Experience, Reason, and the Crisis of the Republic Volume 1

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Experience

By

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INTRODUCTION:
A FOUR-PART REALIST METAPHYSIC
OF EXPERIENCE

§1. This Work's Contents, Organization, and Citations

This work is a two-volume exegesis of the thought of Edmund Husserl (1859-1938) in the four Parts I: *Objects of Experiences* and II: *Experiences of Objects* of Volume 1, and III: *The Logic of Experience* and IV: *The Crisis of the Republic* of Volume 2. Volume 1's realist constituent ontology of dependence (Part I) and Husserl's Brentano School theory of experiences as cognitive events with intentional contents (Part II) comprise the theory of experience applied in Volume 2's Part III formal temporal semantics of the 1st-order predicate modal logic B of experience (conceived as reason) of any 1st-order predicate modal language $\mathcal{L}$ which encrypts intentional contents of experiences (e.g. empirical scientific observations). Part IV applies the Parts I-III realist accounts of experience and reason to Husserl's (1938) analysis of how the nominalist view of experience core to Galileo's view of natural science evolved into a European crisis (patent and worsening since World War II) of Plato's ideal and Jefferson's historic republics. Volume 2's Chs. 21-22 focus on the American crisis, proposing Parts I-III provide a metaphysical means to the end of resolving the 21st Century political crisis of Jefferson's historic American republic.

Parts II-IV are applications in epistemology, (modal) semantics, and political philosophy of Volume 1's Part I, with which my descriptive comments begin. Ch. 1 introduces and Chs. 2-9 formulate a realist dependence ontology as the axioms, definitions, and theorems of the Calculus [CP] of Phenomena. [CP] uses two primitive (proper part and foundation) predicates to define eight types of dependence in a realist ontology of pieces and moments of dependent and independent, singular and plural, individual and

collective, and non-categorial and categorial objects. Of plural independent categorial objects, some are relation complexes, some are categorial relations, non-categorial collectives and individuals are pieces of each, and each are implicated in the Volume 2 Part III formal semantic definition of truth. Ch. 10 bases its general definition of 'constituent ontology' on N. Goodman's work, contrasts [CP] to the Leonard-Goodman Calculus [LGCI] of Individuals as realist v. nominalist constituent ontologies, contrasts realist to nominalist constituent ontological atomism, and avers that the epistemic and semantic tasks of Parts II and III are relevant for deciding the relative values of realist and nominalist constituent ontologies. Neither [CP] nor [LGCI] have any obvious relation to time, while classical realist distinctions (e.g. of temporal particulars v. a-temporal universals) did, and Parts II-IV pointedly do, refer to time. So the concluding Ch. 11 of Volume 1's Part I discusses [CP] in relation to time and classical realism as a bridge to the epistemic, formal semantic, and historical topics of Parts II-IV.

Volume 1's Part II develops a theory [E] of intentionality in two (*noetic* v. *noematic*) fragments as Husserl's Brentano School view of events of experiencing objects. The first (*noetic*) fragment is a theory of time ordering events of experience into past, present, and future, and is notable for Husserl's thesis that time well-orders past and present, but partially orders future events, of experiencing objects. The second (*noematic*) fragment of [E] is a theory of intentional contents of events of experiencing objects, and is notable for its use of [CP]-objects distinguished in Part I as (not parts of, but) *functionally correlated to* events (*noeses*) of experiencing objects. This view of intentional contents as [CP]-objects correlated to events of experience supports Husserl's and Gurwitsch's *correlation* conceptions of intentionality and Part III's formal semantics of languages (and the logic) of experience as encrypting intentional correlates of events of experience.

Volume 2's Part III uses Husserl's 1901-1929 distinction between grammatical (syntactic) and semantic categories to formulate a three-valued *noetic* semantics for any 1st-order modal predicate language encrypting intentional contents of events of experience, and formulates the logic B of any such language as an inference system suitable for a second-semester university logic course. Part IV is a mainly historical discussion of what has gone wrong in the West's philosophical development since the 14th Century, arguing the 21st Century crisis of the West is the

contemporary hegemony of nominalism over realism. Ch. 21 of Volume 2's Part IV includes three substitution instances of a syntactic (object-language) B-proof and one semantic (meta-language) proof justifying Jefferson's 1776 claims that some natural rights are not civil entitlements, and suggests some revision of university philosophy, sociology, and history curricula including a 2nd-semester logic B of experience, greater emphasis on Weberian, and less emphasis on non-Weberian social science and history is indicated. Volume 2's Ch. 22 uses Volume 1's constituent ontology [CP] of dependence to design and request realist sociological studies of 20th Century political-economic states of the U.S.A. intended to provide empirical scientific evidence for or against the work's philosophical argument.

Square bracketed citations refer to Bibliography entries (preceding colons); page numbers precede commas, last page numbers precede semi-colons if they precede something else, and the closing square bracket otherwise. E.g. [57] refers to entry 57 (*The Critique of Pure Reason*), and [5: xxxviii; *Cf.* 119: 38-49, 249-255; 28: 100-101, 163-166] refers to p. xxxviii of entry 5 (*The Social Contract*), to pp. 38-49, 249-255 of entry 119 (*Origins of Totalitarian Democracy*), and to pp. 100-101, 163-166 of entry 28 (*Totalitarian Dictatorship and Autocracy*). I cite chapters or sections to facilitate use of editions or translations other than those cited.

§2.   What This Whole Work is About (Metaphysically Speaking)

A prospective reader should know that Volume 1's Part I is core to what both volumes of this work are about, but some with a prior interest in Part I may wonder what the whole work is about, and why it includes Parts II-IV. Parts I-IV are related in ways the work will reveal. Saying the work is about everything is (mischievous but) not unjustified, but risks provoking the (equally mischievous but not unjustified) response that whatever is about everything is likely about nothing. To pin it down a bit more: The whole work is about metaphysics (i.e. *first* philosophy, *viz*. the part of philosophy needing no other, but needed by any other, part of philosophy). But many among us opine metaphysics is the best example of something which is about nothing just because it is about everything.

The work introduces those who so opine to contrary opinions that metaphysics is about three things, referred to by Descartes as *res Extensa*, *res Cogitans*, and God, and by Kant in his *Critique of Pure Reason* [57] as the *transcendental ideas* of world, self, and God. On either view metaphysics is about three things (so is about something). But also on either view, metaphysics is about everything, because these three general topics encompass all there is. Neither Husserl nor this work is Cartesian or Kantian, but also neither is intellectually far from either (especially from Kant). Husserl's *Cartesian Meditations* speaks for itself; to see what I mean about Husserl and Kant the best source [58] is (sadly) untranslated (but see Volume 1's Part II *infra*). To see what I mean about this work and Kant, note Part I: Objects of Experience is to Kant's transcendental idea of world as Part II: Experiences of Objects is to Kant's transcendental idea of self and as Part III: The Logic of Experience is to Kant's transcendental idea of reason (God), and that Part IV: The Crisis of the Republic is to Parts I-III as Kant's (2nd) *Critique of Practical Reason* was to the ideas of world, self, and God of his (1st) *Critique of Pure Reason*.

In short, this work applies a post-Kantian metaphysic of experience (and reason) to issues of fact and value pertinent to the empirical sciences of nature and culture, and is a single whole c(r) one moment r of which unifies its four maximal pieces (Parts I-IV). This work refers throughout to its immediate moment r of unity as its moment of (extreme collective) *realism*. One wondering how four maximal pieces of an independent whole c(r) are unified by its immediate moment r of unity will find in the Constituent Ontology [CP] of Dependence (Part I *infra*) the following answer: The independent whole c(r) is the completion of its immediate moment r of unity; all but one of c(r)'s maximal pieces are maximal pieces of c(r)'s immediate moment r, and the other maximal piece of c(r) is the reification of c(r)'s immediate moment r. So think of this work as the completion c(r) of its immediate moment r of realism, of Parts I-IV as the four maximal pieces of c(r), and of Part I: The Constituent Ontology [CP] of Dependence as the reification r(r) of c(r)'s immediate moment r of realism. Thus, this work is one of the things it is about, but that should not be too surprising (since I warned you this work is about everything).

§3.   What This Whole Work is Really About (Less Metaphysically Speaking)

§2 really just said you have to study Part I to get a grip on understanding what this whole work is about (intimating that grip will become less tenuous as you study Parts II-IV, but that Part I is unique in discretely founding the moment of realism which unifies the work). I think that needed saying, although the reader may think it might be better said in a postscript than in an introduction. The issue is that first philosophy (metaphysics) is like a (lazy-eight) snake eating its tail; where it begins and ends is an issue. So it seems best to append a few less cryptic comments as §§3-4. Parts I-III are mostly mathematical with some history tossed in as an intuitive anchor, while Part IV is mostly historical with some mathematics tossed in to frame intuitive issues clearly. I here lift from Part IV comments meant to foster an intuitive grasp of mathematically formulated dependence ontological, intentionality, and formal semantic contents of Parts I-III. If you find them orienting here they will have served their introductory purpose; I hope you understand them (and this introduction) more fully when next you see these comments in Part IV, Ch. 21, §15.

> …Plato's ontology was realist because it admitted temporal particular *and* ideal objects, and was extreme because it admitted universal ideal objects (Platonic Ideas). He saw philosophy as the search for true definitions, and definitions as true iff they (adequately) describe some ideal universal. His dialogues illustrate this search, using his realist ontology to defend his view that any definition *describes* some unique ideal universal (e.g. *Virtue* in the *Meno* and *Justice* in the *Republic*) in which distinct particulars (of the same type) participate to some (greater or lesser) degree, and are good in direct proportion to the degree of their participation.
>
> Plato's theories of value (axiology and ethics), law, and politics are just *applications of* the extreme realist ontology of his metaphysics. We experience any particular temporal object x as participating (to some degree) in some ideal universal, which is the standard of value we experience x as having; we experience any x participating in some ideal Idea as good in direct, and as bad in inverse, proportion to the degree x participates in it. …If particulars are [so] experienced …then (nominalist) theories which replace ideal universals by idiosyncratic, ephemeral individual or collective feelings and/or conventions cannot account for our

experiences of individuals as virtuous or of laws or governments as just.

Part IV shows how modern philosophy from Copernicus to Rousseau evicted ideal universals (Platonic Ideas) from their early medieval place between heaven (God's intellect) and Earth (nature), leading to the 19th Century collapse of value… Parts I-III reject the nominalist (Galilean/Cartesian) theory of ideas to provide for Plato's ideal objects (and the basis of value they provide) a new home …in experience. …but Brentano's thesis that experience is intentional entails [we] experience modality, a topic of Part III: The Logic B of Experience (Reason) and Part IV: The Crisis of the Republic.

§4.   At Whom, by Whom, and How this Work is aimed

Volume 2's Part IV argues: i) Western culture suffers a metaphysical malaise; ii) caused by the post-15th Century failure to articulate a metaphysics compatible with both modern natural science and communal beliefs and values serviceable as a viable moral compass for negotiating life in a cultural context; iii) this failure is the result of the 16th-19th Century rejection of realism in favor of nominalism regarding experience, and last; iv) Parts I-III are an alternative realist metaphysic of experience I prescribe for the malaise of European and hence American culture. This statement of this work's theses reveals the work is not intended for general readers seeking entertaining diversion or relaxation; think of it more as a self-help book aimed at ailing cultures generally, ailing European cultures less generally, and at a critically ailing American culture in particular.

Had your family life gone seriously awry you might study a relevant self-help book promising (little entertainment, but maybe) a solution to your problem. If you were seeing a (e.g. Gestalt) therapist about your family problems and came across such a book (hard to understand but maybe plausible), you might ask your therapist what s/he thought about it (seeking a more informed opinion about whether it might help). But if the book argued your family's cure requires rejecting your therapist's basic beliefs, what reply would you expect from your therapist? In this metaphor this work aims at the therapist, who represents the professors of philosophy, history, psychology, and social sciences who staff European and American universities and are intellectually responsible

for our cultural health, but typically suffer most grievously from the metaphysical crisis now afflicting our culture. European socialist and American progressivist ideologies share the nominalist premises which entail the West's metaphysical crisis. Secular relativist views of science and rejections of late 18th Century (founding) American values at American universities are effects of the 19th-20th Century defeat of realist by nominalist views of experience and reason, and will respond only to a reversal of that historical defeat.

They also serve whose *thought* defends the U.S. Constitution against all enemies foreign and domestic. This work frontally assaults the nominalist metaphysical premises of the progressivist ideology typically inculcated by contemporary American universities. Frontal assaults are hopeless without effective weapons, so I avail precise, mathematical formulations and proofs of relevant concepts. Of readers irritated by such precision I beg indulgence; it is necessary for understanding experience and reason well enough to have even a prayer of overcoming the crisis.

Last, this work's mathematical approach to its philosophical topics bequeaths it a feature sufficiently rare in the humanities to be worth mention. Understanding some things (e.g. the calculus) requires understanding other things (e.g. analytic geometry and limits); mathematics curricula reflect, so students exposed to such curricula understand, that. Further, this feature is common to pure and applied mathematics. Understanding physics requires understanding the calculus (so analytic geometry and limits); students of science and engineering understand that because they are exposed to curricula which reflect that. However, this ordering of studies necessary for developing *understanding* is not necessary for developing *motivation*; some students become motivated to study mathematics only after learning that doing so is an intellectual means to the end of understanding physics or engineering. Such students included Hobbes, Descartes, and Einstein (all motivated by interests in physics to study mathematics) and myself (motivated by interest in philosophy to study mathematics). So here is the upshot:

Relative to *understanding* this work, the four parts I-IV of Volumes 1 and 2 must be read in order. Volume 1's Part I must be studied and understood first, and understanding any part of Volume 1 or 2 requires understanding all preceding parts of either Volume.

But this order of approach is unnecessary relative to *motivation*, where the readers best initial approach will depend on personal interests. Begin with a perusal of i) Part IV first if your interest is primarily in political philosophy, or ii) Part III first if your interest is primarily in philosophy of language, or logic, or science, or iii) Part II first if your interest is primarily in cognitive science, or psychology, or mathematics. After doing so assess whether you are motivated to study earlier parts of the work, but *don't confuse motivation with understanding*; you will most likely *understand* any part which interests you only if you return to study it carefully once you understand each preceding part of the work.

PART I

OBJECTS OF EXPERIENCES

CHAPTER 1

HUSSERL'S AXIOMATIC CONSTITUENT ONTOLOGY OF DEPENDENCE: BACKGROUND AND CONTEXT

Ch. 1 introduces the *Seminar for Austro-German Philosophy's* late 20th Century project of axiomatizing the constituent ontology of dependence adumbrated in Husserl's third *Logical Investigation*. Topics of this historical discussion refer to aspects of pre-21st Century philosophy, ontology, mathematics, and logic relevant to exegesis of Husserl's discussion of ontological dependence, covering strong" v. "weak" foundation, part concepts, reasons for adopting weak foundation as a primitive predicate, differences between [CP] and earlier influential post-1982 axiomatic constituent ontologies of dependence, and some issues of order in relation to the language [LCP] of the formal theory [CP] of dependence developed in Chs. 2-9 and discussed in Chs. 1, 10, and 11 of Part I.

§1. This Book's Ontological Project and Historical Context

After stating and discussing some axioms, definitions, and theorems of his constituent ontology of dependence in [45], Husserl commented:

> These thoughts can only be meant, and are only meant, to count as mere indications of a future treatment of the theory of Wholes and Parts. A proper working out of the pure theory we here have in mind, would have to define all concepts with mathematical exactness and to deduce all theorems by *argumenta in forma*, i.e. mathematically. Thus would arise a complete law-determined survey of the *a priori* possibilities of complexity in the form of wholes and parts, and an exact knowledge of the relations possible in this sphere. That this end can be achieved, has been

shown by the small beginnings of purely formal treatment in our present chapter. In any case the progress from vaguely formed, to mathematically exact, concepts and theories is, here as everywhere, the precondition for full insight into *a priori* connections and an inescapable demand of science [45: 484].

A 1st-order axiomatization of Husserl's realist constituent ontology of dependence, Part I of this book is a "proper working out" of enough of Husserl's thoughts to support a (*noetic*) modal semantics for first-order languages expressing *material* ontologies (like chemistry or social psychology) of some semantic category of experience, or *regional* ontologies (like theoretical physics or theoretical sociology) of some material region of experience. An orienting historical discussion (Ch. 1) introduces an axiomatic exegesis [CP] of Husserl's realist constituent ontology of dependence (Chs. 2-9). Comparing [CP] to Leonard-Goodman's ontology [LGCI] of individuals, Ch. 10 contrasts realist ([CP]-) to nominalist ([LGCI]-) constituent ontological atoms and atomism, and Ch. 11 discusses the realist constituent ontology [CP] in relation to time and to Parts II, III, and IV *infra*.

[CP] distinguishes (mediate v. immediate) moments and (maximal v. mediate v. immediate) pieces of categorial and non-categorial dependent wholes and their independent completions. Husserl's '*wholes in the pregnant sense*' turn out (Ch. 10) to be non-atomic [CP]-objects. Non-categorial [CP]-objects include singular and plural independent objects (individuals, their singular moments, collectives, and their singular and plural moments) and categorial [CP]-objects include moments of unity, moments of association, relating moments, relation complexes (*Sachverhalte*) of individuals and non-categorial collectives, moment *abstracta* binding relation complexes into categorial *relations*, *eide* binding categorial relations into semantic categories, and regional *eide* binding categorial relations into *material regions* (maximal semantic categories). I adopt a constituent ontological atomism axiom [CPA18] (for didactic purposes), adopt Husserl's views where I can, and elsewhere (as with Husserl's view of pieces of independent objects as closed under complementation) I accept council from *die Sachen selbst*.

What follows refines and expands my [93] account of the ontology applied by the *noetic* semantics of (Brouwerian) Modal languages of experience. That semantic goal includes a) Part II's *noetic* and *noematic* accounts of intentional experiences of [CP]-

objects of experience, b) Part III's account of reason as the (modal) logic of experience, including b-i) the assignment of semantic values to the individual variables, n-adic predicates, identity claims, and n-adic atomic formulae of modal logics of experience, and b-ii) the role of semantic categories and material regions of experience as semantic domains of material and regional ontologies of experience.

I am unpersuaded by commentators viewing Husserl's transcendental turn of 1913 as idealist *apostasy* by a realist ontologist. I view philosophy since antiquity as most profitably understood as a historical conflict of nominalism and realism, and the dearth of nominalist transcendental idealists as no accident. Transcendental idealism and realism are compatible; Kant and Husserl are both realists and transcendental idealists, and Husserl's (post-1908) transcendental idealism is commensurate with the commitment to realism embodied in his constituent ontology [CP] of dependence. [CP] reflects a long-standing tradition of intuitive part-whole approaches to ontology more or less common to ancient, medieval, and (pre-20th Century) modern thinkers, is the context of Husserl's earlier ontology [CP] of dependence, and of the transcendental idealist philosophy he based on [CP] and formally introduced in his 1913 *Ideen I* [54].

Inadequately distinguished from intuitive (extensionalist) class theory (for short: $\in$-ontology) before its 19th-20th Century mathematical formulation, the constituent ontology of dependence (mathematically formulated here) is an equally old intuitive (intensionalist) alternative. 20th Century formal semantics (and relevant part theories) were routinely formulated in Zermelo-Fraenkel class-set languages, and that linguistic habit was an impediment to understanding Husserl's constituent ontology of dependence. Here I avail a historical event during Husserl's tenure at Göttingen to plausibly locate the constituent ontology [CP] of dependence within a more comprehensive class-set theory I adopt in Part II §6 (Ch. 12) *infra*. I do so partly to orient [ZF] class-set theorists relative to [CP] and partly to *restrict the use of the membership predicate within* [CP].

[CP]-objects are *Urelements* (*neither have members nor are the empty set*) of any [ZF] class-set theory. In June 1906 (during Husserl's 1901-1916 tenure at Göttingen) Zermelo told the Göttingen Academy of Sciences his axiomatic class theory assumed a domain of distinct objects, including some (*viz.* classes)

with members and some (*viz*. *Urelements*) which neither are the empty set ∅ nor have members. In 1930 Zermelo proposed seven axioms (excluding those of Infinity and Choice) for a version of Zermelo-Fraenkel [ZF] class-set theory closely related to the version commonly used today and permitting *Urelements* [80: 269-70]. Any [ZF] class-set theory which permits *Urelements* could use all and only [CP]-objects as *Urelements*, and in any such context [CP]-objects would be memberless members other than ∅.

But *Nota Bene*: If [CP]-objects are *Urelements* then they have no members, so no [CP]-distinction between (e.g. independent and dependent) [CP]-objects is expressible in the language of [ZF] class-set theory in terms of members of [CP]-objects. [ZF] axioms therefore find little application in Part I's introduction of Husserl's dependence ontology [CP]. Relation complexes and categorial relations are plural independent [CP]-objects (collectives) and focal desiderata of [CP]. Reflecting on i) the Wiener-Kuratowski-Hausdorff account of order in the [ZF]-account of relations and ii) the fact that [CP]-objects *have no members* should help adepts of the [ZF]-tradition see why the epsilon predicate finds little application in the dependence-ontological [CP] account of order, relation complexes, and categorial relations (*vide* Chs. 6-8 *infra*).

Part I is an axiomatic account of an intuitive constituent ontology of dependence more or less common to realist classical (ancient and medieval) and (pre-twentieth century) modern philosophers. That intuitive realist tradition (presumed by Husserl at the end of the 19th Century) was occluded by 20th Century developments and applications of the class-set and nominalist ontological traditions. That left realist constituent ontological issues opaque to contemporary minds. This introductory chapter's remaining discussion of relevant events before and near the turn of the 20th Century aims to help.

§2.   The Brentano School Ontological Dependence Concept

The Brentano School inherited the *ontological dependence* concept from ancient, medieval, and modern rationalist and empiricist extreme and moderate realism. Some claims about the world are true independently of observation; i) 'Nothing is square and not square', ii) 'Whatever is not both square and not square is either square or not square', iii) 'No square is round', iv) 'Any point

not on a line lies on exactly one other line parallel to the given line',
v) '7 + 5 = 12', vi) 'No cat is a canine', and vii) 'All bachelors are
unmarried' are such claims. Ancient extreme realists (Plato) saw i)
sensible particulars as instancing universals; ii) universals as
knowable by reason; and iii) such *necessary* truths as describing
universals, and so as *truths of reason*. Later extreme realists
(neoplatonists) viewed universals as divine ideas and such
necessary truths (*of reason*) as describing the divine plan implemented
at creation. Inverting the ontological priority of universals and
particulars, Aristotle and medieval moderate realists averred that
universals arise only *via* (and/or *are*) mental events of abstracting
enmattered forms (*i.e. qualities*) of particulars, but still viewed
necessary truths (*of reason*) about particulars as describing
relations (of ontological dependence) amongst the *qualities* of
particulars.

The shared view: One quality (e.g. bachelorhood) *ontologically
depends on* another (e.g. unmarriedness) just in case it *cannot*
exist unless the other exists. The common realist doctrine that
necessary truths express ontological dependence relations
amongst forms of particulars left open a question regarding God,
forms, and necessity: Are ontological dependence relations necessary
because God created particulars the way He did, or did God create
particulars the way He did because relations of ontological
dependence are necessary? This is the question whether relations
of *necessitated conditional existence* are necessary or contingent.
Plato, Aristotle, later neoplatonists, moderate realist Christians
through Aquinas, and Husserl answered this question affirmatively
(and theologically) by referring modality to divinity. If the necessary
features of creation are necessary then they bind not only man but
also God, whose creation had to satisfy them. Medieval nominalism
[associated with William of Ockham (ca. 1285-1350 A.D.)] challenged
the realist faith in the necessity of ontological dependence relations.

Ockham rejected the view that some features of creation
are necessary as impugning God's omnipotence, arguing that
relations of ontological dependence are binding on man (round
squares are *impossible for man*) but not binding on God (round
squares *are not impossible for God*, as He could have created
different dependence relations governing the particulars of a
different creation which satisfies different necessary truths). For
Ockham, necessary features of creation are contingent on God's
fiat (which might have been otherwise), so they are not necessarily

necessary. Ockham's contingency of necessity thesis conceived (as in Part III *infra*) in terms of modal logic was a rejection of the S4 axiom Lp ⊃ LLp.

    For example, if 'p' means no square is round and 'Lp' means it is necessary that no square is round, in *God's creation* both 'p' and 'Lp' are true but 'LLp' is false, because God could have created a different world which satisfied different necessary truths, and which included some round squares (and in which 'Lp' is false). On Ockham's view that follows from God's omnipotence; He could have, but didn't incarnate other necessities in creation only out of beneficent concern for those of us who fear the affront to reason of sharing creation with round squares. In short, the necessity that no square is round and impossibility of round squares are contingent on (divine) conventions of the Creator.

    Ockham's appeal to (divine) convention to argue for contingent necessity was not, but his increasingly secular modern heirs (e.g. from Hobbes to Hume) grew increasingly, hostile to modality *per se*. Ockham's argument for weakening the necessity of (laws of) Creation involved reference to something beyond creation, *viz*. to the Creator. The property of *being the Creator* seems a necessary property of God, and Ockham never argued the necessity of God being the Creator is contingent. So his argument left room for necessary necessity (of properties of the Creator) v. contingent necessity (of properties of created objects). This extant Ockhamist option pre-figures Kant's late 18th Century distinction between analytic necessity (applicable to reason and God) and synthetic necessity (applicable to intuition of time and space).

    Ockham's conventionalist faith in the beneficence of an omnipotent creator of the necessary truths of reason was insufficient to validate the S4 axiom, but sufficient to infect Descartes. The evil creator hypothesis of Descartes' *First Meditation* was intended to make the necessary truths of reason dubious long enough for Descartes to validate them by proving the beneficence of the creator, and believing that the malevolence of the creator impugns the necessary truths of reason entails believing Ockham's divine conventionalism. So Descartes accepted Ockham's conventionalism regarding the necessary truths of reason and the relations of ontological dependence they express. Rejecting Ockham's and Descartes' divine conventionalism, Husserl claimed necessary truths bind God [54: 362; *Cf*. 58: 125-134]. But (*vide* Part III *infra*) the S4 axiom is not a theorem of the modal system

supporting Husserl's (*Brouwerian*) necessity concept.

Descartes bequeathed the contagion of Ockham's nominalism first to modern rationalism, and thence to modern empiricism. Modern rationalism saw the common bond between reason and reality as necessary connections of ontological dependence revealed by intuition and traversed by deduction. The Twelfth of Descartes' *Rules for the Direction of the Mind* saw *necessary connections* of *simple natures* as self-evident relations of ontological dependence between intuitions. The Galilean-Cartesian *analytic-synthetic* method saw *analysis* as the conceptual dissolution of connections including (but not limited to) necessary connections of ontological dependence, and *synthesis* as the deductive reconstitution of necessary connections which are *exclusively* relations of ontological dependence. Descartes' view of any thought as ontologically dependent on some thinker is the central presupposition of the *Cogito Sum* argument of his *Second Meditation*, and modernity's chronic malaise of metaphysical dualism is an infection by Descartes' view of *res Extensa* and *res Cogitans* as ontologically dependent relative to God *but not relative to each other*.

In the tradition of modern empiricism, John Locke conceived the representative function of simple sensuous ideas of primary qualities as their ontological dependence on primary qualities of material substances. Locke also distinguished necessary from contingent associations of ideas, viewing (only) the former as relations of ontological dependence between ideas. Berkeley's critique of Locke's thesis that simple ideas of primary qualities *do* but simple ideas of secondary qualities *do not* have a representative function involved Berkeley's thesis that ideas of the former type depend ontologically on ideas of the latter type. Berkeley accepted Locke's thesis that some ideas ontologically depend on other ideas, but rejected his thesis that some ideas ontologically depend on real qualities of material substances. Instead Berkeley opined that our ideas ontologically depend on God's ideas (still relying on ontological dependence, but preserving a modern version of Ockham's divine conventionalist view of relations of ontological dependence). But God's role as establishing relations of ontological dependence by divine convention came under serious (if not infamous) assault by Berkeley's Scottish heir, David Hume.

Modern versions of nominalist conventionalism developed as increasingly secular (and powerful) assaults on the original, realist view of ontological dependence. Hume followed Berkeley in substituting mental events for qualities; two *mental events* have a relation of ontological dependence iff *one cannot occur unless the other occurs*. Hume still used ontological dependence to distinguish *between* ideas and impressions, holding in §I of Book I of the *Treatise* that i) (with one apparent exception) no simple idea can occur unless some simple impression occurs, and ii) this (unilateral) dependence of ideas on impressions justifies *The Principle of Empiricism* (denial of innate ideas). But Hume's secular account replaced Ockham's Creator by human consciousness, and (most crucially) Ockham's divine convention by the force of *individual* psychological habit, and this entailed Hume's denial of dependence relations *between impressions*.

In §III of Book I of the *Treatise of Human Nature* Hume departed from both Locke and Berkeley by denying any impressions (or ideas) have necessary connections:

> ...all our ideas are copy'd from our impressions, and...there are not any two impressions which are perfectly inseparable (43: 10).

So Hume denied impressions have relations of necessitated conditional occurrence (i.e. of ontological dependence). Ockham's ancestral nominalism saw all humans (unlike God) as bound by the same ontological dependence relations, while Hume's modern (psychological) nominalism saw *different* humans (e.g. with different psychological habits) as bound by *different* associative connections. In replacing God by individual habit as the author of convention, Hume mounted an even stronger nominalist assault on the realist view of necessity and necessary truth. Ockham only *restricted* the necessity of relations of ontological dependence by excusing God from their scope. Hume's secular, psychological conventionalism denied their necessity altogether, admitting contingent relations in their place. Twentieth century nominalists (e.g. Goodman and Quine) were heirs to Hume in this regard, admitting no ontological dependence relations.

The received tradition is easily seen to abound with realist claims (and nominalist denials) of ontological dependence. E.g. creation ontologically depends on the Creator, attributes ontologically depend on a substance, some attributes ontologically depend on others, and the thought *I exist* ontologically depends on the thinker.

Ontological dependence becomes the relation of necessitated conditional *occurrence* in Hume's version of Descartes' modern theory of ideas; an idea ontologically depends on an impression if *it cannot occur unless the impression occurs*. Hume's denial of the "inseparability" of any distinct impressions quoted *supra* is a denial that any distinct impressions have a relation of ontological dependence, so the *dependence of x on y* was also called the *inseparability of x from y*. Stumpf's late 19th Century [118] concept of *inseparable mental contents* expressed both the psychological perspective of modern empiricism and his rejection of Hume's (nominalist) position within that tradition. So the intuitive language of ontological dependence was *ubiquitous* in the received tradition as the evolved (yet vague) medium of reference to relations of *necessitated conditional existence/occurrence* when Husserl and Meinong availed it in developing Brentano's intentionality concept at the end of the 19th Century.

But also at that time, a juxtaposition of historical circumstances darkened the immediate 20th Century prospects of the received tradition's intuitive modal language of ontological dependence. These circumstances included the mathematical development of a classical language of membership by Cantor, Frege, Zermelo *et al.*, Twardowski's influence on Lesniewski (who influenced Tarski), and Russell's attention to Frege and Meinong but not to Husserl's third *Logical Investigation* proposal that a precise language of ontological dependence be developed mathematically. Those are the topics of the remainder of this Chapter.

§3.   Dependence Ontology as The Path Not Taken out of Bagley Wood

In the spring and summer of 1905, Bertrand Russell traded Meinong's version of the Brentano School's modal language of *dependence-ontology* for a classical language of $\in$-ontology under mathematical development by Cantor, Frege, Zermelo *et al.*. Before realizing these modal and classical languages encode incommensurable ontologies, Russell flirted with the intentional objects of Meinong's view of truth as correspondence to a fact. In his April 1904 review of Meinong's Theory of Complexes and Assumptions, Russell commented tolerantly on Meinong's opinion that in the theory of judgment:

> It is necessary sharply to distinguish content and object: the content of a presentation exists when the presentation exists, but the object need not exist---it [the object] may be self-contradictory, it may be something which happens not to be a fact, such as a golden mountain,... or it may be something which did exist or will exist, but does not exist at present. What is called the existence of an object in presentation is really not existence at all: it may be called pseudo-existence [107: 24].

Russell's recognition of the *existential autonomy* of the content *vis-à-vis* the object of a judgment is tantamount to recognizing the content's *intentional* character. An ontological commitment to Brentano's ("in-existent") intentional contents [*meanings*] as well as to ("really existent") objects [*referents*] of judgments incurs the obligation to account for the *existential autonomy* of the content (sense) *vis-à-vis* the object (referent) of a judgment in a general account of intentionality like those Meinong, Husserl, *et al.* tried to formulate in the language of ontological dependence. Meinong called some intentional objects 'complexes' and 'objects of higher order', included amongst them relational and non-relational facts and pluralities, and referred to their relation to their constituents *via* the (ill-defined) Brentano School concept of *foundation*. Understanding foundation as a modal relation of "indispensable (i.e. *necessary*) presupposition," Russell commented:

> Among objects...some...have an intrinsic lack of independence; thus diversity, for example, can only be thought of in relation to differing terms. Such objects are based on others as indispensable presuppositions: Meinong calls them 'objects of higher order', and the presupposed objects he calls *inferiora*, in respect to which they (the objects of higher order) are *superiora.* An object which can have an *inferius* must have one; but an object which can have a *superius* need not have one. Not all objects of higher order are relations: four nuts, e.g. are such, for they presuppose each of the nuts. A melody, again, is such; and so is a red square, being compounded of a shape and a color.
>   The above instances make it fairly plain what class of objects Meinong has in view: they are relations, the complexes formed of terms related by a relation, and the kind of objects (which we may call plurals) of which numbers other than 0 and 1 can be asserted [107: 25].

Russell excluded Meinong's *plural objects* from consideration, but viewed the relation between each of the nuts and the plural whole

of four nuts as that of *membership*:

> With regard to plurals, which are supposed by our author to have some unity making them more than a mere collection, it is impossible to speak without entering upon the whole question of classes and numbers... [107: 27].

The *problems of plurals and plural unity* to which Russell here refers are topical *infra*; dependence-ontology views the *unity* of the *superius* as a result of its *unilateral founding by* (and not *the membership of*) its *inferiora*. Meinong's meanings were expressed in a language of foundation and escaped Russell's attempt to reformulate them in a language of membership because *founder* and *member* are primitive concepts of ontologies which are incommensurate accounts of the meaning of the term 'object'.

   Russell's April 1904 preference for the mathematical clarity of Zermelo's ∈-ontological language and Peano's notation was reasonable, and influenced his rejection of the concept of ontological dependence as both vague and incommensurate with the emerging mathematical version of classical logic. He viewed ontological dependence as *logical priority*, which he viewed as entailment and (ultimately) *material implication*:

> ...the *inferiora* are in some way [logically] prior to their *superius*. Now logical priority is a very obscure notion; and so far as can be seen at present, it is one which a careful discussion tends to destroy. For it depends upon the assumption that one true proposition may be implied by another true proposition, and not the other by the one; whereas, according to symbolic logic, there is a mutual implication of any two true propositions. The appearance of one-sided implication in such cases arises, it would seem, from an unconscious substitution of formal for material implication. Thus it would result that the subsistence or being of a whole cannot presuppose that of its parts in any sense in which that of the parts does not presuppose that of the whole [107: 25].

   I love Russell's passion for clarity, but here its price is too high; relations of unilateral dependence of some parts relative to their wholes number amongst the eight types of ontological dependence distinguished *infra*. Russell's view of ontological dependence as *entailment* is too restrictive; it is a relation between objects generally (not just between propositions). Second, the reduction of entailment to *material* implication also leaves Russell's