embraced hypothesis, these ancient "bands" constitute the original units of human «species» "social formation". This content constitutes epoch zero.

Epoch one, next-to-irrupt «arithmos»/category of human-social formations ontology, per model: that of the, initially temporary, transient, multi-band "Camps" units, each one composed of 2 or more "bands" units, born initially by way of an autocatalytic self-conversion of [some] "bands" units into "Camps" units. The advent of "Camps" «arithmoi» in various loci marks epoch one.

After that, in epoch two, we conjecture the emergence of hybrid units, e.g., of 'other-conversion formations', primarily converting "bands" units into "Camps" units, in a way catalyzed by the presence and activity of the "Camps" units. We also hold that this second epoch saw the irruption of a second, new kind of 'socio-ontology', in the shape of a new 'self-hybrid' category/«arithmos»: that of settled, initially quasi-permanent, multi-camp "Village" units, e.g., each one [initially] made of 2 or more [former] "Camps" units, or by camps' individually expanded self-reproduction. We model these "villages" units as having been created via self-conversion of [some] "Camps" units into "villages" units.

Our solution of this 'meta-model' also defines an epoch three, as that in which the human-social formations category/«arithmos» of multi-village chiefdoms first appears, by way of the 'self-hybrid self-conversion' of [some] "villages" units into multi-village "chiefdoms" units. Our solution also sees, in & as epoch three, the emergence of additional hybrid units/ 'other-conversion formations', modeled by the generation of new categories representing them. These new hybrid local «arithmoi» convert, respectively, "bands" units, "Camps" units, & [some of the former] bands-to-camps 'other-conversion formation' units themselves, into "villages" units, as catalyzed by the presence & activity of these ancient "villages" units.

Our solution's epoch four sees irruptions of local «arithmoi» of multi-chiefdom, multi-"tribal"-alliance-based "city-State" units, arising as 'self-conversion self-hybridizations' of [some of the] "chiefdoms" units, together with new hybrid local «arithmoi», representing the interactions, and interaction products, of "chiefdoms" units with [some of any] surviving "bands" units, "Camps" units, "villages" units, & with [some of any surviving] bands-to-camps 'other-conversion formation' units, bands-to-villages 'other-conversion formation' units, Camps-to-villages 'other-conversion formation' units, etc., e.g., conversions of the latter into the former, as catalyzed by the presence & activity of these ancient tribal/"chiefdoms" units.

'Meta-model' epoch five sees irruptions of scattered instances of local «arithmoi» of multi-city-state "Empire" units, as 'self-conversion self-hybridizations' of [some of the] "city-State" units, together with "city-State" units' new hybridizations among / conversions of some of any surviving units of all previous kinds of human-social formation(s) units -- those that are reconstructed by this 'meta-model' -- by "city-State" units. The pattern of this 'meta-model' encounters a break in epoch six, in the irruptions of the modern nation-states, which we explore. Finally, we iterate this 'meta-equation meta-model' beyond present history, beyond the nation-states, for a prediction of the next new kinds of social formation(s) that have yet to manifest, to our knowledge, but that we expect to be 'nextant'.

'[Psycho]Historical-Dialectical Meta-Equation of human-Social formation(s) Meta-Evolution' --

[Psycho]Historical Dialectic of 'Human-Nature-al' History, human-Social formation(s), 1st Triad.

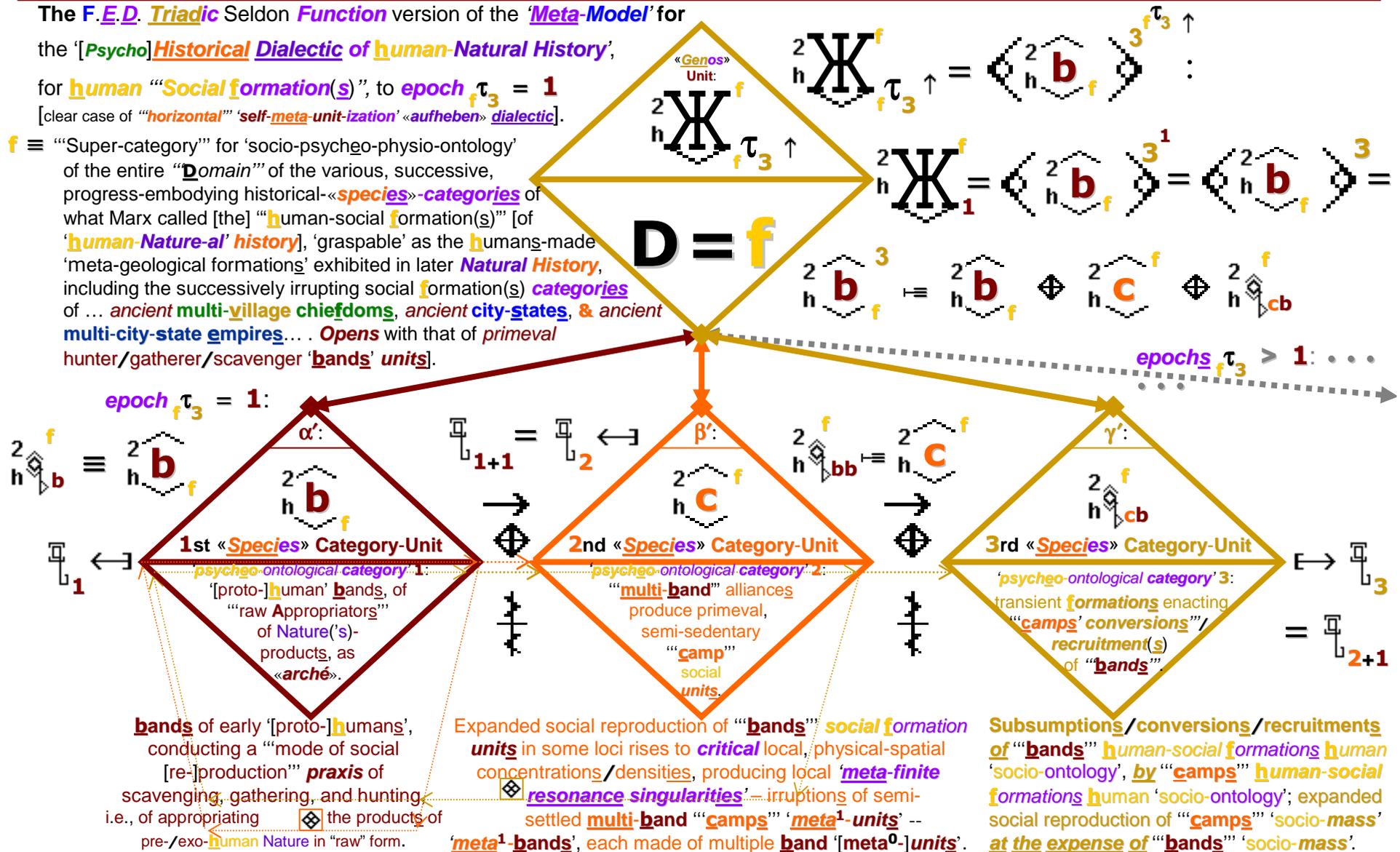
The **F.E.D. Triadic** Seldon **Function** version of the '**Meta-Model**' for

the '**[Psycho]Historical Dialectic of human-Natural History**,

for **human** "**Social formation(s)**", to **epoch** $f\tau_3 = 1$

[clear case of "**horizontal**" '**self-meta-unit-ization**' **«aufheben» dialectic**].

f \equiv "Super-category" for 'socio-psycho-physio-ontology' of the entire "**Domain**" of the various, successive, progress-embodiment historical-**«species»-categories** of what Marx called [the] "**human-social formation(s)**" [of '**human-Nature-al**' history], 'graspable' as the **humans-made** 'meta-geological formations' exhibited in later **Natural History**, including the successively interrupting social formation(s) categories of ... **ancient multi-village chiefdoms**, **ancient city-states**, & **ancient multi-city-state empires**... **Opens** with that of **primeval hunter/gatherer/scavenger 'bands' units**].



'Meta-Model' NARRATION: The [Psycho]Historical Dialectic ['«aufheben»-ation'] of human-social formation(s) 'Meta-Evolution'

010

The human-social , 'socio-ontological' categorical progression generated by this 'meta-model', per our solution of it, is, in summary outline, as follows --

Epoch $\tau_2 = 0$. In this starting epoch, the «arché» 'socio-ontological category exists by itself'. This "0th" epoch signifies the historical period during which "band" formations were the only human-social formations, the only humans-level 'socio-ontology' whatsoever that was present. In terms of years units, this is probably the "longest" duration epoch of all for the, **D = f, Domain**. We interpret the value representing the human-social formations "state of society" for this epoch, namely 'b', as "stroboscopically" catching the moment, at the very start of this epoch, before the 'self-inter-action' of, or the 'intra-action' within, the "bands" «arithmos» has even begun, while their expanded self-reproductions slowly accelerate.

Epoch $\tau_2 = 1$. In this 2nd epoch, the first emergence / "original accumulation" of the "Camps" 'socio-ontology' begins, e.g., by merger of multiple "bands" in the formation of each "camp", a process which arises once the "quantitatively" expanding self-reproduction of the population of "bands" units results in the crossing of a critical density threshold. We interpret the value(s) symbolizing the human-social formations "state of society" for this epoch, namely 'b + c', as "stroboscopically" catching the moment, at the very start of this epoch, when both "bands" & "Camps" are extant. That moment is before these two ontologically-distinct populations of 'socio-«monads»' have even begun to interact with one another, & before the 'self-inter-action' of, or 'intra-action' within, the "Camps" «arithmos» has even begun.

Epoch $\tau_2 = 2$. First emergence / "original accumulation" of the "villages" 'socio-ontology'. Consolidation / 'allo-hybridization' & 'auto-hybridization' by the "Camps" 'socio-ontology' ensues. 'Allo-hybridization' with the earlier/still-extant, "bands" 'socio-ontology', **q_{cb}**, is included. Per this 'meta-model', the former hybridization processes occur together with first emergence of "villages" 'socio-ontology', by 'auto-hybridization' of "Camps" 'socio-ontology', via 'Meta-Darwinian' - "fitness" - signifying "quantitatively" expanding self-reproduction of the population of "Camps" units, to the degree of creating sufficiently 'densified' interactions among "Camps". These processes are symbolized by the "self-multiplication" of the "Camps" category-symbol, **c²**, connoting "self-interactions" of/within the actual camps. Such 'intra-actions' may result in, e.g., the merger of multiple "Camps" as one way to formation of a single "village", as a self-«aufheben» 'meta-unit-ization' of "Camps" units into that "village" unit, connoted by **q_{cc}**. Or, they may result via 'self-conversion' of an individual "camp", by "quantitative" internal growth of that single "camp", by its self-expanding self-reproduction. Growing the human population count internal to it, & the land surface area incorporated into it, it may move itself across the critical socio-ontological threshold of becoming a "village", i.e., of no longer being a "camp"; of "negating" itself as a "camp", in this "determinate", "village", sense, also denoted **q_{cc}**. The value(s) signing the human-social formations "state of society" for this epoch, namely 'b + c + q_{cb} + v', is(are) interpreted as "stroboscopically" catching the moment, at the very start of this epoch, when b, c, q_{cb}, & v are all extant, but before the interactions of the v category with its predecessor categories, & with itself, can begin. "Real subsumption" of all earlier 'social formations socio-ontology', i.e., of b, by "Camps" 'socio-ontology', signed by **q_{cb}**. Merely "formal subsumption" of all earlier 'social formations socio-ontology' -- of b, c, & q_{cb} -- by the "villages" 'socio-ontology', v. First emergence of 'self-reproductive accumulation' of c 'onto-mass', signing, primarily, conversions of b 'onto-mass' into c 'onto-mass', catalyzed by c 'onto-mass', signed by **q_{cb}**.

Epoch $\tau_2 = 3$. First emergence / "original accumulation" of the "chiefdoms" 'socio-ontology'. Consolidation / 'allo-hybridizations' & 'auto-hybridization' by the "villages" 'socio-ontology'. 'Allo-hybridization' of the "villages" 'socio-ontology' with all earlier human-social formations socio-ontology', & especially, their "real subsumption" by the v 'socio-ontology'; their conversion into/integration as "organs" of the new v system. Merely "formal subsumption" of all earlier 'socio-ontology' by the new f 'socio-ontology'. First emergence of the 'self-reproductive accumulation' of v 'onto-mass', as symbolized by conversion-terms **q_{vb}, q_{vc} & q_{vcb}**.

Epoch $\tau_2 = 4$. First emergence of the "city-states" 'socio-ontology'. Consolidation / 'allo-hybridizations' & 'auto-hybridization' by the "chiefdoms" 'socio-ontology'.

Epoch $\tau_2 = 5$. First emergence of the "empires" 'socio-ontology'. Consolidation / 'allo-hybridizations' & 'auto-hybridization' by the "city-states" 'socio-ontology'.

Epoch $\tau_2 = 6$. First emergence of the "nation-states" 'socio-ontology'. The "empires" 'socio-ontology' consolidates / 'allo-hybridizes' & 'auto-fragments' / collapses. Post-Dark Ages re-coalescence of fragments of former/fallen "empires" into the first emergence / "original accumulation" of modern "nation-states" later ensues. Here this 'meta-model' reaches the threshold of the human-social formations "state of society" that constitutes our historical present.

“‘Inventory’” of human-social formations ‘Socio-Ontology’ as of ‘Meta-Model’ Epoch $\tau = 0$: “bands” as ‘«arché» category’.

In his book *Non-Zero: The Logic of Human Destiny*, Robert Wright describes the hunter-gather “band” stage of human-social formation as follows --

“The ancestral cultures of all modern societies were hunter-gatherer cultures.”

“Archaeologists have found their remnants—their spearheads and stone knives, the fireside bones of their prey—across Africa, Europe, Asia, the Americas.”

“But archaeologists can’t reconstruct the social lives of these peoples in much detail.”

“The closest we can come to that is studying the few existing hunter-gatherer societies and reading accounts of how other hunter-gatherers lived before industrial society changed them.”

“Over the past two centuries, anthropologists and other travelers have documented hunter-gatherer life *on all continents*, ranging from the Chenchu of India to the Chukchi of Siberia, from the !Kung San of southern Africa to the Ainu of Japan, from the aborigines of Australia to the Eskimo of the Arctic, from the Fuegians of South America to the Shoshone of North America.”

“To study these vanishing—mostly vanished—ways of life is to dimly glimpse the early stages of our own cultural evolution.”

“The Shoshone and Fuegians observed by Twain and Darwin *weren’t* “living fossils”—they were anatomically modern human beings, just like you or me, *but their cultures were living fossils* [in F.E.D.’s terminology, they were phenomic living fossils, not genomic living fossils].

“Mark Twain is not the only person to have commented on the rudimentary social structure of the Shoshone, who inhabited the Great Basin of North America, around present-day Nevada.”

“One book on native American cultures discusses them under the heading “The Irreducible Minimum of Human Society.”

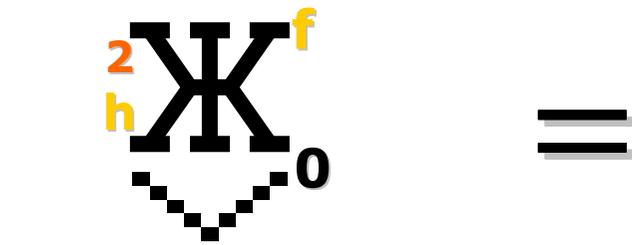
“The largest stable unit of social organization was the *family* . . .”

“The Shoshone did spend part of the year in *multifamily* “camps.”

“But the **camps** were less cohesive than, say, those of the !Kung San, the much-studied hunter-gatherers of the Kalahari desert in Africa.”

“For months at a time Shoshone families would go it alone, roaming the desert with a bag and a digging stick, searching for roots and seeds.”

[Robert Wright, *Non-Zero: The Logic of Human Destiny*, New York: Pantheon Books, 2000, pp. 19-20, *emphases by F.E.D.*; see also <http://nonzero.org/chap2.htm>].



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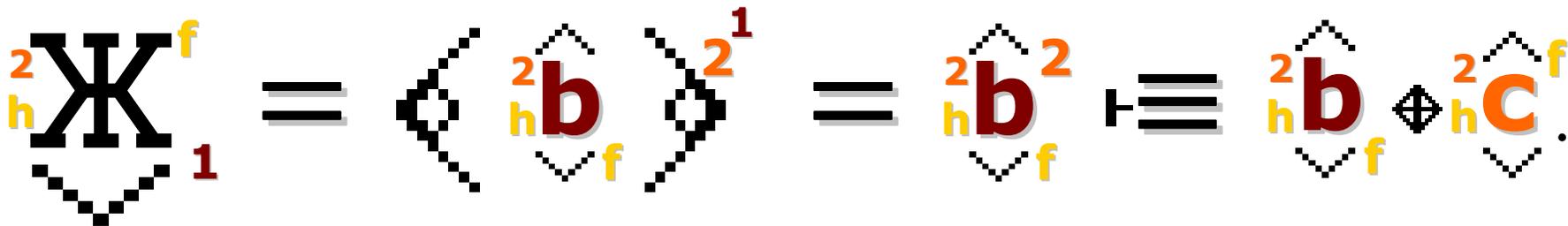


“‘Inventory’” of *New*

human-social formations ‘Socio-Ontology’

as of ‘Meta-Model’ Epoch $\tau = \mathbf{1}$. “camps” as ‘meta-meristem’.

012



In his book *Non-Zero: The Logic of Human Destiny*, Robert Wright describes some *still-extant specimens* of the ‘multi-band’ “*camp*” stage of human-social formation as follows --

“Often a !Kung *camp* will have at its core a single group of relatives such as a brother and sister.”

“But they commonly have spouses, whose siblings may also live in the *camp*, as may these sibling’s spouses.”

“So even when a *camp* is loosely based around a single group of close kin, the *camp* can comprise multiple families and include many individuals who are *not* biological kin.”

[Robert Wright, *Non-Zero: The Logic of Human Destiny*, *ibid.*, p. 353, *emphases by F.E.D.*; see also <http://nonzero.org/toc.htm> .].

Synchronic Direction/Dimension of Ontological "Transcendence" / 'Qualo-Fractal' Scale-Escalation.

Diachronic-«Aufheben» Diagram: “Historical-Dialectical” ‘Meta-Monadology’ of human-social formation(s) for Epoch $\tau = 1$.

013

Irruption of the “camps” «species» of human-social formation ‘neo-ontology’ from the ‘self-densification’ of the “bands” «species».

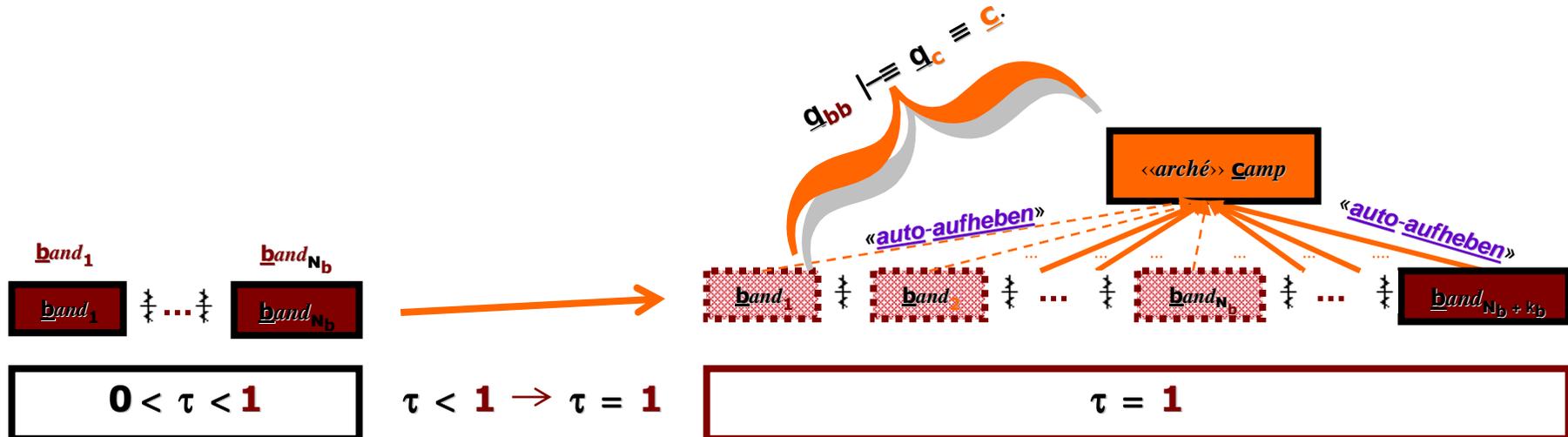
Definition of *historically-specific ‘meta-unit-ology’ or ‘meta-«monad»-ology’* –

Each “camp” unit, or «monad», is a meta-“band” ‘meta-«monad»’, each “one” made up out of a heterogeneous multiplicity of its predecessor, “band”, units, or «monads», i.e., each “one” is made up out of a [local sub-]«arithmos», of “band” units, or «monads».

Note: The ‘dia-grammar’ of this style of «Aufheben» Chart does not allow for the depiction of ‘hybrid ontos’, e.g., via ‘other-conversion’ terms, but only of the ‘self-hybrid’, ‘meta-physis’ terms that signify ‘meta-«monad»-ological, ontological self-conversion(s)’. In any case, in epoch **1**, no hybrid terms, & just **1** ‘self-hybrid’, are [possibly] extant per this ‘meta-model’.

Epoch 1: “‘Formal Subsumption’” of the bands ‘socio-ontology’ by the Camps ‘socio-ontology’.

$N_b + k_b =$ that local population count of the “band” «monads» of the “bands” «arithmos» which is associated with “‘critical density’” in the typical incipient/emergent-“Camps” ‘socio-ontological innovation nucleation zone/locale’. ‘Metafinite singularity’ threshold for the irruption of “Camps” social formations.



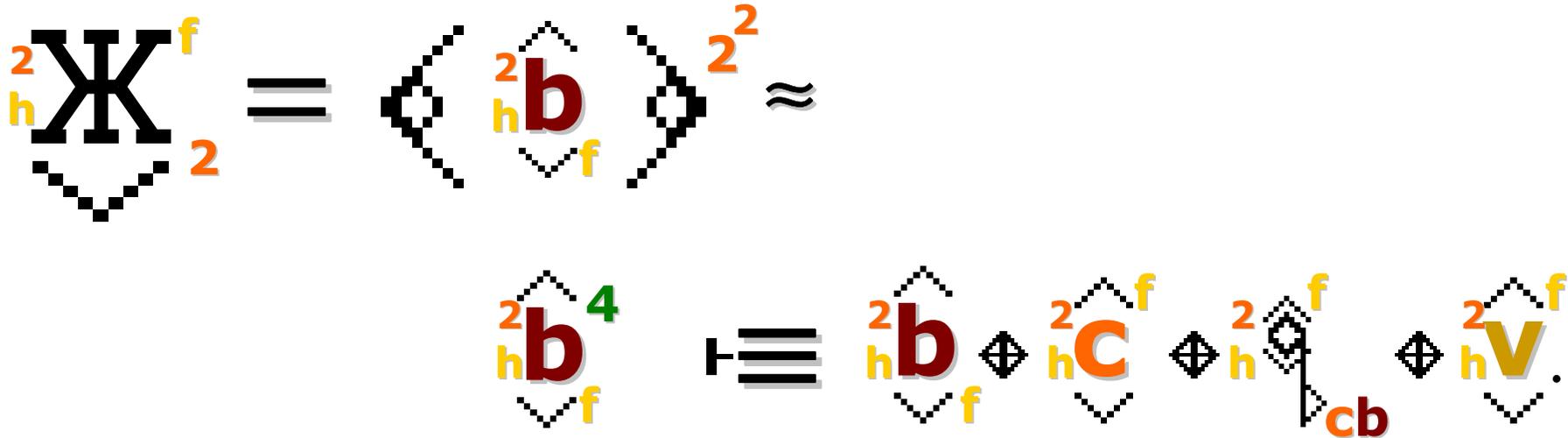
Diachronic Direction/Dimension of Self-Proliferation, of “Auto-Catalysis”, or of Expanded Self-Reproduction, of Monadic Populations.

“‘‘Inventory’’’ of New

human-social formations ‘Socio-Ontology’

as of ‘Meta-Model’ Epoch $\tau = 2$. villages as ‘meta-meristem’.

014



In his book, Non-Zero, Robert Wright addresses the [*initially*] ‘*multi-camp*’ “*village*” stage of human *social formation*, and the *inner ferment* of its *self*-induced *transition* to *beyond itself*, as follows --

“Consider the “*chiefdom*” threshold. It is one thing for neighboring *villages* to become trading partners or even to attain a measure of “*supravillage*” political organization via loose confederation. It is another thing for neighboring *villages* to grant real, ongoing power to a central authority -- for one *village*’s *chief* to become the *paramount chief*. When this happens, a *chiefdom* has been formed.”

[Robert Wright, Non-Zero: The Logic of Human Destiny, *ibid.*, p. 59, *emphases added by F.E.D.*; see also <http://nonzero.org/toc.htm>].

Diachronic-«Aufheben» Diagram: “‘Historical-Dialectical’” ‘Meta-Monadology’ of human-social formation(s) for Epoch $\tau = 2$.

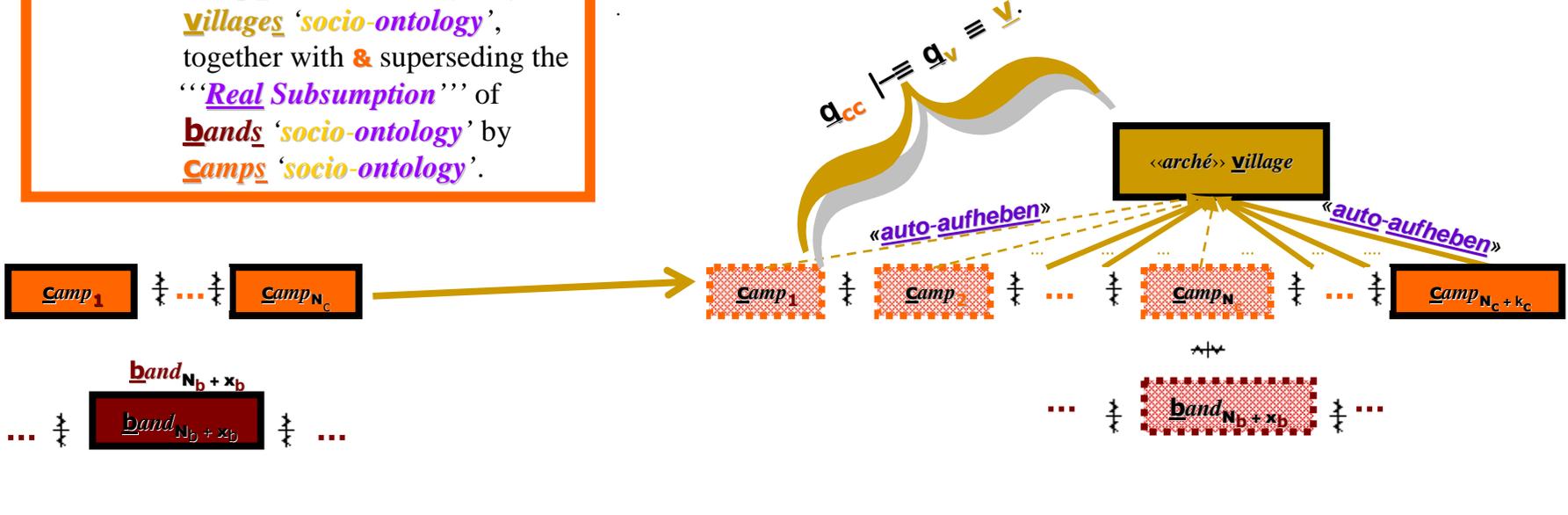
Irruption of the “villages” «species» of human-social formation ‘neo-ontology’ from the ‘self-densifications’ of the “Camps” «species».

Definition of historically-specific ‘meta-unit-ology’ or ‘meta-«monad»-ology’ – Each “‘village’” unit, or «monad», is a meta-“camp” ‘meta-«monad»’. Each “‘one’” may be made up out of a heterogeneous multiplicity of its contiguous predecessor, “‘camp’”, units, or «monads», i.e., each “‘one’” may be made up out of a heterogeneous [local sub-]«arithmos», of “‘camp’” units, or «monads», or by self-expansion of single “‘Camps’” beyond the “‘village’” threshold.

Note: The ‘dia-grammar’ of this style of «Aufheben» Chart does not allow for the depiction of ‘hybrid ontos’, e.g., via ‘other-conversion’ terms, but only of the ‘self-hybrid’, ‘meta-physis’ terms that signify ‘meta-«monad»-ological, ontological self-conversion(s)’. In any case, in epoch **2**, only one hybrid term, & just **2** ‘self-hybrids’, are [possibly] extant, per this ‘meta-model’ solution.

Epoch 2: “‘Formal Subsumption’” of bands ‘socio-ontology’, and Camps ‘socio-ontology’, by villages ‘socio-ontology’, together with & superseding the “‘Real Subsumption’” of bands ‘socio-ontology’ by Camps ‘socio-ontology’.

$N_c + k_c =$ that local population count of the “camp” «monads» of the “Camps” «arithmos» which is associated with “‘critical density’” in the typical incipient/emergent-“villages” ‘socio-ontological innovation nucleation zone/locale’. ‘Metafinite singularity’ threshold for the irruption of “villages” social formations.



$1 < \tau < 2$

$\tau < 2 \rightarrow \tau = 2$

$\tau = 2$

Ontological Categories [‘Ontos’] Diagram for $\langle \underline{b} \rangle^{2^\tau}$ at $\tau = 2$:

“‘Historical-Dialectical’” ‘Meta-Monadology’ of human-social formation(s) as of Model Epoch $\tau = 2$.

$$\langle \underline{b} \rangle^{2^2} \dashv\equiv \underline{b} + \underline{c} + \underline{q}_{cb} + \underline{v}.$$

Processes of Self-Subsumption, or of Self-Conversion, of camps socio-ontology by camps socio-ontology itself, into villages socio-ontology.

Epoch 2: “‘Formal Subsumption’” of bands ‘socio-ontology’, and camps ‘socio-ontology’, by villages ‘socio-ontology’, together with and superseding the “‘Real Subsumption’” of bands ‘socio-ontology’ by camps ‘socio-ontology’’.

$\underline{q}_{cc} = \underline{v}$:
villages
local «arithmoj»

$\tau = 2$ ‘Meta-Meristem’: Irruption of the “villages” «species» of «monads» of human-social formation ‘neo-socio-ontology’ from out of the ‘self-densifications’ of «monads» of the “camps” «species».

‘reproductive accumulation’ of Camps ‘socio-mass’, at the expense of bands ‘socio-mass’’.

“‘original accumulation’” of Camps ‘socio-mass’’.

$\underline{q}_{bb} = \underline{c}$:
camps
local «arithmoj»

human-social formation processes of Self-Subsumption/-Self-Conversion of bands socio-ontology, by bands socio-ontology itself, into camps socio-ontology.

\underline{q}_{cb} :
c $\langle \underline{b} \rangle$ sans b
local «arithmoj»

human-social formation processes of Subsumption/-Conversion [“takeover”] of bands socio-ontology, i.e., of portions of all prior socio-ontology, by camps socio-ontology, into camps socio-ontology.

b
bands
local «arithmoj»

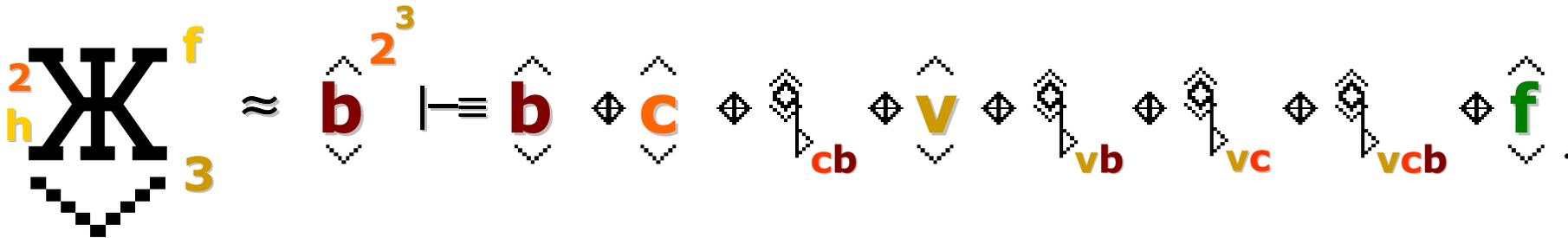
«arché» socio-onto: “bands”.

Synchronic Direction/Dimension of ‘Meta-Finite’ Ontological “Ascent”/“Transcendence”/‘Qualio-Fractal’ Scale-Escalation.

GRADIENT: from Formal Subsumption of Past/Continuing human-social-formations ‘socio-ontology’, to Its Real Subsumption.

“‘Inventory’” of So Far Emergent human-social formations ‘Socio-Ontology’ as of ‘Meta-Model’ Epoch $\tau = 3$. chiefdoms as ‘meta-meristem’.

017



In his book, *Non-Zero*, Robert Wright has comparatively much of “‘psychohistorical’” relevance to say in describing the «*species*» of the generic ‘multi-village’ “chiefdom” stage of human-social formation, some of its *sub-«species»*, and even a few of its *individual instances/«monads»* --

“Three centuries ago, when Europeans in North America encountered the chief of the Natchez Indians, they couldn’t help but notice his high self-esteem. One Jesuit priest observed that he “knows nothing on earth more dignified than himself.”

“And, since the chief knew nothing in the heavens greater than the sun, it seemed only natural to deem himself “brother of the Sun.” This logic made sense to the sun-worshipping Natchez people, who vied for proximity to the chief’s divine aura. Upon his death, those who had the honor of accompanying him into the afterlife would swallow enough tobacco to lose consciousness and then be ritually strangled.”

“From a modern vantage point, it is hard to relate either to the chief or to his followers. Few politicians today consider themselves gods or demigods — or, at any rate, few would admit it. And few citizens aspire to spend eternity in the company of politicians.”

“It’s tempting, indeed, to dismiss the Natchez people as a bizarre aberration. But they were actually pretty typical—typical of human beings living in a particular phase of cultural evolution: the *chiefdom*, in which numerous *villages* are subordinated to firm, centralized political leadership, and that leadership is distinctly institutionalized.”

“So far as we can tell from the archaeological record, all the ancient *state*-level societies were preceded in cultural evolution by *chiefdoms*. So far as we can tell from the ethnographic record, the leaders of *chiefdoms* have routinely claimed special access to divine force. And, remarkably, their people have typically considered this claim plausible.”

“We know from *chiefdoms* observed over the past few centuries that *chiefs* go to great lengths to underscore their *chiefliness*. Some Polynesian *chiefs* turned their entire faces into ornate works of art, enduring a painful, tattoo-like engraving process that leaves the skin looking like the leather on a fancy cowboy boot. Other *chiefs* have force-fed their wives into obesity, creating vivid testament to their affluence. Unfortunately for archaeologists, fat cells and engraved skin don’t fossilize well. But other common forms of *chiefly* self-advertisement are more enduring, such as monumental architecture, often built in tribute to (and as a reminder of) the *chief’s* distinguished lineage.”

“Hence the huge mounds built in North America as tombs for past *chiefs*. Or the pyramid-like temples on Tahiti, or the earliest ziggurats in Mesopotamia. The giant stone heads on Easter Island, up to ten meters tall, also suggest social organization beyond the Big Man level. Using these and other hallmarks of a *chiefdom*, archaeologists have found a clear pattern: After agriculture first spreads across a region, *chiefdoms* tend to follow.”

“This doesn’t mean that farming is a prerequisite for a *chiefdom*. Natural abundance, and attendant population *density*, will occasionally do the trick. As we’ve seen, the Northwest Indians were on the verge of *chiefdomhood*. And the Calusa of Florida, also coastal hunter-gatherers, were a full-fledged *chiefdom*, whose leader dispatched an armada of eighty canoes (not enough) to battle Ponce de Leon.”

“Nor, on the other hand, are we saying that *chiefdoms* inevitably follow fast on the domestication of plants and animals. In the jungles of Amazonia or New Guinea, farming doesn’t become very *productive* very fast. But given a friendly environment and a millennium or two, widespread agriculture does seem to propel social organization into the age of *chiefdoms*.”

“Thus, farming and cattle ranching come to England around 4000 B.C., and within a thousand years “megaliths” — orderly arrangements of boulders, as at Stonehenge — start appearing. The same pattern — first farming, then *chiefdoms* — is found earlier in continental Europe. (Julius Caesar would happen upon *chiefdoms* when he ventured into Germany and Gaul.)”

“In Mesoamerica—Central America and the south of modern Mexico—farming *villages* were common by 2,000 B.C., and within a thousand years, immense stone heads, in the Easter Island genre, had been carved. And so on. *Chiefdoms*, the scholar Randolph Widmer has written, “were at various times the most common form of society found throughout Europe, Africa, the Americas, Melanesia, Polynesia, the Near East, and Asia.” Around the world, with the multiple invention and rapid spread of agriculture, cultural evolution marched on. *Chiefdoms* sustained *the basic trend toward larger and more complex social organization*.”

...
“... other hallmarks of *chiefdoms*: ... a large *village* (home of the *paramount chief*) among smaller *ones*; large, *central food storehouses*; *diverse technology*; *sheer population size*, along with signs of sharp status differences. Especially suggestive -- since status is typically hereditary in *chiefdoms*-- is the lavish burial of an infant [F.E.D.: burials of deceased children of the chief]: graves with alabaster statues and copper ornaments, as in the Middle East, or, in Mesoamerica, basalt-column tombs loaded with jades. ...”

[Robert Wright, *Non-Zero: The Logic of Human Destiny*, *ibid.*, pp. 78-80; 365n, *text-color emphases added by F.E.D.*; *Violet text-color marks passages narrating signs of the growth of the social forces of production*. See <http://nonzero.org/toc.htm> .].

Synchronic Direction/Dimension of Ontological "Transcendence" / 'Qualo-Fractal' Scale-Escalation.

**Diachronic-«Aufheben» Diagram: “Historical-Dialectical” ‘Meta-Monadology’ of human-social formation(s)
for ‘Meta-Model’ Epoch $\tau = 3$.**

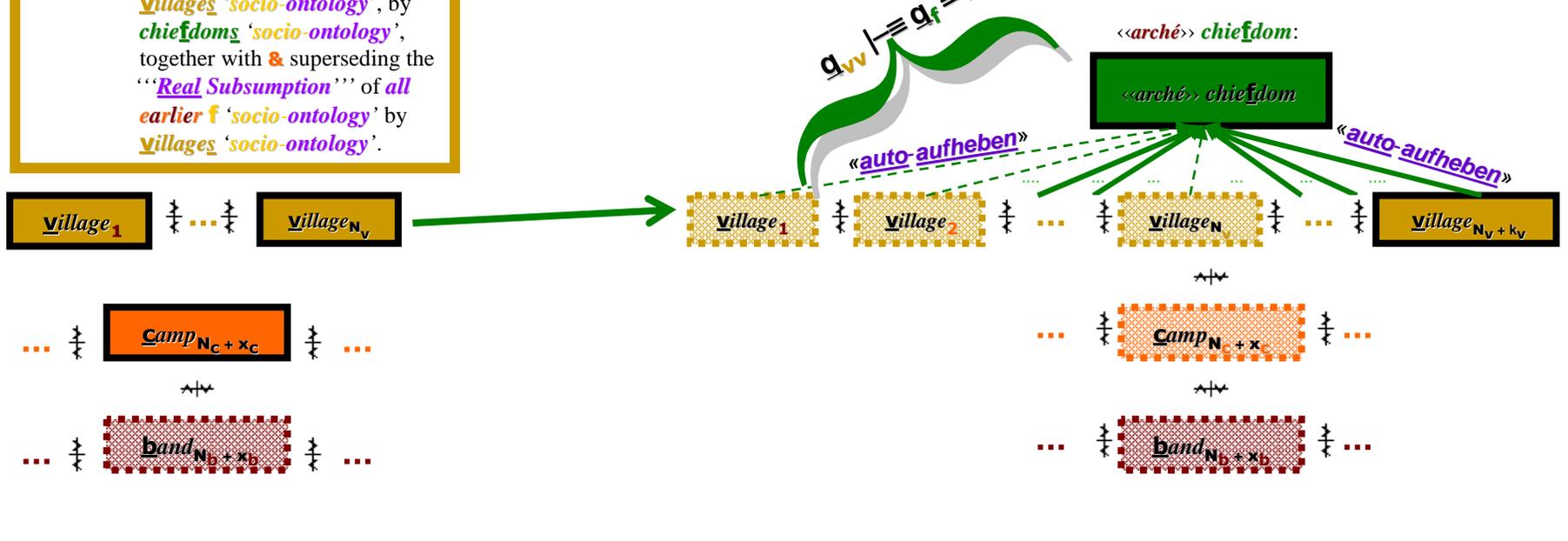
Irruption of the “chiefdoms” «species» of human-social formation ‘neo-ontology’ from the ‘self-densification’ of the “villages” «species».

Definition of historically-specific ‘meta-unit-ology’ or ‘meta-«monad»-ology’ –
Each “chiefdom” unit, or «monad», is a meta-“village” ‘meta-«monad’», each “one” made up out of a heterogeneous multiplicity of its predecessor, “village”, units, or «monads», i.e., each “one” is made up out of a [local sub-]«arithmos», of “village” units, or «monads».

Note: The ‘dia-grammar’ of this style of «Aufheben» Chart does not allow for the depiction of ‘hybrid ontos’, e.g., via ‘other-conversion’ terms, but only of the ‘self-hybrid’, ‘meta-physis’ terms that signify ‘meta-«monad»-ological, ontological self-conversion(s)’. As of epoch **3**, four hybrid terms, & **3** ‘self-hybrids’, are [possibly] extant.

Epoch 3: “Formal Subsumption” of bands ‘socio-ontology’, and Camps ‘socio-ontology’, and villages ‘socio-ontology’, by chiefdoms ‘socio-ontology’, together with & superseding the “Real Subsumption” of all earlier f ‘socio-ontology’ by villages ‘socio-ontology’.

$N_v + k_v =$ that local population count of the “village” «monads» of the “villages” «arithmos», which is associated with “critical density” in the typical incipient/emergent-‘chiefdoms’ ‘socio-ontological innovation nucleation zone/locale’: Metafinite singularity threshold for irruption of “chiefdoms” social formations.



2 < τ < 3 $\tau < 3 \rightarrow \tau = 3$ **$\tau = 3$**

Diachronic Direction/Dimension of Self-Proliferation, of “Auto-Catalysis”, or of Expanded Self-Reproduction, of Monadic Populations.

Synchronic Direction / Dimension of 'Meta-Finite' Ontological "Ascent" / "Transcendence" / "Qualo-Fractal" Scale-Escalation.

Ontological Categories ['Ontos'] Diagram for $\langle \underline{b} \rangle^{2\tau}$ at $\tau = 3$:

“‘Historical-Dialectical’” ‘Meta-Monadology’ of human-social formation(s) as of ‘Meta-Model’ Epoch $\tau = 3$.

019

$$\langle \underline{b} \rangle^{2^3} \equiv \underline{b} + \underline{c} + \underline{q}_{cb} + \underline{v} + \underline{q}_{vb} + \underline{q}_{vc} + \underline{q}_{vcb} + \underline{f}.$$

“‘original accumulation’” of chiefdoms ‘socio-mass’.

$\underline{q}_{vv} = \underline{f}$:
chiefdoms local
«species» / «arithmoj».

$\tau = 3$ ‘Meta-Meristem’: Irruption of the “chiefdoms” («species») of «monads» of human-social formation ‘neo-socio-ontology’ from out of the ‘self-densifications’ of «monads» of the “villages” («species»).

‘reproductive accumulation’ of villages ‘socio-mass’, at the expense of \underline{q}_{cb} ‘socio-mass’.

human-social formation processes of Self-Subsumption, or Self-Conversion, of villages socio-ontology, by villages socio-ontology itself, into chiefdoms socio-ontology.

‘reproductive accumulation’ of villages ‘socio-mass’, at the expense of bands ‘socio-mass’.

‘reproductive accumulation’ of villages ‘socio-mass’, at the expense of campes ‘socio-mass’.

\underline{q}_{vc} :
v⟨c⟩ sans c local
«species» / «arithmoj».

\underline{q}_{vcb} :
v⟨q_{cb}⟩ sans q_{cb} local
«species» / «arithmoj».

Subsumptions of, or Conversions [“takeovers”] of, portions of all hybrid camps/bands prior socio-ontology by/into villages socio-ontology.

“‘original accumulation’” of villages ‘socio-mass’.

$\underline{q}_{cc} = \underline{v}$:
villages local
«species» / «arithmoj».

\underline{q}_{vb} :
v⟨b⟩ sans b local
«species» / «arithmoj».

Subsumptions of, or Conversions [“takeovers”] of, bands socio-ontology by/into villages socio-ontology.

Subsumptions of, or Conversions [“takeovers”] of, campes socio-ontology by villages socio-ontology, into villages socio-ontology.



“‘original accumulation’” of campes ‘socio-mass’.

$\underline{q}_{bb} = \underline{c}$:
campes local
«species» / «arithmoj».

human-social formation processes of Self-Subsumption/-Self-Conversion of bands socio-ontology, by bands socio-ontology itself, into campes socio-ontology.

‘reproductive accumulation’ of campes ‘socio-mass’, at the expense of bands ‘socio-mass’.

\underline{q}_{cb} :
c⟨b⟩ sans b local
«species» / «arithmoj».

human-social formation processes of Subsumption/-Conversion [“takeover”] of bands socio-ontology, i.e., of portions of all prior social formation socio-ontology, by campes socio-ontology, into campes socio-ontology.

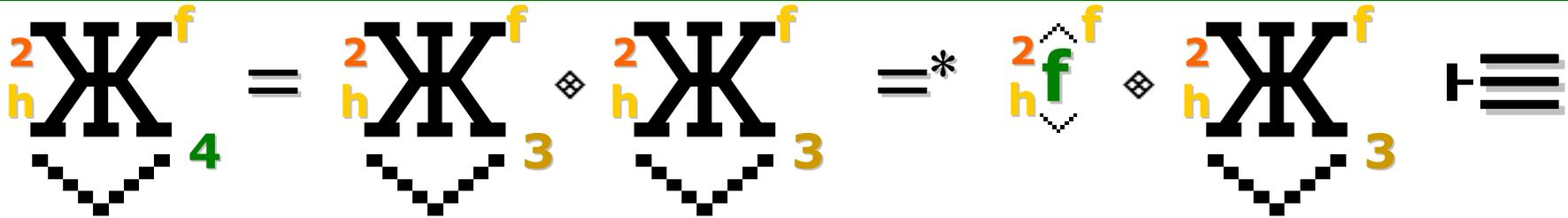


b:
bands local
«species» / «arithmoj».

«arché» socio-onto: bands.

GRADIENT: from Formal Subsumption of Past/Continuing human-social-formations ‘socio-ontology’, to Its Real Subsumption.

“ ‘Inventory’ ” of *Ontologically-Newborn* *human-social formations* ‘*Socio-Ontology*’ as of ‘*Meta-Model*’ Epoch $\tau = 4$. *city-States* as ‘*meta-meristem*’.



In his book *Non-Zero*, Robert Wright describes the *generic* ‘*multi-chiefdom*’ “*city-state*” stage of *human-social formation*, as follows --

“The *chiefdoms*’ *villages* evolved into something more like *towns*, which themselves got bigger and more complex.”

“In all three regions, loosely defined *city-states* -- urban cores surrounded by farmlands and *villages* and *towns* -- seem to have evolved (though in some places, such as Egypt and the Andes, the “*city*” part of the *state* may have been so small as to stretch the definition of the term).”

“And these *city-states* merged, forming *multicity states*, and these *multicity states* grew into *empires*.”

“... In the Mesopotamian vicinity, the story of civilization begins, as elsewhere, with farming and attendant social complexity.”

“By 4000 B.C.[E. -- *F.E.D.*] there are the familiar hallmarks of *chiefdoms* -- temples, other capital projects (irrigation systems and what appears to be a granary), and, of course, special burials for big shots, complete with precious copper and ceramic knick-knacks.”

“The *chiefdoms*’ *villages* get bigger and bigger and at some point cross that blurry line between *villages* and *towns*.”

“Around 3500 B.C.[E. -- *F.E.D.*], though true writing had yet to appear, the stirrings of the first information revolution were evident: the cylinder seal, *complex tokens*, the bevel-rimmed bowl.”

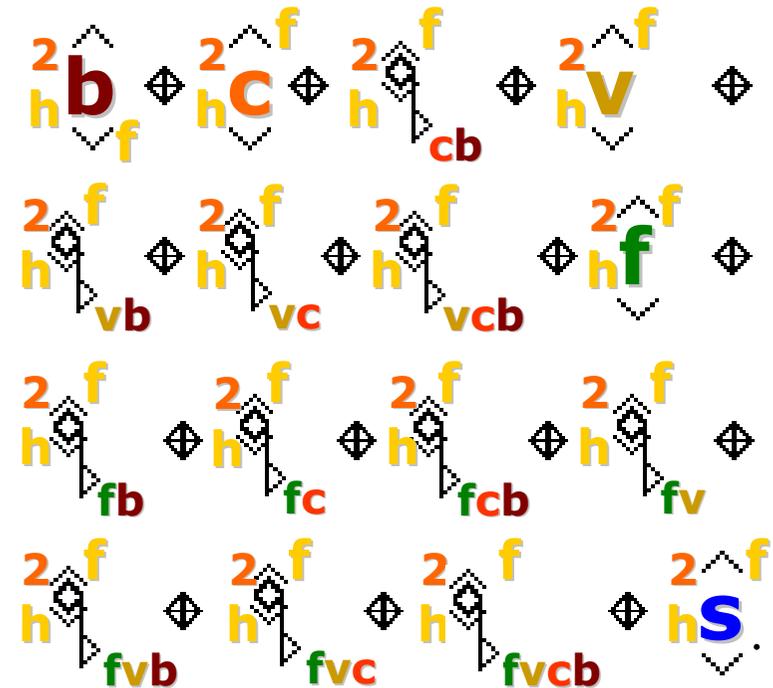
“As *writing* evolved, growth toward civilization was brisk.”

“In southern Mesopotamia between 3500 B.C.[E. -- *F.E.D.*] and 2900 B.C.[E. -- *F.E.D.*], the number of *villages* grew from 17 to 124, the number of *towns* from 3 to 20. The number of “*urban centers*” -- 125 acres (50 hectares) or larger -- grew from one to 20. By 2800 B.C.[E. -- *F.E.D.*], the *city* of Uruk covered 617 acres (250 hectares), and its temples, mounted on massive ziggurats, were visible from miles away.”

“Surrounded by, and interdependent with, farming *villages* and *towns*, Uruk came to anchor an amorphous *city-state*.”

“Comparable *clusters* evolved elsewhere in Mesopotamia.”

[Robert Wright, *Non-Zero: The Logic of Human Destiny*, *ibid.*, pp. 109-110, *text-color emphases added by F.E.D.*; see also <http://nonzero.org/toc.htm> .].



*[This equality is due to a theorem by *F.E.D.* member Miguel Detonaciones, known in the *Foundation* as ‘Miguel’s Rule’, that justifies this “shortcut” .].

Synchronic Direction/Dimension of Ontological "Transcendence" / 'Qualo-Fractal' Scale-Escalation.

Diachronic-«Aufheben» Diagram: “Historical-Dialectical” ‘Meta-Monadology’ of human-social formation(s) for Epoch $\tau = 4$.

Irruption of the “city-States” (‘species’) of human-social formation ‘neo-ontology’ from ‘self-densifications’ of the “chiefdoms” (‘species’).

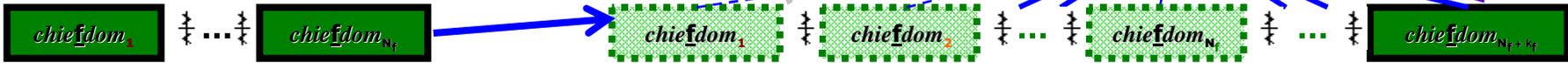
Definition of historically-specific ‘meta-unit-ology’ or ‘meta-«monad»-ology’ –

Each “city-state” unit, or ‘monad’, is a meta-«chiefdom» ‘meta-«monad»’, each “one” made up out of a heterogeneous multiplicity of its predecessor, “chiefdoms”, units, or ‘monads’, i.e., each “one” is made out of a [local sub-«arithmos»], of “chiefdoms” units, or ‘monads’.

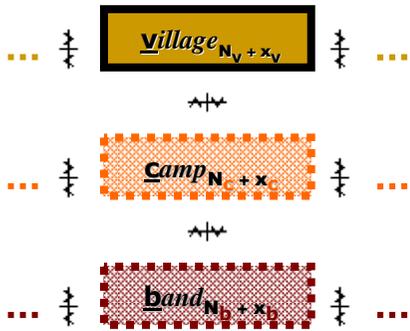
$N_f + k_f =$ that local population count of the “chiefdom” (‘monads’) of the “chiefdoms” (‘arithmos’), which is associated with “critical density” in the typical incipient/emergent-“city-States” ‘socio-ontological innovation nucleation zone/locale’. ‘Metafinite singularity’ threshold for irruption of “chiefdoms” social formations.

021

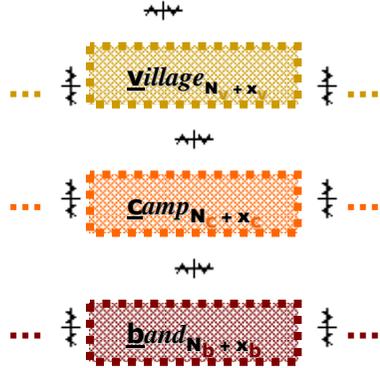
Note: The ‘dia-grammar’ of this style of «Aufheben» Chart does not allow for the depiction of ‘hybrid ontos’, e.g., via ‘other-conversion’ terms, but only of the ‘self-hybrid’, ‘meta-physis’ terms that signify ‘meta-«monad»-ological, ontological self-conversion(s)’. As of epoch 4, eleven “merely” hybrid terms, & 4 ‘self-hybrids’, are [possibly] extant per this solution.



«arché» city-State:
«arché» city-State



Epoch 4: “Formal Subsumption” of bands ‘socio-ontology’, and Camps ‘socio-ontology’, and villages ‘socio-ontology’, and chiefdoms ‘socio-ontology’, by city-States ‘socio-ontology’, together with & superseding the “Real Subsumption” of portions of all earlier Domain D = f ‘socio-ontology’ by the chiefdoms ‘socio-ontology’.



$3 < \tau < 4$

$\tau < 4 \rightarrow \tau = 4$

$\tau = 4$

Diachronic Direction/Dimension of Self-Proliferation, of “Auto-Catalysis”, or of Expanded Self-Reproduction, of Monadic Populations.

Synchronic Direction/Dimension of 'Meta-Finite' Ontological "Ascent"/"Transcendence"/"Qualo-Fractal" Scale-Escalation.

Ontological Categories ['Ontos'] Diagram Possible for $\langle \underline{b} \rangle^{\tau}$ at $\tau = 4$: The "[Psycho]Historical-Dialectical" 'Meta-Monadology' of human-social formation(s) as of 'Meta-Model' Epoch $\tau = 4$.

$\tau = 4$ 'Meta-Meristem': Irruption of the "city-States" «species» of «monads» of human-social formation 'neo-socio-ontology' from out of the 'self-densifications' of «monads» of the "chiefdoms" «species».

$\underline{a}_{ff} = \underline{S}$:
city-States
local «arithmoj».

Social formation Processes of Self-Subsumption/-Self-Conversion of chiefdoms socio-ontology, by chiefdoms socio-ontology itself, into city-States socio-ontology.

$\underline{a}_{vv} = \underline{f}$:
chiefdoms
local «arithmoj».

Social formation Processes of Self-Subsumption/-Self-Conversion of villages socio-ontology, by villages ontology itself, into chiefdoms socio-ontology.

$\underline{a}_{cc} = \underline{v}$:
villages
local «arithmoj».

Social formation Processes of Self-Subsumption, or Self-Conversion, of Camps socio-ontology by Camps socio-ontology itself, into villages socio-ontology.

$\underline{a}_{bb} = \underline{c}$:
Camps
local «arithmoj».

Social formation Processes of Self-Subsumption/-Self-Conversion of bands socio-ontology, by bands ontology itself, into Camps socio-ontology.

\underline{b} :
bands
local «arithmoj».

«arché» socio-onto: bands.

\underline{a}_{fb} :
 $\underline{f}(\underline{b}) - \underline{b}$
local «arithmoj».

Processes of Real Subsumption/-Conversion ["takeover"] of bands ontology by chiefdoms socio-ontology, into chiefdoms socio-ontology.

\underline{a}_{fc} :
 $\underline{f}(\underline{c}) - \underline{c}$
local «arithmoj».

Processes of Real Subsumption/-Conversion ["takeover"] of Camps ontology by/into chiefdoms ontology.

\underline{a}_{fcb} :
 $\underline{f}(\underline{a}_{cb}) - \underline{a}_{cb}$
local «arithmoj».

Processes of Real Subsumption/-Conversion ["takeover"] of \underline{a}_{cb} socio-ontology by/into chiefdoms ontology.

\underline{a}_{vb} :
 $\underline{v}(\underline{b})$ sans \underline{b}
local «arithmoj».

Social formation Processes of Real Subsumption/-Conversion ["takeover"] of bands socio-ontology by/into villages socio-ontology.

\underline{a}_{fv} :
 $\underline{f}(\underline{v}) - \underline{v}$
local «arithmoj».

Processes of Real Subsumption/-Conversion ["takeover"] of villages socio-ontology by chiefdoms socio-ontology, into chiefdoms socio-ontology.

\underline{a}_{fvb} :
 $\underline{f}(\underline{a}_{vb}) - \underline{a}_{vb}$
local «arithmoj».

Processes of Real Subsumption/-Conversion ["takeover"] of \underline{a}_{vb} socio-ontology by chiefdoms socio-ontology, into chiefdoms socio-ontology.

\underline{a}_{fvc} :
 $\underline{f}(\underline{a}_{vc}) - \underline{a}_{vc}$
local «arithmoj».

Processes of Real Subsumption/-Conversion ["takeover"] of \underline{a}_{vc} socio-ontology by chiefdoms socio-ontology, into chiefdoms socio-ontology.

\underline{a}_{fvcb} :
 $\underline{f}(\underline{a}_{vcb}) - \underline{a}_{vcb}$
local «arithmoj».

Real Subsumptions, or Conversions ["takeovers"] of portions of all prior Social formations socio-ontology by/into chiefdoms socio-ontology.

\underline{a}_{vcb} :
 $\underline{v}(\underline{a}_{cb})$ sans \underline{a}_{cb}
local «arithmoj».

Social formation Processes of Real Subsumption/Conversion ["takeovers"] of portions of all Camps/bands prior ontology by/into villages socio-ontology.

\underline{a}_{cb} :
 $\underline{c}(\underline{b})$ sans \underline{b}
local «arithmoj».

Social formation Processes of Real Subsumption/Conversion ["takeover"] of bands ontology, i.e., of portions of all prior Social formations ontology, by Camps socio-ontology, into Camps socio-ontology.

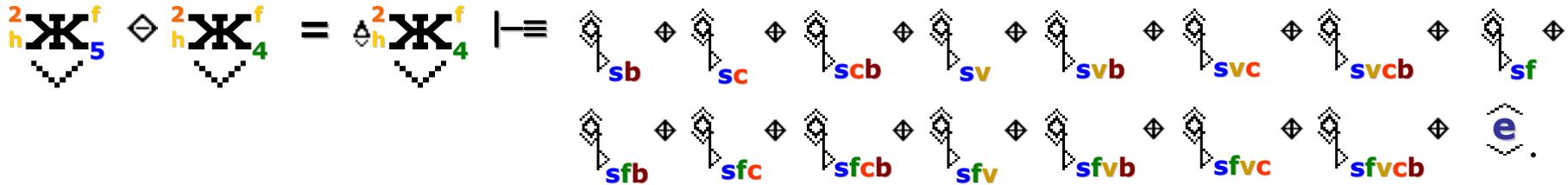
$$\langle \underline{b} \rangle^{\tau 4} \equiv \underline{b} + \underline{c} + \underline{a}_{cb} + \underline{v} + \underline{a}_{vb} + \underline{a}_{vc} + \underline{a}_{vcb} + \underline{f} + \underline{a}_{fb} + \underline{a}_{fc} + \underline{a}_{fcb} + \underline{a}_{fv} + \underline{a}_{fvb} + \underline{a}_{fvc} + \underline{a}_{fvcb} + \underline{S}$$

GRADIENT: from Formal Subsumption of Past/Continuing human-social formations 'socio-ontology', to its Real Subsumption.

“‘Inventory’” of ‘Latest Epoch Incremental, Ontologically Unprecedented’ human-social formations ‘Socio-Ontology’

as of ‘Meta-Model’ Epoch $\tau = 5$: empires as ‘meta-meristem’.

023



In his book *Non-Zero*, Robert Wright describes the generic ‘multi-city-state’ “empires” stage of human-social formation, as follows --

“...Still, even after granting these early and occasionally momentous contacts, we are left with three large realms of ancient civilization, quite removed from each other: China, the Near East, and the New World.”

“The scholarly consensus is that each developed its energy and information technologies -- farming and writing -- indigenously.”

“And each underwent its early civilizational history in essential isolation from the others.”

“Yet, in all three cases, the same thing happened.”

“In all three regions, loosely defined city-states -- urban cores surrounded by farmlands and villages and towns -- seem to have evolved ...”

“And these city-states merged, forming multicity states, and these multicity states grew into empires.”

“The first large multicity state in Mesopotamia was the Akkadian empire, formed around 2350 B.C.[E. -- F.E.D.], when Sargon of Akkade conquered Sumerian cities in southern Mesopotamia.”

“Sargon’s conquests came with a divine seal of approval; having toppled a city, he asked the local priests to declare his victory the will of the Mesopotamian god Enlil.”

“Perhaps to facilitate clear thinking on their part, he exhibited the vanquished local king in neck-stock.”

As a further aid to theological interpretation, Sargon installed his daughter as high priestess of the goddess Nanna at Ur, the religious capital of southern Mesopotamia.”

“In east Asia, farming seems to have evolved a millennium or so later than in the Middle East, but its consequences followed just as surely: bigger villages, more artifacts, more trade, vaster conflict, bigger buildings, bigger realms of political control, starker status hierarchies ...”

“An age of chiefdoms seems to have been reached by the late fourth millennium B.C.[E. -- F.E.D.], and in the second millennium B.C.[E. -- F.E.D.] came testaments to state-level organization: writing, cities, a king who could lead 13,000 men into battle and oversee epic engineering.”

“All of this belongs to what is known as “the Shang civilization,” but the suggestion of homogeneity may be misleading.”

“Some scholars now dissent from the long-accepted Chinese view of a unified national past, and envision the Shang as much like early Mesopotamia: individual, perhaps amorphous, city-states that trade and battle, ally and fall out ...”

“The main point is that the story in China moves in the same direction as the stories elsewhere.”

“The Shang’s successor -- the Chou, who dominated the first millennium B.C.[E. -- F.E.D.] -- forged a vast state with many cities.”

“But control was diffuse, and Chou principalities -- Ch’i, Ch’in, Chin, Ch’u, and others -- finally fell into open warfare.”

The Ch’in eventually prevailed, carrying Asian political unity to unprecedented scope. Hence the name China. ...

“...Meanwhile, back in the Near East, more names had come and gone, and the regions they represented had continued to get bigger, if fitfully: the Assyrian empire dwarfed the Akkadian ... and was in turn dwarfed by the Persian Empire..., which was then overcome by Alexander the Great (the “son of God” and “general governor and reconciler of the world”), whose Macedonian empire would soon be overshadowed by the Roman Empire (its emperor being “the savior of all mankind”).”

“If in 200 B.C.[E. -- F.E.D.] the Han, or the Romans, had magically gotten a peek at life in the ... New World, they would have been unimpressed. A casual glance across the Americas would have suggested a hemisphere full of savages and barbarians; almost everywhere, social structure fell somewhere on the spectrum from simple band to chiefdom. But here and there, visible on close inspection, were cradles of civilization, small pockets where culture was crossing the hazy line between chiefdom and state.”

“...Monte Alban (in southernmost Mexico, near Guatemala), is reminiscent of the first big city in Mesopotamia, Uruk. In both cases, the city-to-be was at first a mere town, outshining its neighbors in size and architecture, and dominating them politically, in the classic fashion of a chiefdom’s hub. In both cases war and trade helped drive complexity upward, and in both cases information technology and urbanization proceeded hand-in-hand. In Monte Alban by 300 B.C.[E. -- F.E.D.] there were calendrical notations, and glyphs used to label sculptures of dead enemies. By 200 B.C.[E. -- F.E.D.] the population had grown to 5,000, and it would surpass 30,000.

“But Monte Alban was destined to be outclassed by Teotihuacán, a trading partner to the north that by A.D. [C.E. -- F.E.D.] 550, with 125,000 residents, would be one of the six largest cities in the world...”

“Teotihuacán is not to be confused with the nearby city of Tenochtitlán, the Aztec capital that, when seen by Cortez in 1519, housed around 200,000 people (more than any European city [at that time -- F.E.D.]) and anchored a state twice the size of Portugal.”

“Cortez called Tenochtitlán “the most beautiful city in the world,” and compared it to Venice.”

“Built on islands in a saltwater lake, it was laced with canals and bridges and adorned with floating gardens, a zoo, and an aviary.”

“The city’s waterborne commerce involved tens of thousands of canoes, and its central marketplace, according to Cortez, could accommodate 60,000 buyers and sellers.”

[Robert Wright, *Non-Zero: The Logic of Human Destiny*, *ibid.*, p. 108-114, emphases added by F.E.D.; see also <http://nonzero.org/toc.htm>].

Synchronic Direction/Dimension of Ontological "Transcendence" / "Qualo-Fractal" Scale-Escalation.

Diachronic-«Aufheben» Diagram: “Historical-Dialectical” ‘Meta-Monadology’ of human-social formation(s) for Epoch $\tau = 5$.

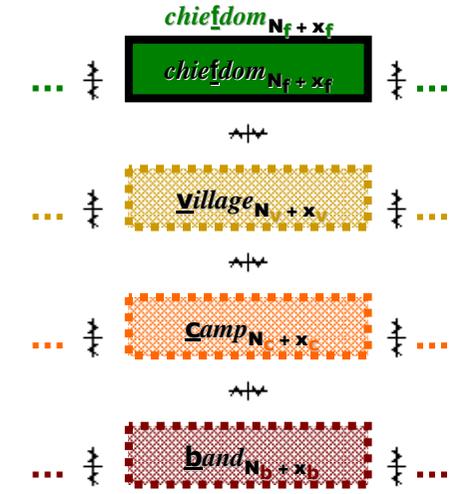
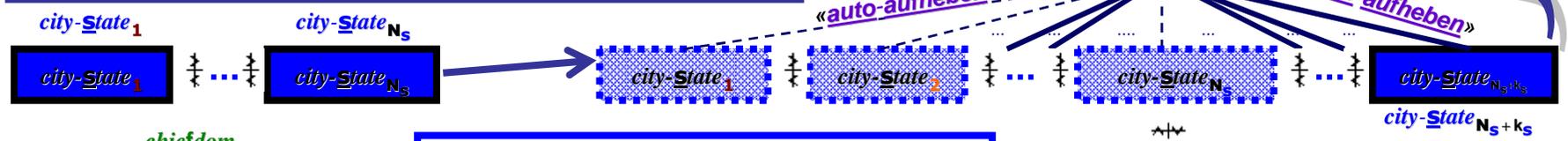
Irruption of the “empires” «species» of human-social formation ‘neo-ontology’ from ‘self-densifications’ of the “city-States” «species».

Definition of *historically-specific* ‘meta-unit-ology’ or ‘meta-«monad»-ology’ –

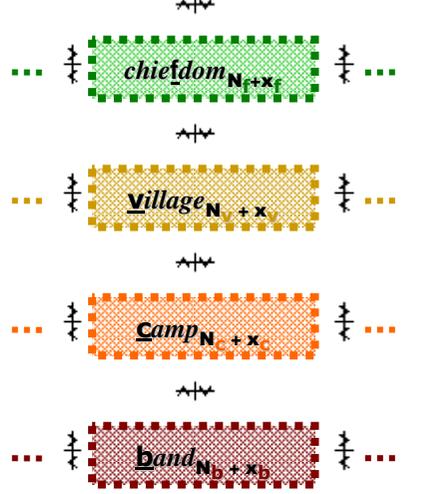
Each “**Empire**” unit, or «monad», is a meta-“city-States” ‘meta-«monad»’. Each “one” is made up out of a **heterogeneous multiplicity** of its predecessor, “city-State”, units, or «monads», i.e., each “one” is made up out of a [local sub-]«arithmos», of “city-States” units, or «monads».

$N_s + k_s$ = that local **population count** of the “city-State” «monads» **024** of the “city-States” «arithmos», which is associated with “critical density” in the typical incipient/emergent-“empires” ‘socio-ontological innovation nucleation zone/locale’. ‘Metafinite singularity’ threshold for irruption of “empires” social formations.

Note: The ‘dia-grammar’ of this style of «Aufheben» Chart does not allow for the depiction of ‘hybrid ontos’, e.g., via ‘other-conversion’ terms, but only of the ‘self-hybrid’, ‘meta-physis’ terms that signify ‘meta-«monad»-ological, ontological self-conversion(s)’. As of epoch 5, 26 hybrid terms, & 5 ‘self-hybrids’, are [possibly] extant.



Epoch 5: “Formal Subsumption” of **bands** ‘socio-ontology’, and **camp**s ‘socio-ontology’, and **village**s ‘socio-ontology’, and **chiefdom**s ‘socio-ontology’, and **city-States** ‘socio-ontology’, by **empires** ‘socio-ontology’, together with & superseding the “Real Subsumption” of portions of **all earlier Domain D = f** ‘socio-ontology’ by **city-States** ‘socio-ontology’.



Diachronic Direction/Dimension of Self-Proliferation, of “Auto-Catalysis”, or of Expanded Self-Reproduction, of Monadic Populations.

On the Pattern-Break in this 'Meta-Model' After the Ancient Empires Epoch.

027

Our solution for epoch $\tau = 6$ concludes with that of the *initially algebraic* -- i.e., *an unknown* -- category-symbol q_{ee} . We solve this symbol as *describing* the *modern nation-state social formation*: $q_{ee} \vdash \equiv q_n \equiv n$. But, in accepting this solution, we are *breaking* with the *pattern* of *all* of our previous solutions for '*self-hybrid*' terms of this 'meta-model', *all the way* from c, v, f, & s right up to e itself. This is because the *modern nation-state unit* is *NOT* a 'meta-empire' unit, *each unit* made up out of *a heterogeneous multiplicity* of INTACT empire [*sub-*]units'. Instead, the *modern nation-state unit* is, *initially and essentially*, made up out of *a heterogeneous multiplicity* of the ruined fragments, or fragmentary ruins, of *former, fallen empires* -- of the fragmentary ruins of the Roman empire in particular.

The *kind* of 'meta-models' that the n_Q , *simplest, dialectical algebra can explicitly express* are *entirely endogenous* 'meta-models'. They *express* directly *only* the "*pure*", *idealized, internal, 'essence-ial', immanent development* -- the '*self-development*' -- of the Domain that they *address*: the «*causa sui*», *or* «*causa immanens*», *ultimately* of the «*arché arithmos*» of that Domain itself. But the *actual course of development* of *any* "'eventivity'" -- short of *that* of the *whole cosmos* as *the totality, which* has, *by definition, no known outside, no "external environment"* -- is *codetermined together*, by the *combination* of «*causa immanens*», of *internal causes* & of «*causa transiens*», of *external causes*: of *exogenous forces & conditions, as well as* of *internal, endogenous ones*.

We *confront* the *impacts* of such *exogenous co-determinants* in this *break* in the *previously-unbroken pattern* of 'meta-unit-ization' of this 'meta-model'. As Robert Wright noted, the *main Terran ancient empires* were largely *isolated* from *one another*.

The *level* of the "*social forces of production*" *as manifested* in the *technologies* for distant transportation & communication in the *ancient world* were *insufficient* to bring about the kind of *intensive, regular, concentrated inter-empire contact & interaction* that might induce *direct formation* of 'meta-empire' units, *or even* of *a single world-wide 'meta-empire' unit*, that *would* have kept *post-empire human-social formation* in *pattern*. It ran up against the limitations of the habitable surface area of the globe at this empires stage. This precluded the *plethoric multiplication*, & resulting *dense contemporaneous multiplicity*, of *multi-city-state empire units*, that *might* have been required to *irrupt* in *one or more 'meta-finite singularities'* that *could* have resulted in *numerous/several multi-empire states, or even* in *a single planetary super-empire*. Huge *multi-city-state empires*, like *that* of Alexander of Macedonia, & like *that* of *ancient Rome*, which *later split* into *separate* Western & Eastern wings, *were more likely* to *fragment*, under such conditions, *or to collapse altogether*, into *Dark Ages degeneration*, than to *coalesce* with *other empires*, e.g., by conquest *or* alliance, into (*a*) 'meta-empire(s)'.

The *impact* of these *exogenous conditions* *broke* the *pattern* based upon the dominance of the exclusively «*causa sui*», «*causa immanens*», *endogenous, immanent, self-development moment* of the *actual 'inter-determination'*. By accepting the *solution* $q_{ee} \vdash \equiv q_n \equiv n$, we are embracing *an implicit*, "'stealth'" importation of «*causa transiens*» into our nominally «*causa immanens*»-*only* 'meta-model'.

A 'Dialectical Meta-Model' in Predictive / 'Pre-Constructive' Mode --
Intimations of Successor humans[+] -social formations
to the «Arithmos» of nation-states:
Considerations on 'meta-nation-state' humans[+] -social formations.

Algorithmically, mechanically, this 'meta-model' can readily be iterated beyond epoch $\tau = 6$, the epoch which "ends" with the nation-states social formation category as highest, last, most-complex category, per our solution herein. Indeed, one can so iterate, algorithmically, as far as one likes. As the nation-states category is the present dominant social-formations «species», such further iteration is, potentially, a symbolical prefiguring of the future. I.e., we'd be using the generic N_Q categorial calculus, as interpreted specifically for the social formations Domain, in predictive or 'preconstructive' mode, with the possibility of granting to us "foreshadowings of the future".

The question for such 'exo-iteration' is always: Do we have the wherewithal -- from experience of past-to-present phenomena of the social-formations Domain, or from insights otherwise derived -- to enable us to solve plausibly for the meanings of the next 'meta-meristemal' category-symbols generated by such further iteration?

The $\tau = 7$ iteration of this 'meta-model' -- achieved formally by squaring the 'cumulum' of the $\tau = 6$ iteration -- "ends" with what must initially be, for us, an algebraic unknown, q_{nn} . If we take, for now, this unknown as such, & so equate it to x -- $x = q_{nn}$ -- then we can even represent the final result of a yet further iteration, that for epoch $\tau = 8$, as, e.g., $y = q_{xx}$. Further than epoch 7, we cannot gainfully venture. But it turns out that we can conjecture potentially useful solutions for both $x = q_{nn}$ and $y = q_{xx}$. Those solutions form the basis for prediction hypotheses regarding the future of human-social formation, and, indeed, of humans[+] -social formation.

Regarding q_{nn} , we note that, per our usual "canons of solution-interpretation", it might be solved as describing an «arithmos» of 'meta-national' «monads», a category referring to 'meta-Nations' as units, wherein each such 'meta-Nation' unit is made up out of a heterogeneous multiplicity of nation-state units.

Now presently, & for some way back into our past, there have existed "multi-national" formations, of which the European Union may be the most recent & most fitting example. But such examples might also be taken to include "multilateral" treaty organizations, such as NATO, as well as general international, Inter-Governmental Organizations, 'IGOs', starting with the League of Nations, & presently, including the United Nations, but perhaps also including special-purpose inter-state/multi-state organizations, such as the World Bank, the International Monetary Fund, & the World Trade Organization. But we see these organizations as but 'protoic' & transitory formations, & so will venture further in offering, as our solution, something much more momentous, something that, for us, deserves the designation 'q_{nn}'. Our solution hypothesis is $q_{nn} \vdash \equiv q_p \equiv p$, the latter being our sign, in this f context, for 'planetary poli'. We hold that it will be, if it comes to be at all -- i.e., if Terran humanity surmounts the vicissitudes of the present "«descendence phase»" of its capitalist civilization -- a democratic global government, which, we expect, will officially reset the planetary clock, from C.E., "Common Era", to 'U.E.', 'Unification Era', its 'year 0' marking the real beginning of human[e] history as such [cf. Marx], re-designating all previous anthropological time, the true "pre-history" of humanity [cf. Marx] -- as 'B.U.E.', for 'Before Unification Era'. Of course, our universal «arithmoi» hypothesis expects a «multiary» «arithmos» of 'planetary poli', not a single, isolated «monad». I.e., we expect that when, or relatively soon after, Earth ascends to its 'political-economic-democratic planetary polis' social formation, that there will also be other 'planetary poli' in its vicinity, perhaps including that of a "Terra-formed Mars".

This consideration brings us to our next solution-hypothesis, that about what we can now solve as $i \equiv q_{pp}$. Per our usual "canons of solution", this symbol might be solved as describing an «arithmos» of 'meta-planetary-polis' «monads», a category designating 'meta-poli' as its units, wherein each such 'meta-polis' unit is made up out of a heterogeneous multiplicity of 'planetary polis' [sub-]units. Our hypothesized solution is thus $q_{pp} \vdash \equiv q_i \equiv i$, our sign, in this context, for a category that we call 'inter-planetary federations' [hats off to Gene Roddenberry]. This latter solution is far from novel; is foreseeable, & has been foreseen, by many. For our part, we suspect that this formation will co-arise with 2 other 'neo-ontologies' predicted via 2 of the 'meta-models' solved in the sequel to this text: the cosmos 'meta-model' category of 'meta-humanity', & the "social-productive force" 'meta-model' category of technologies built on actualities presently adumbrated as "dark matter" & "dark energy".

'Meta-Model' ASSESSMENT: The [Psycho]Historical Dialectic of human-social formation(s)' 'socio-onto-dynamasis' -- Efficacy and 'Homeomorphic Defect'.

029

The 'dialectical meta-model' presented above, in this text, reconstructs, categorially, the major chronological and taxonomical kinds of human-social formation(s), in the empirically, archaeologically reconstructed order, and also in the apparently necessary historical order, of their appearance, or at least of their possibility. Each next, new 'self-hybrid' social formation "'bootstraps'" from & builds upon the developmental level attained by its direct predecessor 'auto-hybrid' social formation, building [to] a new, higher 'qualo-fractal' level/scale.

This 'meta-model' also generates 'allo-hybrid' terms, potentially mapping categories of "real subsumption" of earlier-extant social-formation(s) ontology by later, i.e., the "takeover" of earlier kinds of human-social formations by later kinds, for all syntactically-possible such combinations, whether or not they have all actualized for this empirically, archaeologically reconstructed, Terran f D domain.

Herein, we have partitioned and discretized the phenomena of human-social formation -- whose historical progression was, while not at all "continuous" in the idealized, unrealistic sense of the "Rreal" number line, at least more gradated than our discretization portrays -- into just 7 categories for what has manifested to-date: bands, camps, villages, chiefdoms, city-states, [ancient] empires..., and [modern] nation-states. We think that this parsing offers new insight into the constitution & continuity of Terran human-social formation.

Robert Wright notes gradations beyond ours -- e.g., inter-village trading alliances, & "supravillage confederations", in-between villages and chiefdoms; "chiefdom hub villages" & "towns" in-between chiefdoms & city-states, & "multi-city states" in-between single city-states & empires. These can be captured in alternative solutions of our 'meta-model meta-equation', solutions which still start from the same point of departure, that same 'arché' human-social formations socio-ontological category: bands.

This 'meta-model' cannot detail goings-on inside the individual «monads» that constitute these «species» categories. It represents those «monads» only abstractly & collectively, via categories. It also leaves implicit the 'cognitive-psychohistorical' determinants of these formations. They must be there, but are not explicitly elaborated in this 'meta-model meta-equation'. Nor can it take explicitly into account the interactions of the strictly endogenously-developing «arithmoi»-of-«monads» that it maps, with the exogenous ontology of external, e.g., other Domain, «arithmoi»-of-«monads» that modify the manifestation of these endogenously-generated «arithmoi»-of-«monads»; that co-sculpt & co-script the outer forms of these formations. This can be seen especially in the case of the exogenously-conditioned break in the pattern of this 'meta-model', & in the meanings of our solutions, after, e.g., the "Dark Ages" collapse of ancient empire(s), & before the emergence of the nation-states 'human-social formation(s) socio-ontological category'.

Scholium: human-social formation as a process of and within Natural History.

030

As Robert Wright *says* in his book Non-Zero: The Logic of Human Destiny, cited above, there is *a recurring pattern* in the *history* of human settlement-forms. It is *a pattern* of “‘self-complexification’”. It appears to be *one of a necessary historical* “order of birth” for the various [psycho]historical categories in the *taxonomy* of what we call, after Marx, “‘[human-social formations]’”, *all* belonging to the ‘natural history of human[oid] societies’: *bands, camps, villages, chiefdoms, city-states, empires, . . . and nation-states [so far]*.

There is *no remaining reason not* to *grasp* this human process as a process of *later natural history, as a part* of *Nature*; *as a self-continuation* of *cosmological ‘self-meta-evolution’*.

We also ventured, above, our guess regarding the *next 2 ‘self-hybrid’ social-formation categories* in that [psycho]historical categorial progression.

Moreover, this *pattern* is *that of a process* of [aufheben] ‘self-meta-unit-ization’ of some *units* of the *immediate predecessor* ‘self-hybrid’, or ‘arché’-*ic*, *category*, in *their formation* of the *units* of *their immediate successor* ‘self-hybrid’ *category*, or *taxon*, in this historical taxonomy of the *still-largely-present* ‘socio-ontology’, and of the *past* ‘socio-onto-dynamasis’, of human-social formation(s).

As such *a process* of ‘self-meta-«monad»-ization’, or of ‘self-meta-HOLON-ization’, the *historical process* of human-social formation is thus *also a process* of ‘self-«aufheben»’, *concurrent self-transformation/self-elevation/self-conservation* of *predecessor* ‘self-hybrid’, or ‘arché’-*ic*, ‘«monad»-kinds’, in the *formation* of *successor* ‘self-hybrid’ ‘«monad»-kinds’.

As *a self-reflexive*, ‘self-«aufheben»’ *process*, the *process* of human-social formation is therefore *also a dialectical process*, and *a ‘human-Nature-al part* of the, *singular*, ‘dialectic of Nature’ *as a whole*.

As such, *it can* be *mapped categorially* via the ‘*mathematical metaphor*’ of *a historically-periodized, multi-epochal* N_Q *categorial-algebraic ‘dialectical meta-equation meta-model’*, such *as we have saw* above. However, this [psycho]historical dialectic of the “‘self-complexification’” of $D = f$ human settlement-patterns captures but *a single side among many* -- but *one dimension* -- of the multi-dimensional historical dialectic of the self-development of the *Terran human species to present*. *Perhaps also*, ‘*preconstructively*’, by iteration of this ‘*meta-model*’ *beyond its epoch 6*, we *can* gain *a glimpse* of the *pattern* of the ‘socio-ontological-categorial’ *future* of that *Terran self-development*. It is *a mission* of *later* texts, to *also describe other key dimensions* of the [psycho]historical dialectic of humanity(s). *Toward fulfillment* of *that mission*, *a later* text addresses, for *example*, the [psycho]historical dialectic of the *forms* of human ideology\knowledge. Taken *together*, e.g., “‘*simultaneously*’”, we call these ‘meta-models’ -- *each focusing on just one* of these *many dimensions* of the historical self-development of humanity(s) -- ‘*The Seldonian Psychohistorical-Dialectical [Meta-]Equations*’.