

**A PRECIS OF THE LOGICAL STRUCTURE OF
CONCEPTUAL COHERENCE 3.0 ¹**

05/04/16 – A. K. Bierman

Abstract: *Conceptual logic is the ur-logic, the **basement** logic that underwrites alethic logic and truth value. This new logic introduces ^{^coherence^} values, ^{^coherent^} and ^{^incoherent^}. Use them to evaluate **propositions**, which are interpretations of sentences, whereas use alethic logic's truth value terms, ^{^true^} and ^{^false^}, to evaluate **statements**. Both logics sanction the entitlement value **unknown** for judgments of propositions' coherence and of statements' truth values. The concept of ^{^coherence^} can't be fully understood without knowing at least some conceptual logic, which this "Precis" supplies. It is the philosophical logic par excellence starting with Plato.*

*Coherence value and truth value are not reducible one to the other. Pure logic and mathematics have only coherence value; they lack truth value, because the terms of their formulae are variables. Only after world's substantives and tropes are **emplaced** in or **assigned to** the variables, do their formulae have truth value. Conceptual logic has **leutic modality** functor operations: [Enjoined to (say)], [Enjoined not to (say)], [Allowed to (say)], and [Not allowed (to say)]. These via attiva functors differ from alethic logic's via passiva Necessary, Impossible, Possible.*

For increased precision in philosophical discourse, I expand our armory of quotation marks. Any expression between **slash** quotation marks, /.../, /sentence/ and /word/,

¹ Wherever there is a difference in symbolism or claims between those in this essay and earlier ones, take this essay as canonical. I call this essay a "Precis" because it is a brief version of *The Logical Structure of Conceptual Coherence 3.0* that I earlier called "Conceptual Logic 3.0" that preceded this essay. Substitute for the first name the new second name wherever the former occurs in this "Precis". Reading "Precis" will prepare you for reading *3.0*, although you may not fully understand parts of this shortened version of it without help from Appendix III at the end of this essay, pp. 51 – 60. In that Appendix, you may start to orient yourself to this new logic. In *3.0* I also provide technical details that are central to this logic and its theories of coherence and truth. The speed of uptake depends on readers' philosophical backgrounds and logical skills. I give you explanations and examples that put you at the same level as accomplished alethic logicians who may be as much, or more at sea, as you on first encountering the first new expansions since Plato's partial initiation of it. After that, Aristotle started logic in the unwavering direction of alethic/truth logic. Who enters here need not despair: 'Tis *Paradiso*, not *Inferno*. See <http://philosophy.sfsu.edu/philosophy/page/arthur-bierman>. Access is easier if you enter by typing: sfsu arthur bierman.

Appendix I, a Table of Contents, is on p.51 of this essay. It lists paginated sections where this essay's diverse topics, technical terms, and explanations are located.

Appendix II, p. 51, contains the Entitlement Chart from "On Emplacing", p. 43, where I proved, pp. 55 – 86, that the chart fully explains the relations between coherence and truth value entitlements that govern our epistemological judgments.

Appendix III, pp. 53 – 62, replicates pages 1 – 9 of in *The Logical Structure of Conceptual Coherence 3.0*, formerly "Conceptual Logic 3.0". Substitute herein the former wherever the latter title occurs. There brief historical notes cite works supportive of this enterprise, which I gratefully acknowledge. I thank the banyan tree at the University of Hawaii, Honolulu, for the benevolent insight I received under its generous branches. I hope it still flourishes to the benefit of others.

is a physical token—inscribed, spoken, signed, Any expression between **caret** marks, **^...^**, is a concept or a proposition. Concepts and propositions are interpretations, token *rewrites*, of a word or a sentence token, respectively. Statement tokens use propositions and reside between **angles**, **<...>**; they carry truth status claims implicitly or explicitly.

/Sentence/ → ^proposition^ → <statement> are distinct, ordered token expressions.

Since /hot/ has several interpretations/rewrites (^boiling^, ^stolen^, ^fast^, ^popular^ ...), we may have to rewrite /The car is hot/ to identify the proposition we intend—^The car is *stolen*^. We make statements only with coherent companion proposition tokens. Incoherent propositions deprive their companion statements of truth value. Because ^The blueberries are dreaming^ is incoherent, it deprives us of coherently claiming it has any truth value. This is one reason why I claim conceptual logic is the basement logic of alethic logic. Conceptual logic is the study of valid inferences between concepts and propositions, a necessary prelude to exercising any alethic logic, including valid inferences between statements.

Plato's *Sophist* [218 - 234] contains part of coherence logic, which is the more fit logic for philosophy. See his model exploration of the conceptual subsumption structure for the concept ^angler^ that he used to identify the concept ^sophist^, akin to what are now called 'expert systems'. Plato was a conceptual logician. His splendid beginning was smothered in the crib by Aristotle, who favored science and truth value and gave precedence to alethic syllogistic inference schemas over Plato's coherence inference schemas; he deviated; he had other fish to descry. He fostered the contemporary alethic pursuit of axiom systems—Barbara and transformation inferences—for a logic suitable for sciences, but of scant use to philosophers who want to comprehend the coherent relations between concepts in and between propositions rather than the 'truth' relations between 'statements'. Socrates asked for definitions of words, /knowledge/, /justice/, /piety/; he wanted to be given other words to which, say, /knowledge/, was bonded, not examples of it. Statements aren't words, so, they don't have 'definitions'. Alethic logic is of limited use for conceptual investigators; conceptual logic has deep correctives for alethic investigators. Regardless of Frege, Russell and Whitehead's formidable alethic logical skills, they led us astray. <1 + 1 = 2> is not a statement with alethic value. It's a proposition ^1 + 1 = 2^ with coherence value. Aristotle alone is not at fault; the guilty make a very long line-up at philosophical check points, including the perennially admired logicians listed above as well as Goedel, Tarski, Quine, Curry, and their adept allies.

This précis contains conceptual logic's well-formed expressions with variables and with emplacements in them. Valid inference forms are introduced in *The Logical Structure of Conceptual Coherence 3.0*. Here, for each of the seven **functor interpretations of the English copulas, to be** and **to have**, and for conceptual

negation, [~], I supply and illustrate at least one valid inference form whose conclusion, negated or not, features each one of the eight functors (starts. p. 26).

FUNCTORS

[Subsume, /] [Bond, :] [Conger, :+] [Assign/Emplace, **E...E** @ /.../
[Identify, =] [Link, *] [Sooth, .] [Counter/Incompatible, !]

These functors are act **advisories**; we use them to advise each other on the routes to take if we want to travel coherently with others on the same paths between concepts in lexical/conceptual space, and if we want to construct coherent propositions in tandem with our fellow speech travelers.

When we speak, listen, or read, we travel in conceptual/lexical space, we *use* language in the *via attiva* mode. Each of these seven functors, and the conceptual negation functor, [~], furnishes different but complementary ways to converge on and identify a concept's unique place in conceptual space. On the other hand, when we talk and think *about* them, *report* our travels, we're in the *via passiva* mode. This is a major distinction; it dissolves ancient, fruitless controversies--the validity of oblique discourse is an example--many of which arise from logicians speaking in the *via passiva* tongue.

Functors are syncategorematic; with them we advise each other on which of our eight functors' routes we propose they may coherently travel between substantive/substantive, trope/trope, and substantive/trope concepts in lexical space. I prefer the metaphor of travelling in lexical space as the way to combine these different kinds of concepts into coherent, unary propositions vs. the chemical composition metaphor favored by the prevailing analytic schools.

Travel is more apt for our *via attiva* conceptual activity than being told sentences' meaning is *composed* of its terms' meanings; the composing metaphor is a Haggis theory of sentence meaning. Concepts and coherent routes between them are relatively stable in lexical space but none are exempt from erasure and replacement. We add new concepts and assign each to its own unique place all the time, deliberately as well as unconsciously. This requires altering our advisories for coherent travel in lexical space. Think of the classification changes in biology since the discovery and mapping of DNA that superseded morphologically based travel paths between concepts. And compare humans' gender classifications that have gone from binary ^male/female^ to some fifty options provided by Facebook.

Sentences, Propositions, Statements

I distinguish **sentence** tokens from **proposition** tokens; the latter are *rewrite tokens*, 'in-other-words' tokens. Rewrite tokens are more familiar to Italian and French speakers than to English speakers. When they ask for the 'meaning' of an expression, they often use the equivalent of our in-other-words: Volere dire, in Italian, vouloir dire,

in French: /What do you want to say/. These auditors' expressions tell the speaker to say what she wants to say in other words; they want rewrites, not 'meanings'. Tokens rule.

Proposition rewrites may be similar or different from the sentences of which they are rewrites. ^My horse is dead^ is a similar rewrite token of /My horse is dead/. ^My car is fast^ is a different rewrite token of /My car is hot/. Because most sentences have several interpretations, we need propositions to identify the one intended in order to avoid ambiguity and misunderstandings. Sentences and propositions are grammatical or ungrammatical. Propositions are **coherent** or **incoherent**, because with them we commit to a specified walk in lexical space. In case an auditor doesn't ask for the 'meaning', she implicitly grants that any rewrite would be similar to the original sentence, or she knows from the context of discourse which rewrite is intended. A rewrite informs her which path in lexical space the speaker wanted her to take.

I distinguish **sentences** from **propositions** and propositions from **statements**.

Statements manifest a proposition + a via attiva claim about persons commitment to a statement's **true**, **false**, or **unknown** truth value. Frege signaled a via passive true, inferred claim with the turnstile symbol, [|--], in his *Begriffsschrift*. I use the angle bracket quotation device, <...>, to signal a via attiva *true/false/unknown* claim.

Neither coherence nor truth value are reducible one to the other. But coherence value is ur, the basement foundation, to truth value.

Without a coherent propositional rewrite of a sentence, you can't make an alethic value claim. <Cryptography is angry> is incoherent; so, it has no literal, alethic value.

I'm sparing in my use of examples and illustrations here, with a couple exceptions, because you may have read "On Emplacing" and/or *The Logical Structure of Conceptual Coherence 3.0*, or my account of conventional natural-kind concepts, or will at least scan one or the other if needed for relevant applications.

I provide some valid inference forms, beginning at p. 26, that occur also in *The Logical Structure of Conceptual Coherence 3.0*. I use /coherence logic/ and /conceptual logic/ interchangeably. (The late Laurence Goldstein pointed out that my logic is connexive; hence, it can't be axiomatized.) I'm outfitting a new ^coherence^ concept to add to our philosophical tools. It's logically independent of alethic logic's ^consistent^. /Coherence/ is a conceptual logic term that should not be interpreted/rewritten as alethic logic's ^consistent^. ^Consistent^ holds between statements, ^coherent^ between concepts in and between propositions. See validity pp. 50 – 52 for Coherence Tables' test of conceptual inferences' validity, akin to Wittgensteins's Truth Tables for alethic inferences.

In my essays on conceptual logic, I most want to give a precise, full, clear, useable concept of ^coherence^; it's the fulcrum of conceptual logic with its ^coherent/incoherent^ proposition values versus traditional alethic logic with its ^true/false^ statement values. I'm using decades of linguistic work to provide a different and more useful logic for philosophy that we may employ to address its conceptual tangles and disputes. Conceptual logic should be taught to philosophy students in place of alethic logic. To roughly

orient yourself to the pair ^coherent/incoherent^, think of earlier approximations: ^meaningful/absurd^, ^makes sense/is nonsense^. There are other vague variations on this worn theme. See my introduction to *The Logical Structure of Conceptual Coherence 3.0*, included here as Appendix III, p, 55ff.

A valid **conceptual inference** has at least one
 propositional premise and perforce a propositional conclusion,
 each of whose copulas is one of the seven lexical functors,
 whose constituent concepts may be located within the lexical structure of a
 language, and
 whose conclusion is evaluated as coherent or incoherent.

Think of these conditions as a [Congery, :+] for ^valid conceptual inference^.

Both conceptual and alethic inferences are considered valid if they have the same form as inferences informed native speakers judge valid. Most 'native' speakers have no grasp of ^valid^; their acquiescence to claims of an inference's validity are usually manifested by silence in deference to a doughty rhetorician; oft their challenges to its validity betray their logical ignorance. Yet, logic rests finally on shared acceptance of at least one or more inferences. Aristotelian logic rests on a shared judgment that the Barbara syllogism and several immediate transformational inferences are valid, whether their acceptance is explicitly or implicitly expressed or goes silently unchallenged. Don't search outside linguistic commonalities for grounds of validity; stick with inference forms that are widely accepted or unchallenged by native speakers until a resident logician proves it's a mistake. Going anywhere outside shared validity judgments leaves contesting parties without common logical practices for reaching rational agreement.

If contending parties don't share validity judgments, they can't *reason* to the same conclusions, although they may be persuaded or cowed into agreeing to propositions' coherence or statements' truth value. But, neither of these rhetorical modes of getting others to agree with us is reasoning to an agreement. This shared requirement applies also to a system's axioms. Axiomatic systems are linear; their theorems' proofs go back eventually to the axiom(s), which are the beginning of the inferential line. You can't 'prove' axioms as you do theorems drawn from them. If you could, such so-called axioms wouldn't be axioms, they'd be theorems. ^Theorem^ and ^axiom^ are conceptually incompatible; theorems are derived by inference, axioms are not. Obviously that's why it's incoherent to claim axioms have logical proof as theorems do. They rest finally on commonality, not 'intuited truth', because communication is a cooperative venture.

Where do we go from here? Well, unless you hug intuition as Goedel did, there are no alternative grounds for acceptance of an axiom or the validity of an inference outside shared consent to them. Get used to the communal via attiva logical world. This doesn't entail you can't reason about ^valid^ inferences and 'true' axioms^. For example, if a conceptual inference is claimed to be valid, but entails incoherent conclusions from coherent premises, that's a good reason to declare the inference form is invalid. Recog-

nizing ^incoherent conclusions^ is just knowing the coherent conceptual/lexical structure of a language and its emplacements. That's the bottom line, folks.

We've witnessed an enormous, inconclusive literature on axioms 'truth'. What a waste. Wittgenstein, too, lost his way on truth in his *Tractatus*. He held that tautologies have truth value—"a tautology is true unconditionally" (4.461)--although tautologies "say nothing" (4.461). "Tautologies and contradictions are not pictures of reality. They present no possible facts" (4.462)². One of these two allegations is incoherent. By his lights, statements can't have truth value without being 'satisfied' by 'facts' or 'states of affair's'. So, 'true' tautologies and 'false' contradictions are subject to the 'fact' mandate. Yet, Wittgenstein tells us they say nothing; they aren't pictures of "reality", of 'facts' and 'states of affairs'. Hence, he wrote incoherently when he affirmed tautologies and contradictories have truth value.

He gaffed twice. (i) He didn't distinguish **pure** systems whose formulas' constituents are variables, ^Q or ~Q^, and have only coherence value versus '**applied**' formulas with world emplacements. Both <Your cat's sick> or <Your cat's not sick> are coherent and both have truth value, T or F. (ii) His second gaffe was not distinguishing the conjunctive formulas ^Q & ~Q^ from the separate propositional formulas ^Q^ and ^~Q^. The conjunction is an incoherent 'contradiction' and the separate pair of formulas are not. Had he made this distinction, he could have said the contradictory <Q & ~Q>—and the tautology formula, <Q or ~Q>—have no truth value, because, being pure formulas, they "say nothing".

(CO) ^^[Sooth, .] S P^ [&] ^[Sooth, .] S ~P^^.³

Pairs of contradictory or contrary propositional formulas, as in the (CO) form, are coherent if both incompatible trope concepts, ^P^ and ^~P^, are in the same link range ^{^P^ ^~P^}, and neither is bonded to ^S^, as ^red^ is bonded to ^ruby/gem^. Being free of bondage, both may be coherently soothed of the same substantive concept, as in

(COc) ^^[Sooth, .] cherry bitter^ [&] ^[Sooth, .] cherry ~bitter/sweet^^.

Each proposition in this conjunction is coherent. Neither is bonded to ^cherry^; so both ^bitter^ and ^sweet^ are free; hence, both may be coherently soothed of ^cherry^. This entails the conjunction (COc), too, is coherent. Although ^red^ and ^green^ are in the same link color range, {red green yellow ...}, ^green^ and ^yellow^ are not free to be soothed of ^ruby (stone)^, because ^red^ is bonded to ^ruby^. The [Bond, :] functor blocks the freedom of coherently soothing ^green^ and ^yellow^ of ^gem/ruby^.

When we take such statement tautologies and contradictories as

(COo) <<[Sooth, .] cherry bitter> [Or] <[Sooth, .] cherry ~bitter/sweet>>>,

(COa) <<[Sooth, .] cherry bitter> [&] <[Sooth, .] cherry ~bitter/sweet>>>,

² Daniel Kolak's translation; Mountain View, CA, Mayfield Publishing Company, 1998.

³ (CO) is short for the [Counter] functor, listed on p. 2. A concept ^C^ is via attiva countered by conceptually negating it, ^~C^, that makes the concepts [Incompatible, !]. The results are similar when we counter propositions.

out of alethic logic's domain and transfer them to conceptual logic as I did in (COc), necessarily 'true' tautologies' and impossibly 'true' contradictories' are no longer an endlessly contentious issues worth the price of admission to *The Logical Structure of Conceptual Coherence 3.0*.

The coherence of (L)'s ^{^taste^} range,

(L) ^{^[Link, *]} cherry {bitter sweet salty sour ...}[^]

is needed to entail the coherence of (COc)'s *sooth* propositions. Down the road in my exposition of valid conceptual inferences, I provide a valid inference that shows [Link]'s role in this entailment.⁴

Both conjunct propositions in (COc) are coherent under the free condition, unlike alethic contradictory statements in (COa); *not both* of its conjuncts are true. This proves ^{^coherent^} is not reducible to ^{^true^} and vice versa. *Two* coherent propositions are not identical to *one* true statement; **2** (coherent propositions) \neq **1** (true statement).

With (COc), we're in the domain of concepts and propositions, ^{^...^}; we *sooth* a trope concept of a substantive concept. We're heading toward the determination of propositions' *coherence value*. This differs from the domain of alethic statements and assignments/emplacements in whose domain, *if we assign/emplace substantives* into token sentences' subjects and tropes into their predicates, we're heading toward a determination of statements' *truth value*. With statements, we *predicate/sooth* emplaced tropes of statements' emplaced substantives, the porters of tropes.

It seems marvelous yet mysterious to some that our physical and chemical formulas 'fit reality'. The mystery is now solved. If the assignments/emplacements are coherent, the world '*fits*' into our conceptual/lexical structure, not vice versa. "Not vice versa", as in "our words' *refer* to the world's constituents". Emplacing's direction is correct, referring has it backward; ^{^refer^} misdescribes the relation between language and the world. In the emplacement process, via conceptual propositions, **we construct** the 'facts' that determine the truth value of statements. Facts aren't pre-packaged entities; the non-linguistic world has no logic; being outside our languages, it has, for example no negation, hence, nature presents itself nude of true and false value. Facts come into being only after we've established propositional coherence.

<This cherry is sweet> is coherent, and true, if you coherently emplace a cherry in /cherry/ and if that cherry coherently carries a sweet trope into /sweet/; then you can boast: <I've *made* this sweet-cherry fact>. Every day, every hour, almost every minute

⁴ I believe that no concepts, {odd even}, in coherent link arithmetical/mathematical ranges are free, because all are bonded coherently to a substantive: ^{^[Bond] 1 odd^} and ^{^[Bond] 2 even^}. These bondings could be the implicit conceptual source of the conviction that mathematical 'statements' are necessarily true, unlike empirical statements. This opens the gate for the a priori Trojan Horse, because realism about numbers and other mathematical substantives is fantastical in comparison with assigned/emplaced empirical substantives and tropes. Alice feels alien in a priori Wonderland. Numbers as substantives pass muster more plausibly than ^{^odd^} and ^{^even^} tropes/properties. If there were no free tropes in logic or mathematics, there would be no reason for despair, because we would see their token expressions wearing the raiment of regal coherence instead of the tattered rags of truth.

you construct facts. If, instead, the cherry carries a sour taste into /sweet/, <This cherry is sweet> is false per the inference below. You have not constructed a ‘sweet-cherry’ fact.

Following Plato, I’ve shown that a statement’s falsity may be inferred if the inference contains an incompatible proposition, as in the second premise below.

<[.] This cherry is sour>	True sooth statement
^[!] sour ~sour/sweet^	Conceptually incompatible concepts

<<[.] This cherry is sweet>> False sooth statement

Bid happy farewell to Parmenides who’s said to have said that we can’t make false statements. Plato was the first to disprove his bold supposed claim: False statements can be validly inferred from true ones with the aid of a conceptually incompatible trope.

Although [Sooth] and [Predicate] differ, they’re also interestingly similar. Coherent [Sooth] assignments/emplacements are the truth makers for statements. Coherent assignments/emplacements of physical substantives and tropes turn them into concepts in the same way that marks on paper or stone become words: Sounds riding the air become concepts because emplacements assign them a place in conceptual space. This is what gives any languages’ lexical tokens their status as concept-freighted words. This is one of the most important consequences of a structuralist account of concepts, which is why I said “interestingly similar” above.

It’s difficult for the well-trained alethic philosopher to grasp that the coherently emplaced rooster, ^Erooster @ /rooster/, whose crow greets the dawn, can be a concept as its red trope, ^Ered @ /red/, can be. Alethic values don’t exist without statements’ coherence values; they lean on coherent assignments/emplacements of substantives and tropes. Accounts of statements’ truth value based on their *representation of* or *correspondence to* pre-packaged facts or states of affairs sail on windless seas. ^X represents ^Y and ^X corresponds to ^Y require two separate entities; a representation is one thing, what it represents is another. [Emplace/Assign] is monistic, not dualistic; a sentence with an emplaced substantive and a trope *is* a fact, not a representation of one. Nor does a statement correspond to a fact; it *is* the fact. Putting world constituents inside languages’ sentences with logically ordered terms creates **one** entity, not an incoherent duo.

My account of [Predicate] versus [Sooth] distinguishes them. We commonly say “we predicate a property of a subject “. But now, *inn neue speake*, we say “we sooth a trope of a substantive”. This is possible because assigned/emplaced substantives and tropes are given places in lexical space, which transforms them into nominal concepts. This is a consequence of treating ‘meaning’/‘concept’ as a structural phenomenon. That’s why I’ve symbolized predicative statements with a [Sooth] (In sooth, Sire) functor in earlier essays. Substantives in coherent sooth propositions and statements ‘carry’ a trope into coherent predicate places: ^{E(.)}black @ /black/. Substantives appear twice in sooth propositions and statements, once in the subject and again in the predicate, (.), as a porter of EblackE:

^[Sooth, .] **E.E** @ /dot/ [&] **E(.)blackE** @ /black/.

This modest proposition frees us from centuries of puzzlement about the copula's role in 'gluing' subjects and predicates together to make a unified proposition/statement. No mental or sticky copula is needed. We distinguish substantives from tropes, treat tropes conceptually as tropes **of a** substantive. We travel in lexical space from **^dot^** to **^black^** analogous to the way we travel in world space from San Francisco to Berkeley; so, just as we took *one unified trip* from one city to the other, so we took *one unified trip* in lexical space from one concept to the other. The reward for taking that conceptual trip--if the path is a coherent one, one in which the substantive carries a black trope into /black/--is that you're licensed to count that propositional trip as a *unified one*. This, of course, entails <<The dot is black> is true>. But, <The dot is red> is an incoherent path; the black dot, **E.E**, doesn't coherently carry **EredE** into /black/. It's an incoherent trip; because it's riven, S+P~, unlike <The dog is black>, S+P+, it's not unified.

In sum: There's no truth or falsity without coherence value, it's a necessary condition for truth value. [Sooth] statements' truth values sail under the flag of coherence.

Replacing the Compositional with the Travel Metaphor in Conceptual Space to Account for the Unity of Propositions

In *The Logical Structure of Conceptual Coherence 3.0*, I treat **concepts nominalistically**: Concepts are **lexical tokens** that occupy unique places in **lexical space** in relation to other tokens. By travelling on functor paths in lexical space from one concept to another, we strew propositions in our wake, whether coherent or incoherent. If enjoined or allowed functor paths between a proposition's concepts exist, the proposition is coherent; if you're [Enjoined not to] = [Not allowed to] travel on a proposed conceptual pathway, it's incoherent. /Pigs are birds/ has no coherent interpretation, because there's no coherent [Subsume] functor path between /pig/ and /bird/; so, **^[Subsume] pig bird^** is incoherent, whereas **^[Subsume] animal pig^** is coherent. We can use valid conceptual inference forms to chart coherent pathways in conceptual space. The concepts **^coherent/incoherent^** are logically disciplined; so, they're a more mature pair than such embryonic pairs as **^meaningful/meaningless^**, **^sensical/nonsensical^**.

I reject the **compositional metaphor** of 'meaning': With word-1 meaning + word-2 meaning, we compose sentence-1 meaning. I'm surprised at its long life, given its implausibility. Perhaps composition folks cling to it, because they cite from a narrow selection of the very large number of different kinds of definitions in Saint Webster's book of definitions. It's probably time to look carefully at your semantic Saint's book to discover that other forms of definitions exist outside the confines of the hoary "bachelor" means

“unmarried” “male”. These folks have a lot to answer for.⁵

Do meanings meld together so that Two word meanings = One sentence meaning? How is it logically possible that Two word meanings = One sentence meaning? Tell me in detail. How can Two become One? Are we in a “Jesus-Superstar Meanings” theological musical? Do different functors differ in how they meld words’ meanings into sentences’ meaning? Does \wedge [Subsume, /] plant hibiscus \wedge meld differently from \wedge [Sooth, .] hibiscus blooming \wedge ? If they do, how do they do it differently? Which one and why?

Some theorists have claimed words get their meaning in the context of sentences in which they appear. Frege was an advocate of this. And how about a ‘decomposition’ account? Can we decompose, that is, **analyze** propositions’ meanings into their component words’ meanings? No, that’s bad, too; the same problem pops up: We can no more go from One proposition meaning = Two words’ meanings than we could go from Two words meanings = One proposition meaning. Both melding and demelding suffer from the logical \wedge Two \wedge \neq \wedge One \wedge obstacle.

The deeper trouble here is deficient ontology. ‘Meaning’ is treated as a nominalized substantive whose existence is disjoint from its tokens’ physical existence. What God hath put asunder, man may not reyoke. Composition and decomposition theorists start on the wrong foot as Augustine did, which Wittgenstein rightly lampooned at the beginning of his *Investigations*. Augustine may very well be the stand-in for W. himself trying to shake the shame of having once been equally guilty of a composition account of ‘meaning’ even while proclaiming he subscribed to Frege’s primacy of sentence meaning to word meaning in his *Tractatus*, 2.01231ff.

I prefer the metaphor of authorized journeys between concepts and coherent propositions in lexical space via functor paths over the Haggis composition metaphor. No melding needed, only coherent via attiva travel between spoken and written lexical tokens rather than capitulating to mysterious meldings of two in-the-head concepts into a one in-the-head proposition. It’s clear we must continue to bear arms with Frege against psychologism in logic without succumbing to his dubious view that so-called ‘objective’, but incoherent, *unthought thoughts* underwrite accounts of shared ‘sense’, inferential systems, and truth evaluations. We often disappoint Gottlob, because we often travel between concepts in conceptual space on incompatible [Sooth] functor paths. A fetus is a person-- \wedge [Subsume] person fetus \wedge ? I intend and hope that conceptual logic, one of its civic virtue’s, will help us resolve our conceptual conflicts and reach agreements on the structure of conceptual/lexical space. We can more easily construct freely, rationally a

⁵ Here’s a piece of conceptual business that needs attention. You’ll find that looking in *Webster’s* or other dictionaries that their definitions may be interpreted with the eight functors of my conceptual logic: “judo a form of jujitsu developed as a sport and as a means of self-defense without the use of weapons”. We have \wedge [Subsume] jujitsu judo \wedge , \wedge [Subsume] sport judo \wedge , and \wedge [Bond] \wedge judo \sim weapons \wedge . These three functors have the modality [Enjoined to]. Together they comprise the [Congery] of \wedge judo \wedge . The explanations of these functors and their modalities begin on p. 12. You can return here after you’ve digested them.

program for a human community at conceptual peace, if we share a corrective conceptual logic *and exercise it*. Alethic logic isn't up to this task. The time has come for conceptual logic to replace alethic logic as the one to be required and taught in the philosophy curriculum, because philosopher's job since Plato is to investigate concepts and build conceptual consensus.

Concepts are lexical tokens within the structure of conceptual space. That's why I describe my logic as a **structuralist** account of concepts. In the following quotation from Charles Parson, I substitute */concepts/* for */mathematical objects/*.

The idea behind the 'structuralist view' of (mathematical objects/*concepts*) is that (such objects/*concepts*) have no more of a 'nature' than is given by the basic relations of a structure to which they belong."⁶

Conceptual/lexical space is a multi-dimensional structure we construct with functors. Each functor leutically enjoins or allows different lexical conditions for the coherence of propositions in which the tokens are terms. Lexical concepts have no more 'nature' than what is given them by their functors.

When we travel publicly in lexical space, our speech will be heard and our script seen by others. If we travel on coherent, similar functor paths between identical categorical concepts we end up in the same place in lexical space; if we travel on different paths we won't end up on the same concept in lexical space; hence, won't understand each other, although we often don't know we don't understand each other. We may not realize this until further down the line. I say <This car is hot>. You put your hand on the hood and reply, <Nonsense>. It's as cold as the way Aunt Maud treats suitors.>. You didn't understand what I said, because you wandered off to ^temperature^ territory while I'd hiked to the ^hot/stolen property^ county; those counties' subsumption pathways for concepts are incompatible, [!], which is why their tokens have different meanings.

Advice: It's not helpful to use the traditional ^intensional^ to describe my conceptual logic. My logic supplants that alogical concept.

Symbols for Components of Subject-Predicate /Sentences/, ^Propositions^, <Statements>

This is the first new kind of logic since Aristotle, except for Plato's partial venture in his *Sophist* noted above; hence, it needs additional, new symbols. Although they're bantam barriers to being read and acquired, young philosophers developing careers are reluctant to learn and master a new logic, as Robin Assali, my friend and co-author in another undertaking, warned me. But a new kind of logic needs new logical constants; it's unavoidable. It needs new symbols for new functors/'logical constants', new grammar, new conditions for ^coherence^ and ^truth^ evaluations, new grounds for valid inferences.

⁶ Charles Parson, "Structuralism and Metaphysics"; *The Philosophical Quarterly*; Vol. 54, No 214, January 2004.

- S - Substantive concepts of objects, events, processes, acts are eligible for S emplacements.
- P - Trope concepts are emplacement candidates into/P/ tokens. ‘Relations’ are not tropes; they’re ordering functors we use to order terms in 2term+ propositions: /Jill hit Jack/ vs. /Jack hit Jill/.
- [F] - Binary functors are interpretations of the copula, *advisories* for conceptual travel in the via attiva mode, a *report* in the via passiva mode. There is one conceptual monary functor, [Negate, ~], and seven binary functors if we count [Assign] and [Emplace] as one as I do.
- C - Categorematic, lexical concepts are resident in propositions and statements with subject and predicate terms. Each concept has a unique place in lexical space.

Here, I do not present 2+-Terms ‘relational’ sentences, propositions, or statements as in /Gus stole hats/ versus /Hats stole Gus/. I made suggestions for 2+ Terms ‘relational’ sentences in *The Logical Structure of Conceptual Coherence 3.0* and en-large on those notes in “Relations”, currently under development. When it’s ready, it will appear on my website.

New and Old Quotation Marks and What’s Between Them

- /.../ A token word or sentence, a physical entity (seen, heard, felt, ...).
- “...” A type word or sentence; any physical token, /hot/, coherently emplaceable into a type, “hot” and its equivalents. Seldom used.
- ^...^ An interpretation/*rewrite*. A concept is a word’s interpretation; a proposition is a sentence’s interpretation. Interpretations are similar or dissimilar token *rewrites* of words and sentence tokens.
- <...> A truth value affirmation or denial of a statement after a sentence token has been interpreted as a proposition/*rewrite* that’s used to make the statement.
- E...E A substantive may be emplaced in a subject token; a trope may be emplaced in a predicate token: ^E...E @ /.../^.
- [...] Braces distinguish functors from concepts, sentences, propositions, statements. [Assign] and [Emplace] are functors; so are [Subsume], [Link], [Negate] and [Enjoined to].
- {C1...Cn} A link *range* of incompatible concepts subsumed by an adjacent concept. A subsuming concept is adjacent if it does not subsume any concepts intermediate between it and concepts in the range. ^Red^ is adjacent to ^{scarlet crimson coral ...}^.

[A1...An] A *conger* is a *range* of trope concepts bonded to a substantive concept: \wedge [Conger, :+] bird [feathered beaked ...] \wedge . Many congered concepts have shifted from morphemic to genomic concepts in the life sciences. A conger takes the place of ‘necessary properties’.

Functor Symbols

Monary Functor

[~] Conceptually negating a *proposition* alters its coherence value. \wedge Non- \wedge is the closest English negation to [~]. It’s a mainstay of many expositors of Aristotelian logic, often illustrated in the Square of Opposition to establish contariety between A and E statements. By negating concepts, we turn them into incompatible, [!], concepts, as in \wedge [!] \sim fresh {rotten wilted old ...} \wedge .

[~] [**Counter**, ~]: [Counter] is a monary via attiva functor we use to make a pair of concepts, \wedge red \wedge versus \wedge \sim red \wedge , incompatible, [!], and to make propositions, such as (P1) abd (P2), incompatible.

(P1) \wedge [Bond, :] building tower tropes \wedge

(P2) \wedge [Bond, :] building \sim tower tropes \wedge .

If a concept in a proposition, P2, is countered by [~]--*except* for an [Allowed] [Sooth, .] proposition—P2 and uncountered P1 will be **incompatible**. This entails not both are coherent.⁷

Countering concepts has either of two outcomes; they may be contraries or contradictions. The latter are the lower limit (2) of contraries. Dead \wedge and \wedge alive \wedge have only each other as contraries, so, they’re contradictories, whereas \wedge blue \wedge is a contrary of \wedge red \wedge , since \wedge blue \wedge has many incompatible color concepts: \wedge [Subsume, /] \sim blue {green yellow ... } \wedge .

[~] Via attiva alethic negation of a statement is used to deny a statement’s acclaimed truth value, whether it’s acclaimed T or F. With \langle [-] \langle The barn is red $\rangle\rangle$, we deny $\langle\langle$ The barn is red \rangle is true \rangle . Compared to [~], [-]’s use is limited to sooth/predication statements, [Sooth, .] and not to those that feature the other six functors, except in [-]’s via passive mode.

⁷ (P1) \wedge [Bond, :] building tower tropes \wedge & (P2) \wedge [Bond, :] building \sim tower tropes \wedge are incompatible, !. (P2) is a conceptual via attiva *denial of proposition* (P1) that \wedge building \wedge is bonded to \wedge tower tropes \wedge . But (P2) is *incoherent*, because \wedge building \wedge is bonded to \wedge tower tropes \wedge in English. So, (P2) the denial, \langle [Bond, :] building \sim tower tropes \rangle , is false; because (P1) and (P2) are incompatible entails not both are coherent and because incoherent propositions have no truth value.

Binary Functors

- [/] **[Subsume, /]** With this binary functor we subsume a less general substantive or trope concept under a more general one; $\wedge\wedge\text{Crime}\wedge$ subsumes $\wedge\text{rape}\wedge\wedge$, $\wedge\wedge\text{hot}\wedge$ subsumes $\wedge 212^{\circ}\wedge\wedge$. This functor is asymmetrical.
- [@] **[Assign]** or **[Emplace]** a substantive in the place held open by an /S/ token, or a trope in the place held open by a /P/ token. The functor [@] is an advisory. Emplaced substantives and tropes reside at ground zero on subsumption pathways; they subsume nothing. Individual substantives reside at the bottom of subsumption pathways; they are their own haecceity; each bears tropes that are numerically non-identical with others', because tropes being temporally and/or spatially individuated with their bearer, can't be identical to another's substantive's tropes. The red trope of WC Field's nose isn't *identical* to the red of my mother's Uncle Pitz's nose even though their reds are *similar*.⁸

This holds because any trope, say red, that is coherently emplaceable in /red/ is coherently emplaceable also into the property "red". The property may exist in many places at many times; it's individuated differently from tropes and, so, doesn't yield their bearer's haecceity; it yields quiddity. This haecceity notion appears in a "Bizarro" cartoon. A man puts out his hand to another and says, "Hello. We're the Hendersons. You must be the non-Hendersons." (Dan Piraro, 07/12/2010).

All lexical token concepts have a unique place in lexical space. Substantive concepts, for example, inherit all the differentiating functor congerly, [:+] relations of its subsuming concepts.

$\wedge\text{Porky}\wedge$ inherits its subsuming $\wedge\text{pig}\wedge$ and $\text{Duroc}\wedge$'s tropes:

$\wedge\text{Porky}$ is a $\text{pig}\wedge = \wedge[\text{Subsume}] \text{pig} \text{Porky}\wedge$;

$\wedge\text{Porky}$ is a $\text{Duroc}\wedge = \wedge[\text{Subsume}] \text{Duroc} \text{Porky}\wedge$.

Although Porky and Porco are from the same litter, subsumed by these same concepts, they have diverse haecceities, because each occupies its own, diverse place in lexical space as a unique *this/haecceitas* ground zero emplacement at the bottom of a subsumption pathway. Assume

$\wedge\text{eporky}\wedge @ / \text{Porky} / \wedge \ \& \ \text{E}(\text{porky})\text{zfat}\wedge @ / \text{fat} / \wedge$

is coherent; then its corresponding statement is true, but Porko is still out there amongst the litter, a distinct *this/haecceitas* that we can emplace in a similar proposition. Further, Porco may coherently carry a lean trope into /lean/. "Porky was

⁸ Uncle Pitz Zessin owned several farms in Nebraska. The income from of one of them was dedicated to his brandy diet. He adjusted to droughts by using money from other farms.

the fat pig/Porco was the lean./While Porky waddled through the straw/Porco skipped t' *keep* his lean."

European royalty solved *haecceitas*' demands with numerals added to ensure their piglets each had truly proper names: Henry VII was the lean king/Number VIII the gross one. Numerical counts, Roman or Arabic, do us honor and preserve the *haecceitas* of each of us with royalty's proper name device. Think of /Reginald Tobias Flint III/, not a royale l'homme. Rigid designation is an over-complicated address to *haecceitas* that needlessly wapped a hornet's nest. It had been easily solved by royal houses and proud families' affixed numerical solution.

- [:] We [Bond] substantive ^S^ to trope ^P^ concepts. ^[Bond, :] humans mamals^. Trope concepts are complicit in the concept of a kind|sort of a substantive as [Conger, :+] requires. [Bond, :] and [Conger, :+] are leutically enjoined functors.
- [:+] We construct congeries of tropes to distinguish one *kind* of substantive (plant vs. insect) from another, including determinable different kinds of substantives (object vs. event). **Beware:** [Conger] differs from [Define]; [Define] is not a conceptual logic functor. More below. Essentialists, ancient and current, were/are ignorant of the congerie functor. They didn't/don't have the fuller *via attiva* functor advisories at hand that I've identified. Most lack de jure grounds that give congerie propositions their coherence. Without them, they have no means to distinguish essential from contingent properties. They can't predict that a property will be true of a substantive in all possible worlds, particularly in an evolving world in which lexical systems, too, are in flux. They rely on definitions to identify abiding 'essential' properties, confusing definitional conceptions of substantives in all 'possible' worlds with our empirically experienced substantives we use in the non-virtual world in which we live.
- 'Rigid designation' theorists want historical depth; individuation should have been discussed with haecceity in mind, which can't be captured without a conceptual logic that *gives individual substantives and tropes conceptual status in lexical space via assignment/emplacement* at the bottom of subsumption pathways. Philosophers wedded to alethic logic alone can establish only quiddity, because essential definitions don't yield individuation. Further, emplaced substantives carry their haecceity into lexical space that serve better logically than their slimmer verbalized definite descriptions.
- [=] [**Identify**]: To identify concepts we travel between words' interpretations/rewrites. If a word token and its proffered interpretation/rewrite occupy the

same place in lexical space, they're identical concepts. ^Stolen^ and ^fast^ are coherent rewrites of ^hot^, but, since they're in different counties in lexical space, they're not identical.

I prefer /rewrite/ to /interpretation/; it's nominalistic, physically concrete. ^Interpretation^ is tainted with psychic traits irrelevant to conceptual identity itself, although not to what goes on under our skulls.. Most words are multivocal; /hot/ tokens reside in several different places in lexical space. Rewrites block the ambiguities in discourse that multivocality causes. I addressed the identity of assigned/emplaced concepts of substantives and tropes in detail in *The Logical Structure of Conceptual Coherence 3.0*, and in "Assignments and Varieties of Emplacements". See my website.

Both ^[.] car stolen^ and ^[.] car popular^ are non-identical coherent rewrites of /[.] car hot/. These propositions are incompatible, since ^popular^ and ^stolen^ are subsumed on different, hence, incompatible, subsumption pathways.

[Identity] holds only between concepts that are grammatically similar--subjects|S-substantive concepts, and predicates|P-trope concepts. [Identity, =] holds between propositions whose S and P concepts are, respectively, identical, whether they're tokens are similar or dissimilar.

- [*] [**Link**, *]: A substantive concept is *linked* to a range of incompatible concepts, ^[*] S {C1...Cn}^, that are leutically allowed to be soothed coherently to one and the same substantive concept from this, until now, elusive functor. ^Rose^ is linked coherently to {red yellow pink ...}.

- [.] [**Sooth**, .]: [Sooth] is a via attiva propositional advisory for travelling coherently between S and P concepts in lexical space. This coherence logic is via attiva oriented. [Sooth] is the only functor in this system that equips us to make true/false statements based on coherent *non*-lexical emplacements, and assignments ^E...E @ /.../^, in sentences' SP terms. This licenses us to infer validly from a true via passiva alethic statement, <Socrates died of drinking hemlock>, to the coherence of the proposition ^[.] Socrates died-of-drinking-hemlock^. I call this a **siring** inference: Truth *sires* coherent.

[**Any**] is the only quantifier functor in my system. It excludes [All] and [Some], the dominant quantifiers in alethic logics. This frees us from [All]'s urge to give classes and sets 'real' ontological status, yet, doesn't deprive us of [All]'s generality. It also blocks [Some] whose role is to indicate a partial selection from classes' members and their existence. When [All] is bereft of its class forming ontological powers, [Some] finds no air in [All]'s vacuum. Nominalism gains the

advantage over set Realism by rescuing [Any] from the neglect of logicians. Russell flirted with [Any] at the beginning of his *Principles of Mathematics*, Sections 86 – 90. They're painful to read, because he's still thinking of classes as substantives, gives preference to a logic of classes over a logic of concepts, fails to distinguish concepts from functors (note his search for the 'meaning' of quantifiers), ensnared in the web of via passive presentations of eternal logic rather than appreciating it as an evolving product of humans' via attiva enterprises. He's disappointingly via passive and ontologically realistic for classes there. Usually, [Any] is implicitly assumed in my symbolization rather than explicitly written. For more on [Any], see my "Two Squares of Opposition" on my website.

Conceptual Logic's Grammar

I use the standard via passive functors to present conceptual logic's grammar.

$\wedge C^\wedge$ ^concept^, $\wedge S^\wedge$ ^substantive concept^, and $\wedge P^\wedge$ ^trope concept^ are variables for concepts. The well-formed concepts, WFC, and propositions, WFP, with their functor and concept variables, below, are not themselves concepts or propositions, but their variables. We get concepts when tokens have a unique location in lexical space, and when substantives, and tropes are coherently emplaced in those tokens within that structured space.

Well-formed Concepts - WFC

$\wedge C^\wedge$ $\wedge \sim C^\wedge$
 $\wedge S^\wedge$ $\wedge \sim S^\wedge$
 $\wedge P^\wedge$ $\wedge \sim P^\wedge$

Well-formed Propositions - WFP

$\wedge [F] \wedge S1^\wedge \wedge S2^\wedge \wedge \sim [F] \wedge S1^\wedge \wedge S2^\wedge$
 $\wedge [F] \wedge P1^\wedge \wedge P2^\wedge \wedge \sim [F] \wedge P1^\wedge \wedge P2^\wedge$
 $\wedge [F] \wedge S^\wedge \wedge P^\wedge \wedge \sim [F] \wedge S^\wedge \wedge P^\wedge$

When the context allows, I usually drop carets around the concepts in propositions: $\wedge [F] S1 S2^\wedge$ and $\wedge [F] S P^\wedge$. [F] is a variable for functors; it holds a place for copula functors, such as [Subsume, /]; negation, [~]; the quantifier [Any]; and leutic modals, [I]/[Enjoined to say], [I~]/[Enjoined not to say], [A]/[Allowed to say] and [Any~]/[Not allowed to say] or its equivalent, [I~]/[Enjoined not to say].

Emplacement [@]

EsE [@] /S/
EtE @/P/

I usually drop the brackets from [@]. Look left.

EsE @ /S/ & E(s)tE @ /P/ This is an assignment or emplacement into a sentence token; /&/ indicates there are emplacements into both the subject and the predicate of the sentence. (s) indicates it's the carrier of a trope into, /P/.

Assignment and emplacement are ways of subsuming objects, acts, events, processes and their tropes under concepts, giving them a place in a systemic conceptual system in a language; once in a place known to us we discursively **cognize** kinds of substantives, kinds of tropes, and individual substantives and tropes, Alexa and her red hair trope.

This eliminates the intension/extension dualism in our monistically physical world. There are no "flights of angels" to lift us out of this world into a gauzy other. The /(s)/ in /E(s)t E @ /P// indicates the substantive emplaced in /S/ carries, E(s)tE, a trope into the token /P/ as we move the substantive, EsE, from its emplacement in /S/ to the /P/ emplacement site, which indicates it's purportedly **carrying** the trope emplaced into /P/. However, an EsE may not carry a trope coherently emplaceable into /P/. Dull boys often incoherently think EboyE carries a EdulleE trope into /bright/.⁹

I have noted in other essays, the 180° turn in the direction of the [Emplace] functor's operational direction, World → Word, from the standard [Refer]'s direction Word → World. This change drops radically different consequences on analytically oriented philosophy. To learn what and why they are, I recommend you consult "The Advent of Conceptual Logic: Extending Kant's Copernican Revolution" on my website. For further remarks on this topic, see my account of the [Identity, =] functor coming up.

Counter, [~] (propositions)

Countering uses [~] in via attiva to affirm or deny the coherence of a proposition or a statement. A statement is incoherent, if its resident proposition is incoherent. The denial may be contradictory or contrary. Either denies the proposition is coherent as in ^[Subsume, /] will ~desire^, ^[Sooth, .] prayer ~risible^. Contradictions, {alive ~alive/dead}, are contraries with just two trope concepts within a range of incompatible concepts. (See p. 13f, this essay) Propositions are contradictory or contrary, depending on whether their predicate concepts' range contains 2 or 2+ incompatible concepts; ^[Link, *] sauce {sweet salty garlicky ...}^ has a range of 2+; so, that range's concepts are contraries. ^[Allowed] [.] sauce salty^ is contrary to ^[Allowed] [.] sauce sweet^. Discount the coherence of the title "Hidden Caves of the Living Dead"; ^Living^ or ^Dead^ are contradictories; the title is incoherent on its face.

Identity, [=]

[=] S1 S2 [=] P1 P2 Two S or two P tokens have one and the same interpretation if they occupy one and the same place in lexical space; they're identical concepts.

⁹ In my essay on "More on Leutic Modalities", this is expanded in the last part to propositions with 2+ terms, which are often described as 'relational' sentences. My essay on relational sentences may be finished at the end of 2017.

The process for determining that two similar or differing tokens have one and the same interpretation is complex; it goes beyond vaguely synonymous. The forms of valid inferences, coming later, will convey this better than any description. You cannot give an adequate account of concepts' nor propositions' identity without conceptual logic's valid inferences. All former attempts to explain conceptual identity known to me without such a logic are hopelessly inadequate. They have no algorithm for locating them in a unique place in conceptual space, which is the only place they reside.¹⁰ Many attempts at algorithms are embarrassingly repetitive, no matter how ingenious their Ptolemaic technical contortions are. They feast off the same cant. Their theories rely predominately on althetic logic's 'truths' to ground their accounts of concepts' identities rather than on conceptual logic's coherence. Claims of tokens' synonymy purport to state a relation between lexical items, but we need logical algorithms to justify *why* they're synonymous.

[=] Prop1 Prop2 If two propositions have the same functor and if their grammatically matching concepts are identical per above, the propositions are identical.

Well-formed propositions with [/], [!], or [=] functors, discussed above, must have terms of the *same grammatical category*, both are SS or both are PP. The terms of propositions using the other five functors, explained next, belong to different grammatical categories, SP, that harbor, respectively, substantive and trope concepts.

The many obituaries of Hilary Putnam (died March 13, 2016) mention his Twin Earth thought experiment. ("The Meaning of Meaning", 1975) Our world and its Twin are exactly alike, including two Oscars, except that the chemical makeup of Earth's and its Twin's water differ, although all other features of the two liquids' properties and functions are similar, and go by the same name, /water/. But when Earth/Oscar refers to 'water' and Twin/Oscar refers to 'water', they're referring to different entities. That's why /water/ doesn't 'mean' the same on Earth as on Twin, although the content of their thoughts are the same. Putnam concludes, "meaning ain't in the head" alone; part of it's in the world *outside* our head. He's right, but that story's too short: He thought it's because of the causal connection between the world's items and their effect on our sensory system; that's part of the story. We get a better understanding of outside/inside our heads with the emplacement account of the relation between World and Word, both of which are outside our head: We coherently emplace substantives and tropes outside our head into words' lexical tokens, also outside our head, into tokens unique places in a structured conceptual space that we carry inside our heads. This saves a lot of ink arguing about Kant's tortured account of how to relate our concepts to the world.

Yet, Putnam kept to [Refer]'s direction, Word \rightarrow World, in his discussion. Here's a possible explanation for his lost advance. The Twin Earth story is a variation of Frege's

¹⁰ I've used "lexical space" throughout my essays. I could have used the more accurate "lexical space-time", because concepts are lost and replaced through time. ^Space^ by itself suggests that concepts exist in a static structure. That's too 'Newtonian'. Keep this in mind, although I drop the awkward /space-time/. The many functor readings of the copula give us a logical means to converge from their different lexical paths onto a unique place in lexical space-time.

story about the Morning and the Evening Star, once thought to be two different stars. Later, astronomers traced the path from Morning to Evening Star. It was continuous; so, it's one and the same star, which satisfies my account of [Identity], above. But, Frege didn't draw Putnam's conclusion that some of a word's 'meaning' is outside the head. Instead, it led him to divide 'meaning' into sense/reference parts. He kept to traditional [Refer]'s Word → World direction, supported by the related traditional connotative/denotative, intension/extension distinctions. Frege's mathematical logicism held sway during Putnam's career; as far as I know, he didn't challenge Frege's unfortunate conclusion. He stopped at the causal connections to justify his 'meaning externalism' and didn't proceed to the next step, viz., emplacement. The caused sensory data of substantives and tropes are clues that enable us to emplace them into conceptual space, where, thereupon, we acquire the conceptual logical information needed to formulate discursive knowledge that unemplaced substantive and trope sensory data by themselves don't provide.

Putnam and Frege should have adopted [Emplace]: If coherently emplaced substantives and tropes are given a place subsumed by a token word in lexical space, according to the structuralist account of 'meaning', the sense/reference distinction is swept away. They're both 'meanings' of the same kind. A vast lexical/conceptual space accommodates emplaced world's substantives and tropes; its buried logic provides the required tools for saying about a [Sooth, .] statement, <S>, <I know S>, <I know not-S>, and <I don't know S or not-S>. Epistemology fares well under [Emplace]'s direction, World → Word, not so well under [Refer]'s direction, Word → World.

Functors of Propositions with S and P Terms

Bondage [:] S P

^[:] S P^ is coherent if any substantive coherently emplaceble into /S/ is **enjoined** to carry a selected trope coherently into /P/, as in ^[Bond, :] whale mammalian^. A "selected" trope is one or more chosen from a range of tropes linked to a substantive concept: ^[*] whale {mammalian gray warm-blooded breathes-air ...}^. Don't bond all of a substantive's tropes to it; you have to select which ones to bond. Justify your choices on **de jure grounds**--more useful, better logical connections to new information, and so forth. (The other grounds for coherence are **de dicto** and **de facto**; see *The Logical Structure of Conceptual Coherence 3.0*, Part 5.) Bonding a trope concept to a substantive concept entails you're *enjoining* any interlocutor to predicate it, say, of ^whale^. But we're not enjoined to bond every concept from a substantive's link range to that substantive concept. ^[Bond, :] whale gray^ is incoherent, because the assumed de facto truth of <[Sooth, .] Moby Dick white^ would show you're leutically allowed to sooth white of whales, and because leutic de facto [Allowed] trumps de dicto grounds. De jure opens the gates to normative assessments of scientific classifications and any 'useful' epistemological garnerings from it.

We're also enjoined not to emplace any substantive into, say, [^]bird[^], if it doesn't bear [^]bird[^]'s congerity tropes such as [^]winged[^], [^]feathered[^], and [^]beaked[^].

^{^^}Ewhale^E @ /bird/[^] & [^]E(whale)snouted^E @ /beaked/^{^^}

is incoherent, because [^]bird[^]'s congerity includes [^]beaked[^] and a snout is no beak; so, a whale isn't classifiable as a bird. [^]Wounded[^] isn't bonded to [^]bird[^]; it's not been chosen as a complicit concept in [^]bird[^]'s congerity. Taxonomists don't use it as a trope to distinguish [^]bird[^] from other animals; it would be conceptual folly to think of wounded pigs as birds just because they're wounded. If pigs could fly, they'd be Guardian Angels. So, [^][Bond, :] budgie wounded[^] is best proclaimed incoherent.

Some contend that the alethic claim <Every act is determined> entails <No act is freely-willed>. They do not explicitly acknowledge this entailment owes its acclaimed validity to the *conceptual* incompatibility of ^{^^}freely-willed[^] and [^]~freely-willed/determined^{^^}, because they're too deeply rooted in *alethic* 'inconsistency'. No one who doesn't distinguish between conceptual [~] and alethic [-] negations can know this.

Let's get it straight. If [^][Bond, :] act determined[^] is coherent, we're not free to infer from [^][Link, *] act {freely-willed determined}[^] that [^][Sooth, .] act freely-willed[^] is coherent. Nor may we infer [^][Sooth, .] act determined[^] if [^][Bond, :] act freely-willed[^] is coherent. The first [^]determined[^] bonding would leutically prohibit [^][Allowed] [^][Sooth] act freely-willed[^]; the second [^]freely-willed[^] bonding would leutically prohibit [^][Sooth] act determined[^]. This denies compatibilists can coherently think they can have it both ways. But they and the anti-compatibilists have to show which bonding is coherent, if either is. Philosophy's getting harder, but simpler.

[^][Bond, :] act freely-chosened[^] or [^][Bond, :] act determined[^]

are coherent or incoherent. It's a conceptual problem, Tom, please give us some conceptual inferences to show which, if either, is coherent. Big order, but you're a resourceful guy. It's time for this issue to be resolved. Notice: Both propositions above are leutically bonded. Alethic logicians can't take account of that, because their evaluations are confined to truth value and alethic modalities; they have no logical resources to evaluate statements' coherence except by the shop-worn, logically unanchored [^]essential property[^] concept, Aristotle's first account of Real definitions as opposed to subordinate Nominal definitions.

Congery [:+] S [A1 ... An]

[^][A1 ... An][^] is a congerity of a substantive kind's **complicit** attributive trope concepts for propositions with a [:+] functor. A congerity is a conjunction of trope concepts each of which is bonded to the same substantive concept. Each conjunct concept in a congerity resides on a different subsumption pathway in lexical space from the others; so, each complicit trope is selected from a different linked range of concepts. The trope concepts, [^]wish-bone form[^] and [^]thigh-form[^], in [^]chicken[^] part's congerity range of tropes differ. So do [^]trousers[^]'s [^]waist[^] link range tropes differ in inches [^]{... 36 42 ...}[^].

Selection of tropes from linked ranges to be included in a congerie of substantive concepts distinguishes sorts of substantives without resort to the grammatical trick of nominalizing the subject into classes or sets: A wish-boned class of substantives. Using the functor [Any] versus [All] preserves us from that distorted fate.

Determinables (i) of empirical trope concepts (visible, audible, tactile, ...) reign at the top of subsumption pathways; (ii) they're *incompatible* with each other but may be coherently bonded to one and the same substantive concepts of its different parts or aspects (as Plato distinguished the periphery from the center of the spinning top); (iii) any **determinate** trope concept subsumed by a bonded determinable trope *may be* bonded coherently to one and the same substantive as the determinable is.

^^[:] bird colored^ --} ^[Link, *} bird {red yellow blue ...^. The coherent link proposition in turn entails, ^[Allowed, .] bird red yellow blue ...^, because ^colored^ and its range of color tropes are on the same subsumption pathway. We may de jure pick ^yellow^ from this range to be included in the congerie for ^canary^, a determinate subsumed by its determinable ^bird^.

Traditionally, determinable trope concepts have been used to distinguish ontologically distinct *kinds* of top-dog substantives, such as mind and matter; think of Descartes' ^extended ~thinking^ versus ^~extended thinking^ substantives in his *Meditations*, and of space versus time orderings. Traditional alethic logicians often confuse congeries' complicit *concepts* with *essential properties*, aping ancient natural scientists' taxonomic groupings relying on de re grounds alone. Property tropes become concepts only after they're coherently emplaced in a lexical token with a unique place in conceptual space: ^EgreenE @ /green/^. ^Essential^ property is logically useful only if it's interpreted as an entry in a congerie of bonded tropes. Rene' didn't fully escape Aristotle's limited notion of a conceptual system.

We use congeries to distinguish concepts of substantives, such as ^rose^ versus ^orchid^, ^chicken^ versus ^beef^. A congerie reflects which of the many tropes every substantive carries that are chosen to be bonded to it. I embrace *non-arbitrary*, conceptual conventionalism; there are de jure reasons for the conventions we choose. Choices need not be random, arbitrary, or mindless. See "Stipulating and Conceiving Natural Kind Concepts" on my website.

Link [*] S {P1... Pn}

^{P1...Pn}^ is a range of incompatible trope concepts occurring in propositions with the [Link, *} functor. We use [Link] to perform the logical task of identifying coherent sooth propositions and statements. Intuitively, we use it when we recognize that ^The nail is hard^ is coherent and ^The nail is negligent^ is incoherent. ^Hard^ is in a range linked to ^nail^ via ^iron^, ^negligent^ is not. [Link, *} is important because we

can use it to answer Wittgenstein's *Tractatus* questions: "What may we say and not say?", "What are the limits of language?" [Link] draws leutically [Allowed] limits.

In his discussion of measurement as representation, Bas Van Fraassen notes the use of what is my [Link] functor: "I submit the following generalization as the proper concept of a measurement operation: measurement is an operation that locates an item (already classified as in the domain of a given theory) in a logical space (provided by the theory to represent a range of possible states or characteristics of such items). *Measurement is an act—performed in accordance with certain operational rules—of locating an item in a logical space.*"¹¹ His "logical space" is my "lexical space", and his "range of possible states" are ranges of link concepts, $\wedge\{\dots\}^{\wedge}$, such as $\wedge\text{shoe-size}^{\wedge}$: $\wedge[\text{Link}, *] \text{shoe-size} \{8\ 12 \dots n\}^{\wedge}$.

Soothage, [.] S P

If the sooth functor sentence, */Hemingway was hungry for fame/*, has a coherent propositional interpretation/rewrite, $\wedge\text{Hemingway wanted fame}^{\wedge}$, you can verify $\langle\text{Hemingway wanted fame}\rangle$ is coherent and true, if you can produce a coherent assignment into it, such as an authentic quotation from a Hemingway letter, "What I want above all is fame". Note, an assignment is not an emplacement. Emplacement requires that Hemingway himself be emplaced coherently, **EhemingwayE** @ */Hemingway/*. He's not a letter.

Functors for Complex Propositions

Conjunction, [&] Prop 1 [&] Prop 2

Disjunction [or, v] Prop 1 [or, v] Prop 2 (Inclusive or exclusive)

It's important to note that **both** conjuncts of sooth propositions and statements with contradictory or contrary trope concepts are *coherent* but only **one** conjunct of such statements is *true*. Both $\wedge[.] \text{David Hume happy}^{\wedge}$ and $\wedge[.] \text{David Hume } \sim\text{happy}^{\wedge}$ are coherent any time; but not both are true at the same time. This is why neither conceptual nor alethic logic is reducible to the other. It's also why conceptual, the basement logic, has priority over alethic logic. No coherent propositions, no true or false statements.

Entails [--] Prop 1 Prop 2

Read [--] in the via passiva as [**Entails, --**]. One or more conceptual premises may *entail* conceptual conclusions. In the via activa mode, read [--] as an advisory to $\wedge[\text{Infer, --}] \wedge\text{Prop 2}^{\wedge}$ from $\wedge\text{Prop 1}^{\wedge}$. $\wedge\text{Persons infer}^{\wedge}$ and $\wedge\text{Propositions entail}^{\wedge}$ are coherent; $\wedge\text{Persons entail}^{\wedge}$, $\wedge\text{Propositions infer}^{\wedge}$ are incoherent. Keep this distinction between via activa and via passiva in mind also in the discussion with the next functor I explain, [Mutually Entails].

My [Entails] is close to C. I. Lewis's strict implication, far from material impli-

¹¹ Bas Van Fraassen, pp. 164-5, *Scientific Representation*, Oxford, Oxford University Press, 2008.

cation. It differs, however, from Lewis's, because leutic modalities (p. 26) qualify *functorial acts* per the Lexical Imperative.¹² Lewis replaces material implication with strict implication and qualifies statements with *via passiva* alethic modalities (Necessary, Possible, Impossible). His intensional logic proffers an alternative extensional logic, a compromised intensional logic just as a possible-worlds account of alethic modalities does. Lewis, like W. Sellars and R. Brandom, offered an example of an intensional relation, *^Today is Monday, so tomorrow is Tuesday^* but none has offered a logic thereof.

^Coherence value^ is conceptual logic's prime evaluation; alethic logic's prime is *^truth value^*. Coherence value of propositions is governed by the coherence value of the seven copula functors and conceptual negation, [~], that empower us to put the world's substantives and tropes into our lexical systems and to combine their concepts coherently in our propositions. Since neither truth nor coherence logic may be reduced to the other, we need not surrender the primacy of conceptual coherence value to alethic truth value. Conceptual logic's coherence value is the cognitive *ur* value. An incoherent 'statement' has no truth value while any coherent statement may be true or false.

Mutual Equivalence, (ME), [{}--] Prop 1 Prop 2

I use [{}--] to indicate mutually valid inferences to propositions' equivalent coherence value, also familiar as an alethic transformation or immediate inference:

(ME) *^{}--^* *^.[.] Tina {indifferent or unkind or hostile or abusive}^* &
^.[.] Tina mean^^^.

The coherence of one of the alternative propositions in (ME)'s first proposition entails the coherence of the second, because *^mean^* is a determinable that subsumes a linked range of the several incompatible determinate concepts: *^[Link, *] Tina {indifferent unkind hostile abusive, ... }^*. Determinable and determinant concepts aren't identical; so, valid inferences between a determinable and two different determinates don't entail the two determinate propositions are conceptually identical. For example, both (ME') and (ME'')'s propositions,

(ME') *^{}--^* *^.[.] Tina's hostile^* *^.[.] she's mean^^*

(ME'') *^{}--^* *^.[.] Tina's abusive^* *^.[.] she's mean^^*,

have inferentially equivalent coherence value. But (ME') and (ME'') aren't coherent rewrites of each other, because *^hostile^* and *^abusive^* are determinate, incompatible concepts in a range subsumed under the determinable *^mean^*.

We're treading now into what in common parlance is *^nuance^*. Since *^mean^* subsumes incompatible concepts, it can't be identical with any concept in that range. We are mean to each other in many ways. Our moral judgments of others often neglect these conceptual distinctions, which breed a lot of needless controversies that aren't explicitly

¹² A short version of the Lexical Imperative is: If you wish to be understood by persons who travel within a lexical system, travel only on their coherent enjoined and allowed *via activa* paths in their conceptual system. Heidegger violated this Imperative very often. See *The Logical Structure of Conceptual Coherence 3.0*, p. 136, on my website.

resolvable without gleaning ‘nuanced’ distinctions within the requirements of conceptual logic’s rich structure.

Another kind of nuance with which we acknowledge that mutually valid inferences from one proposition to another don’t entail the identity of their interpretations/rewrites is shown by

(M*) $\wedge[\sim=] \wedge[\text{Sooth, .}] \text{Tina's mean} \wedge \wedge[\text{Sooth, .}] \text{Tina's } \sim\text{unkind}$ [^],
is a cautious, double-negated way of saying she’s not *totally* mean. We allow that not every concept in the range of concepts subsumed by $\wedge\text{mean}$ [^] is coherently soothable of her. She may be studiously indifferent or dubiously hostile to others, but she doesn’t abuse them. Conceptual logic offers resources to help us heed, explain, and respect nuances in our empirical and our moral functorial soothing pronouncements.

Soothing is leutically allowed travel between $\wedge\text{S}$ [^] and $\wedge\text{P}$ [^] and between $\wedge\text{S}$ [^] and $\wedge\sim\text{P}$ [^] concepts we can take after we’ve coherently assigned/emplaced substantives and tropes into eithers’ lexical terms.

Leutic Modalities

Leutic modalities convey lexical travel advice to agents. In conceptual logic, I dispense with the alethic modalities—necessary, impossible, possible—and replace them with *via attiva* leutic modalities: [*Enjoins us to say*], [*Enjoins us not to say*], [*Allows us to say*]. With them we advise our interlocutors, and they us, to travel on so and so paths between SSs, PPs, and SsPs. I adopt **travel** in lexical space as a metaphor friendlier toward a *via attiva* approach our studies of language and its logics than is the compositional, part-whole metaphor. They’re different ways to limn how we make propositions out of a combination of concepts; the travel metaphor invites a role for functors to advise us how to travel coherently between concepts in lexical space in our proposition-making adventures. This is an advantage over the composition metaphor: Without *via attiva* speakers speaking and writing—Saussure’s *la parole*--there would be no *via passive*--his *la langue*--that linguistic scavengers seek in the midden of speakers’ spoken and written to reveal the underlying conceptual structure of a language system. For a reference to the motivation of leutic modalities, revisit the short Lexical Imperative footnote 12, p. 24. The leutic modal advisories are:

[I] [Enjoined to] travel from one concept to another in lexical space per this routing advice: $\wedge[\text{Subsume, /}] \text{soil loam}$ [^].

[I~] [Enjoined not to] travel from one concept to another in lexical space per this routing advice: $\wedge\sim[\text{Subsume, /}] \text{soil wind}$ [^].

[A] [Allowed to] travel from one concept to another per this routing advice: $\wedge[.] \text{soil wet} \wedge \wedge[.] \text{soil } \sim\text{wet/dry}$ [^].

Note that [Subsume] is a *via attiva* functor, advising an act, which differs from [Subsumes], with the /s/ is the *via passive*, reporting past acts or predicted future ones.

Leutic Transformations

Leutic transformations are similar to standard alethic and deontic transformations, all being done by moving negation across modal symbols. I use [~] rather than [-] for leutic transformations; similar transformations apply to both.

[A]	=	[~I~]	You're allowed to	=	you're not enjoined not to
[A~]	=	[~I]	You're allowed not to	=	you're not enjoined to
[~A]	=	[I~]	You're not allowed to	=	you're enjoined not to
[~A~]	=	[I]	You're not allowed not to	=	you're enjoined to

Some Inference Schemas

These valid inference schemas are grouped by their conclusions' functors. Here I drop square brackets around functors. I include some transformation schemas. Horizontal lines separate premises from conclusions. Double lines, ==, indicate mutual entailment inferences.

It's important to understand that the coherent routes between concepts isn't a simple one-one route. We use an assemblage of routes, like the maps we may use to travel to Detroit from Chicago. The more routes we have converging on Detroit, the more ways we can get to Detroit in physical space. Analogically, the more converging assemblage of functor routes that we can use to travel from one concept to others, say, from ^Jack^ to ^angry^, ^happy^, ^tall^, ^devious^, ^sober^, or ^free^, the more routes we have to travel coherently between these concepts' in their unique locations in lexical space.

Look on valid conceptual inference forms and combinations of them as **assemblages** of coherent routes this logic supplies. It uses our implicit, aconscious knowledge of the routes we use to travel in lexical space. We're incredibly adroit at constructing mostly coherent propositions. But if we disagree about a proposition's coherence, as philosophers typically do, we have to trace our differences with the use of lexical assemblages made explicit in our conceptual inferences.

I use different names for the different kinds of inferences we use to reason to valid conclusions. I use, for example, [!], for [Counter/Incompatible] conclusions, [/] for [Subsume] conclusions. These names use a functor followed by a numeral, !1, !2, ..., to distinguish variant inference forms we use to infer to conclusions with the same functor.

[!]			Counter/Incompatibility Inferences ¹³
!1	S ~S ----- ! S ~S	P ~P ----- ! P ~P	[!] is performed by negating a concept, $\sim C$; it may be either contradictory or contrary. Contradictory concepts are the lower limit of a contrary range, having only two rather than two+ contraries.
!2	/ C1 C2 ----- ~! C1 C2	/ C2 C1/ ----- ~! C2 C1	Both the left and the right inferences are valid; subsuming and subsumed concepts are not incompatible.
!3	~/ C1 C2 & ~/ C2 C1 ----- ! C1 C2		If neither of two SS or PP concepts subsumes the other, they're incompatible. They're on branching pathways or they have subsuming concepts somewhere in lexical space that are on branching pathways.
!4	{P1 P2} ----- ! P1 P2		A link range's concepts are incompatible. A range consists of concepts subsumed by a subsumptively <i>adjacent</i> concept; it's adjacent if no concept comes between the subsuming concept and the range. \wedge Colored \wedge is adjacent to {red green yellow ...}. \wedge Red \wedge subsumes scarlet \wedge ; so, \wedge colored \wedge isn't adjacent to \wedge scarlet \wedge but \wedge red \wedge is.

Here are some inference patterns with substantive and trope concepts. **!5** is very important. It proves that concepts in a range, {...}, are incompatible.

!5	/SO {S1 & S2} {S1 S2} : S1 P ~: S2 P ----- ! S1 S2	/vehicle {airplane train} {airplane train} : airplane winged ~: train winged ----- ! airplane train	Linked range subsumed by \wedge vehicle \wedge . Predicates bonded singly or in congeries distinguish kinds of objects from each other. All classifications require [Bond], [Link], [~], [Subsume]. This explains expert systems. See !8 .
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¹³ See pp. 115 – 117, in *The Logical Structure of Conceptual Coherence 3.0*, for the differences between range, inherited, and congerly incompatibilities. For full explanations of why propositions with a substantive subject and its congerly predicates are logically independent, hence, compatible even though their attributive concepts are incompatible, see the same essay, pp. 85 -92. Most simply they're not incompatible, because the subject is not the whole substantive, but different parts or aspects of it. Different parts and aspects of a whole subject are different sentence subjects, yielding different, logically independent propositions and statements. The center and periphery of a top are different parts/subjects. Thus, the center is at rest and the periphery is in motion are logically independent, as Plato taught us.

- !6** / P1 P2 or / P2 P1

 ~! P1 P2
- A similar inference holds also for Ss. Concepts in a subsumption relation are not incompatible.
- !7** ! C1 C2 ! animal plant
 / C1 Ca / animal dog

 !Ca C2 ! dog plant
- Subsumed concepts inherit the incompatibilities of their subsuming concepts. Cs may be either Ss or Ps.
- !8** :+ S1 P1 This shows the primacy of tropes' lexical relations over substantives'
 :+ S2 P2 relations. Concepts of kinds of substantives are identified by their
 ! P1 P2 congeries of trope concepts. If S1 and S2 have incompatible trope
 _____ concepts in their congeries, S1 and S2 are incompatible. They are
 ! S1 S2 different kinds/species. See !5.

Without conceptual logic, alethic logicians can't distinguish ^absurdity^ from ^incoherent^. They think that a set of statements that entails a contradiction, shows the absurdity of one of the set's statements. Contradictions cannot show a statement's ^absurdity^ as if identical to ^incoherent^. It does show the absurdity of a person who holds that a contradictory set of statements is consistent. ^Consistent^ is a truth value relation and coherent^ is a conceptual relation; they're incompatible, because they're on branching conceptual pathways, ^statement^ versus ^proposition^. This is why ^absurdity^ can't deliver a coherent judgment about conceptual ^coherence^/'meaning'—except when true statements *sire* coherent propositions.

Measured Tropes in Conceptual Space

Measurements provide finer grained contrary concepts for trope ranges. Because the number of contraries distinguishable with the use of thermometers, spectrographs, lasers, atom smashers, and other instruments exceed our body's discrimination capacities, they sharpen issues about conceptual vagueness and sorites' conundrums. How many hairs, % of them, must you have lost to be bald? What is the degree of ambient temperature for hot, for tepid? Is a male member long or not? Vagueness and attendant issues arise because we continue to use our non-numeric contraries--^bald^, ^hot^, ^long^--even though we could have adopted numeric contraries whose greater precision embarrasses our good old, hopelessly vague contraries. Yet these old contraries serve well enough for many rough and ready distinction purposes.

If we gave up our vague concepts and used only ordained quantified ones, there need not be vagueness nor sorites problems. Jason lost 25,000, 41 %, of the hairs from his head. Tepid ranges from 105° – 140°. His member erect is six inches long. Aren't

those numbers enough? But “Honey, you’re getting bald!” challenges vanity in a way “You lost 25,000 hairs” doesn’t. “Jeez, it’s hot” is too useful an opening conversationalist gambit, to yield to mere numbers, “So, it’s 99 degrees F. today.” And as to a male member’s length, “Oooh”, he may be able to use an “average” numeric length to reassure himself or to rouse him to find some compensating qualities that will buff him up. Perhaps many, if not most, vague concepts are good enough for most purposes to justify not giving them up. Who carries measuring instruments as they go about their daily business? As to vagueness of tropes themselves, let’s just say they are what they are, and we don’t always know where their de jure incompatibility cuts are, so let’s just ordain them.

If we’re going to keep using anumeric contraries and wish to avoid vague concepts when something is at stake, we should be prepared to make de jure decisions about numerically refined concepts. Don’t count on de dicto and de facto grounds, because they’re the problem, not the solution. Make a cut between one numeric contrary and another in order to rid yourself and me of vagueness; be ruthless, or, at least, imperial. What’s the difference between [^]tepid[^] and [^]hot[^]? It depends on what is de jure justifiable. Iron workers may decide {0° - 1,000° F} is tepid and {1,400° - 3,000° F} is hot. A chef might draw the line between [^]tepid[^], 100°, and [^]hot[^] at 140°. Parole boards assign a range of numbers to such factors as remorse, respect for rules, non-violence, ..., then add them up. Being eligible or not eligible for parole depends on the numeric score that the board members decide is the threshold for parole. If this sounds too ‘subjective’ for you, remind yourself that all conceptual decisions are but that [^]subjective[^] need not be [^]arbitrary[^]. We needn’t run from ourselves. We’re often in reasonable de jure charge, Sir.

[/]
Subsumption Inferences

/1 / P1 P2 Ss’ subsumptions have a similar inference form.
/ P2 P3
————— This proves subsumption is transitive, that’s why we may form
/ P1 P3 subsumption pathways, / P1 P2, / P2 P3, Pm...Pn.

We can always get a valid, negated conclusion by switching a valid conceptual inference’s premise with its conclusion and negating both, as **/2** switches **/1**:

/2 / P1 P2
~/ P1 P3
—————
~/ P2 P3 The first premise indicates that P1 and P2 are on the same subsumption pathway; the second premise indicates that P1 and P3 are on different, incompatible pathways; therefore, P2 is on a different, incompatible pathway from P3. Ss have a similar inference form

/3 ! P1 P2 The double lines indicate a mutual entailment. See p. 24, [{}].

=====

~/ P1 ~P2 If two concepts are incompatible, they're on diverging subsumption
 ~/ ~P2 P1 pathways, which is the visual simulacrum of the incoherence of ^P^
 subsuming ^~P^ and vice versa. Similarly for Ss.

[E] Assignment/Emplacement Inferences¹⁴

The short way to understand this kind of inference is to break down my usual way of symbolizing Assign/Emplace propositions, ^^EsE @ /S/^ & ^E(s)pE @ /P/^, into its two conjuncts, which are the first two premises below.

E1 ^EsE @ /S/^ Assume coherent emplacement of EsE;
 ^E(s)pE @ /P/^ /(s)p/ indicates the substantive, E(s)E
 carries the EpE trope into /P/.

^^EsE @ /S/ & E(s)pE @ /P/^ By conjunction. Evidence for a sooth prop-
 osition's coherence and its sooth state-
 ment's truth.¹⁵

^[Sooth .] S P^ Coherent proposition conclusion

< [Sooth .] S P> True statement conclusion

E1 encapsulates the **coherence account of truth value**. It's a major inference in my conceptual logic. It differs from the correspondence account. I've proved that account is incoherent. Briefly, facts have no logical functors, sentences do; so, it's incoherent to say there's a correspondence between ^facts/states-of-affairs^ and ^sentences/propositions/statements^. Sentences are bonded to logic functors, 'facts' are not; so, ^logical propositions^ and ^alogical facts^ are incompatible.

What follows describes the roles these basal conceptual inferences play to prove coherence logic is the basement logic for truth, starting with **E1**'s coherent emplacement premises. Earlier I pointed out that coherent emplacements of substantives and tropes in sentences entail the coherence of their interpreted propositions, and entail the truth of propositions' correlative statements about lexical states of affairs.

Terminology: A **conceptual inference** has at least one conceptual premise and a conceptual conclusion.

¹⁴ For elaborations on [Emplace], see "Assignments & Varieties of Emplacement" on my website.

¹⁵ If ^EcherryE @ /cherry/ & E(cherry)redE @ /red/^ is coherent, <The cherry is red> is true.

Here we turn in the other direction, inferences from truth to coherence. True or false *sooth* statements about non-lexical states of affairs directly **sire** coherent *sooth* propositions, and, subsequently, **sire** coherent link propositions per the following hypothetical syllogism inference form.

Suppose that either one of the disjunct antecedents in E2 below is true.

$$\begin{array}{l} \mathbf{E2} \quad \langle .S P \rangle \text{ or } \langle .S \sim P \rangle \text{ --} \} \wedge .S P \wedge \ \& \ \wedge .S \sim P \wedge \\ \quad \wedge .S P \wedge \ \& \ \wedge .S \sim P \wedge \text{ --} \} \wedge * S \{P \sim P\} \wedge \\ \hline \langle .S P \rangle \text{ or } \langle .S \sim P \rangle \text{ --} \} \wedge * S \{P \sim P\} \wedge .^{16} \end{array}$$

True *sooth* statements are an interface between the non-lexical and lexical parts of the world. They are what early logical positivists and purveyors of truth condition theories of meaning advocated but never sufficiently explained. Their's was but a sliver of an account of semantics and cognitive communication. It was unaware it needed to be amplified by the wider expanse of a conceptual/lexical logical system. They were right to ride that sliver, but fell short of a more capacious conceptual logic. Note: A false statement also **sires** its correlative proposition's coherence value.

[Assign/Emplace] is a species of subsumption that weans us from hoary [Refer], which flits somewhere between a concept and a functor in 20th Century analytic philosophy; it's role status in that school is unsettled. That's because analytic philosophers tilted back and forth between a *via activa* and a *via passiva* stance toward logics, between *via activa* ordinary language logic and mathematical logic's methods, but generally favoring the latter. Peter Strawson was a prominent, partial exception to the *via passiva* persuasion; he opened the door to presupposing humans activities in his. Whereas, his review of Dewey's *Logic: The Theory of Inquiry* (1938), Russell dismissed John Dewey's *via activa* up-take on logic as an aid to experimentally acquiring knowledge

Treat [Refer] as a functor; referring is something we do, just as much as when we [Assign/Emplace] substantives and tropes, hoisting them into language, conceding nothing to 'representation' as Wittgenstein conceived it in his *Tractatus*, 2.18.

"2.18 What any such picture, of any form, must have in common with reality to be capable of representing it the way it does—rightly or wrongly--is logical form, that is, the form of reality." (Daniel Kolak's translation, Mayfield Pub. Co., 1998.)

Wittgenstein didn't realize that [^]logical form of reality[^] is incoherent; only language has a logical form. First language, then the existence of facts, rather than vice versa. Nature hosts oppositions but not negations; it hosts neither [~] nor [-]. His 'logical form' of reality can be engendered only by assignment/emplacement of substantives and tropes into sentence tokens. Propositions and statements lend their logical form to states of affairs.

¹⁶ See p. 69f of *Conceptual Logic 3.0*.

Emplacement turns referring topsy turvy. He was led astray by the assumed coherent dualism of similars in his description of ‘picturing’ (picture/language and pictured/reality) to explain the grounds of true or false statements.

That was an error of a young Austrian army officer, an ahistorical, youthful philosopher bewitched by B. Russell’s realism, who thought “reality” could have a “logical form”. It’s the same error Hegel made and that Kant overtly avoided. Hegel, followed by naive Marxists, confused opposition in reality (push/pull) with the logical contradiction of statements. Marx didn’t always confuse them; it was contrary economic and moral imperatives of class interests that led to opposition and struggle. This is best seen in Marx’s great *Grundrisse*, his private, conceptual prelude to his *Capital*.¹⁷

The inferential pay-off of *via activa* assignments/emplacements in token sooth sentences is that it turns sentences into propositions; they acquire empirical content, which turns them into statements we can [Assert], [Deny], or [Neither] claims about their truth value. Purported statements have no alethic value but what we grant them; we’re entitled to give them the alethic values that our coherent and incoherent assignment/emplacements allow. If a substantive is coherently emplaced in a sooth sentence’s /S/ and a trope carried by the substantive is coherently emplaced in its /P/, the result is a coherent proposition and a true statement as proved in **E3** below.

E3 $\wedge E_s E @ /S/\wedge \ \& \ \wedge E(s)pE @ /P/\wedge$ Conceptual evidence for *coherent value*

$\wedge[.] S P$

Conceptual entitlement of $\wedge[.] S P$ ’s coherence value.

$\langle \langle [.] S P \rangle \text{ True} \rangle$

Entitled true alethic value of a statement

Here’s an example of this inference form:

(1) $\wedge E_{\text{Noah}} E @ /Noah/\wedge \ \& \ \wedge E(\text{noah})p_{\text{prophetic}} E @ /prophetic/\wedge$ Coherent

(2) $\wedge[.] \text{Noah prophetic}$

(3) $\langle [.] \text{Noah prophetic} \rangle$ is *True* Satisfies the S+P+ test of truth value

(1) shows coherent emplacements into the subject and predicate tokens of the sentence, / $[.] \text{Noah prophetic}$ /; this entitles us to assert proposition (2) of **E3** is *coherent*. We are

¹⁷ See the heroic piece of work, the dedicated translation by Martin Nicolaus; London, New Left Review, Penguin, 1973.

entitled to say statement (3) is true, because truth conditions for statement, S+P+, are identical to coherence conditions for propositions coherence.¹⁸

[Assign/Emplace] replaces [Refer], which, like Peter Pan, never grew up and can never grow up to be a *logical* functor-actor as $\wedge E\text{Noah}E\wedge$ is in the first premise in **E3**. That we've successfully referred to a substantive and/or a trope by itself entails nothing about the truth value of a statement. "Yes, /Noah/ refers to the substantive Noah, and /prophetic/ refers to the trope prophetic. So?" [Refer] just picks out substantives and tropes; it doesn't insert them into sentences' Ss and Ps; hence, it doesn't carry world evidence into language to support the alethic value of $\langle \text{[.] Noah prophetic} \rangle$. A sentence's grammatical 'subject' isn't identical to a lexical substantive, nor is a sentence's predicate identical to a lexical trope. Referring is all mind work; it doesn't sweep the world's substantives and tropes up into token sentences. Unlike [Refer], coherent [Assignments/Emplacements] turn token Ss and Ps into embodied evidence of substantives and tropes for coherence and truth values. Reports of 'successful' referring has no logical consequences, because [Refer] is a *naming*, not a *conceptual logical* functor. And naming an object as a /book/ gives us the variable, /book/. **Variables** are intended to provide places into which you may coherently emplace/assign **constants**, 'namely', a book. Variables give us generality to /book/, because any book may be coherently emplaced in the variable /book/. $a + b = c$ consists of variables into which you may emplace any whole number. [Refer] is a grade school functor, [Emplace] is a high school number.

Think about 'successfully' referring: Do you intend that /dime/ refers to this coin (showing a dime)? And that /silver/ refers to this color (showing the dime again)? She replies "Yes" to both questions. She's named them but naming them successfully doesn't make them evidence for the truth of $\langle \text{Dimes are silver colored} \rangle$. For that you have to coherently emplace the constants $\wedge E\text{dime}E$ in /dime/ and $\wedge E(\text{dime})\text{silver}E$ in /silver/. Agreement on coherent assignments/emplacements are the only empirical inter-subjective test of mutual reference; similar intent of mental naming isn't enough. This is a farm girl's direct approach to [Refer] versus [Emplace]. Back to good ol' rural basics.

Further Reflections on the Background of Emplacement Inferences, such as E1-E3

Statements do not refer. That way lies Frege's fixation on mathematical parsimony, which isn't apt for natural languages. Holding that all true statements have only one ref-

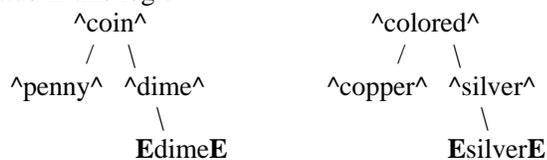
¹⁸ We can validly sire from a false statement to its correlative proposition's coherent value, because both of two contradictory or several contrary *sooth* statements are coherent. Predicating prophetic or ~prophetic of Noah are [Allowed] per this lethic prelude of [Sooth]. Only one of a range of contrary concepts makes a sooth statement true, including contradictories, but any one of them is coherent. So, it's logically allowed that we may infer from a false statement to a coherent correlative proposition. Any one of the contrary concepts in a linked range, $\wedge[*] \{ \text{soaked wet moist dry} \dots \} \wedge$, may be coherently soothed of a substantive concept, $\wedge \text{sock} \wedge$, and may be truly or falsely soothed of a sock. *Warning*: If one of those ranges tropes is bonded to a substantive as in $\wedge [:] \text{desert dry} \wedge$ or $\wedge [:] \text{swamp soaked} \wedge$, the other trope concepts in that range cannot be soothed to those substantive concepts: $\wedge [:] \text{Desert soaked} \wedge$ and $\wedge [:] \text{swamp dry} \wedge$ are incoherent sooth propositions.

erent, the True, is a desperate lunge for a referent. Language and mathematical systems are different; they will always be asunder. There's more logic in natural languages than Frege "dreamed of". It's astonishing that philosophers would have thought a logic designed for a logicist purpose would be adequate for all of natural languages' logic. Philosophy of mathematics is dominated by [Necessary] modality, elbowing [Possible] aside, which has tempted generations of philosophers of mathematics to embrace the a priori, necessary truth of mathematical 'statements', even though [Necessary] and ^true^ are incoherent attributes for pure mathematical/logical expressions. Only [Sooth] statements are true. [Necessary] expressions can't be [Sooth] statements; they have variable terms only; they don't have [Sooth] propositions' terms into which we may emplace world constants truth-making content.

Conceptual logic is a corrective. The epoch of conceptual logic's leutic [Enjoin] and [Allow] modalities have arrived; the rising sun in conceptual space sheds its light on its dim alethic moon.

Descending to the Bottom of Subsumption Pathways Where Assignments and Emplacements Dwell

Assignments/emplacements are at the bottom of subsumption pathways. Individual objects, dimes, are emplaced in /S/s, and its tropes, such as their subsumed silver color in a /P/. These truncated **conceptual pyramids** show substantive and trope concepts' subsumed positions. This shows how assigned/emplaced entities get their conceptual status in this logic.



These stark skeletal subsumption pyramids amplify the explanation of the [Assign/Emplace] functor. It's thought to be unorthodox (it is) and has aroused disagreement, even friendly ire, in its early promotions. Although it may seem bizarre at first sight, I think it will earn your respect, because it helps us avert false leads and dead ends per the essay "Stipulating and Conceiving 'Natural' Kind Concepts" on my web site. There I undertook to show what goes wrong when you philosophize with alethic logic only. Adding coherence logic to the canon is the cure. For additional reflections on emplacement, see "Assignments & Varieties of Emplacement: Regrets, Corrections, and Amplifications" on the above website.

Emplacements may be coherent or incoherent. Subsuming/emplacing a dime under ^dime^ is coherent, but emplacing a penny there is incoherent; subsuming/emplacing a silver trope under ^silver^ is coherent, but putting a copper trope there is incoherent.

^Concept^, in my use, is not a mental entity nor an epistemological capacity. That concepts couldn't exist without a mental capacity doesn't entail a capacity is identical to a concept ^C^. Conceptual capacity enable us to apprehend concepts. But, ^C^s, concepts are unique. They're lexical tokens uniquely located in multi-dimensional lexical space we fashion from seven interpretations of copula functors attended by conceptual negation, [~], and their leutic modality's restraints and allowances.

Each token in a unique place in lexical space is a unique concept, since it has different *coherent* subsumptions and/or different bondings and/or different incompatibilities and/or different identities and/or different sooths and/or being in different link or congery ranges and/or having different emplacements. This is finer grained individuation of concepts than hitherto achieved. I don't claim we need not add to them, but it's a fruitful start. There's a lot more industry ahead for unfettered top gun conceptual logicians on the next "new thing" in philosophy's 'career'.

Any creature that can act in accord with these functor and modal tenderings has conceptual knowledge; any human artifact, such as a computer running with 1/0 software, cannot function conceptually or knowledgeable as humans do unless it can assign/emplace. Learning and making mistakes go together; humans learn with sensory-driven assignments/emplacements subject to errors, disemplacements, misapprehensions, bad eyesight, diminished hearing, and so forth. Statements are bonded to true and false; there is no truth without falsity; hence, there is no knowledge without falsity; nor is there conceptual knowledge without incoherence and the capacity to correct it via conceptual logic. Since computers don't make mistakes, epistemologically, they're conceptually different from humans and other animals. Of course, computers can learn and alter their own programs, but that doesn't compute to they make ^mistakes^ and ^learn^--except as metaphors--because of the conceptual difference between animals and computers.

There's many a way conceiving can go wrong when you're installing substantives and tropes in lexical tokens. Until computers *can autonomously assign, emplace or imagine emplacing present, past or future occupants coherently into tokens*, they can't conceptualize the world, they cannot make a mistake, nor learn, nor conceive. Computers operating under mathematical command enjoiments can never admit experiential leutic allowments. Until they can, there can never be conceptual computers. They may, however, be programmed for valid conceptual logic inference patterns, fruitful, for example, in translation programs and for conceptual dictionaries--if kept up to date.

Structurally Generated Concepts and Communication

Sentence 'meanings', variant ways of coherently rewriting sentences, is a token-aimed structural affair. Communication occurs when persons have isomorphic syntactic and lexical structures: "Yes, we can go on together in coherent harmony, Tom". The numeral series is a familiar example of a structure that is widely, isomorphically shared. We don't need to know what /10/ or /17/ 'mean'. "Here's your change, Sir. Please count

it. ” Computations that end up at the same place in the numeral series is all we need for mutually satisfactory monetary exchanges: $\wedge[=] [+]$ (2/ / 2/) /4/^. *Ongoing isomorphism in our lexical structures is all we need for mutually satisfactory cognitive communication.*

The *logic* of concepts and propositions supports this social prosperity. Forget ‘mentalese’ mumbo jumbo; it confuses a dispensable fiction of what we do conceptually with what we actually do. First came the doing, \wedge [Subsume, /] {podocarpus ever-green-shrubs}^; then came the realization that we’ve actually put these tokens in conceptual space’s logical structure. Enjoy, but don’t give credence to extravagant claims that our left brain has given ‘meaning’ to what the right brain can’t do for itself. Just what is this ‘meaning’ from which the right brain is excluded, I ask: Meanwhile, is the right side dumbly uttering, illegibly scribing?¹⁹

Longer, Connected Inferences

If we had (1’),

(1’) \wedge [.] EnoahE @ /Noah/ & E(noah)myopicE @ /prophetic/^\, instead of the E3E’s Noah conclusion, p. 32, we’d be entitled to infer that < . Noah prophetic> is incoherent. On another hand, both of (3)’s propositions,

(3) \wedge . Glue prophetic^ & \wedge . Glue ~prophetic/myopic^, are *Incoherent*, hence, neither < . Glue prophetic> nor < . Glue ~prophetic> are *True* or *False*. There’s no linkage between any concept in the subsumption pathway on which \wedge glue^ occurs to any concept on the \wedge knows^ pathway on which \wedge prophetic^ or \wedge ~prophetic^ occur. The following three entailments, **One**, **Two**, **Three**, will help you to understand E3.

One	: creature animate / creature novelist	There are many intermediate subsumptions between these two propositions

	: novelist animate	\wedge Novelist^ inherits \wedge creature^’s bonding to \wedge animate^
	* novelist {prophetic ~prophetic/myopic}	\wedge novelist^ isn’t bonded to the concepts in this range

¹⁹ There are many means to communicate cognitively outside of verbal lexical exchanges. A raised eyebrow at an extravagant claim, indicates doubt about its truth; thumbs up, thumbs down are pretty definite affirmations and denials; throwing up both arms energetically indicates doubts about the other’s rationality or sincerity; an erect middle finger conveys rejection of a person’s worth, beyond all norms of decency or coherence, and so forth. Don’t you feel better after a firm, hearty embrace, a sign of solidarity and support? Once upon a time in Napoli, founded by Greeks, gestures had a grammar and lexical significance. These gestures appear on Greek ceramic pots and vases for food and wine; they reached a conceptual level according to research by an Italian scholar, and still occur in native Napolitano discourse. I can’t find the published, Italian source to cite. I’m sorry, Tom.

~. circle straight & ^ ~. square curved ^ Incoherent de dicto conclusions

It has a side dish. It supports my suggestion that the logic for mathematics is conceptual, not alethic. What a waste of millennial efforts, starting with Plato opting for the ‘dearer’ reality of Ideas to our personal sensory experiences in order to silence the Sophists’ via attiva Man-is-the-Measure. Philosophers and mathematicians have wrangled ever since about the truth status of mathematical ‘statements’. They can relieve themselves of this fruitless turbulence by adopting my “lexical idea” of replacing mathematical truth with coherence value. The enjoined functors of mathematical and arithmetical propositions exclude the leutic [Allowed, .] functor. Their leutic functors are [Enjoined, I] or [Enjoined not, I~].²⁰

Shorthand Emplacement Propositions

I use [+], [~], [-] to write shorthand emplacement propositions:

[+] after S or P, S+ or P+, indicates a coherent Assignment or Emplacement [A/E] was made;

[~] after an S or P indicates an incoherent [A/E] was made;

[-] indicates there is no known existing substantive or trope to [A/E] coherently into a sentence’s S or P, respectively;

[?] indicates it’s not known if coherent [A/E]s exist for an S and/or P.

²⁰ In the “Leslie Tharp Memorial Issue” of *Synthese*, Volume 81, No. 2, November, 1989, Hao Wang’s essay is entitled, “Tharp and Conceptual Logic”. This refers to Tharp’s philosophy of mathematical logic’s grounding. His account is dissimilar from my conceptual logic, although there are interesting and close similarities between them. His views about the source of mathematical truths rely on concepts rather than ‘objects’; I do not believe there are such truths; there are only mathematical *coherences*. He was committed to alethic evaluations of mathematical <statements> I’m committed to coherence evaluations of mathematical ^propositions^. The scope of his theory is narrower than mine; it’s confined to the conceptual logic of mathematics alone. My scope extends over all of all languages’ conceptual orderings.

Wang writes, p. 151, “One of Tharp’s central themes is that we can operate with generalities without [referring to the infinitely many] objects. It is possible to infer general truths from limited and particular concepts. For example, ‘all whales are mammals’ involves a ‘modal quantification’ and means, ‘For any possible x, if x is a whale, then x is a mammal’. It expresses a relation between concepts whale and mammal.”

Note two items in this quotation: First, Tharp relies on the determiner [Any] that I’ve designated as the only one needed in propositions in the five enjoined functors we use to construct conceptual/lexical space. Second, the conceptual relation Wang cites is my [Bond] functor. Tharp’s account of conceptual logic, because restricted to mathematical logic, is not properly a full-blown ^conceptual logic^, but he could have been trying to move toward it. Charles Chihara’s remark below shows this clearly in his essay in that “Memorial Issue”, p. 155: “...mathematical theorems are not about actually existing objects; they are modal assertions, and the quantifiers that occur in mathematical statements are modal quantifiers. For example, the existential quantifier ‘(Ex)’ is to be understood as: There could be an x” I interpret this existential quantifier as the leutic [Allow, .]. But, because [Enjoined, I] and [Enjoined not, I~] are the leutic modalities that can deliver ^Coherent^ and ^Incoherent^ evaluations of mathematical axioms and theorems, it’s a mistake for Tharp to use the existential (Ex) in a conceptual interpretation of mathematical ‘statements’; they’re propositions, not statements. My leutic modalities save us from the *a priori* and the analytic *a priori* that Quine and White earlier dismissed because of the logical flaws of ^synonymy^.

S+ P+ indicates coherent emplacements. These shorthands give us four sample shorthand emplacement truth value entailments, below. For the full sixteen [A/E]s, see the Emplacement Chart, Appendix II, 53. The discussion of each row of the Chart runs from p. 55 – 86 in “On Emplacing”. The only [A/E] that entails and entitles us to a True judgment is S+ P+. The other fifteen entitle us to either False or Unknown judgments. The cards are stacked against Truth, Tom. It’s a rare commodity.

- < . S+ P+> --} True Coherent [A/E]s in sooth sentences’ Ss and Ps.
- < . S+ P~> --} False EmyopicE is an incoherent emplacement in /prophetic/ as in (1’), p. 31. This [A/E] fails the S+ P+ test for true statements.
- < . S- P+> --} False Non-existent angels, S-, can’t carry innocent tropes into /innocent/. Nor can any S- carry any trope into any token place. This [A/E], too, fails the S+P+ test.
- < . S~ P-> --} False in spades. [A/E] into S is incoherent and there is no EpE to [A/E] into /P/; hence, P-. An incoherent substantive into /S/ can’t carry a non-existent trope into P. Both ^EtoE @ /trigger/ & E(tomato)infiniteE @ /infinite/^ fail the coherence, S+ P+, truth test.

With the assignment/emplacement functor, [A/E], we can explain entitlements to truth value judgments without resort to correspondence to facts. Conceptual coherence suffices. (Keep this in mind when you’re studying Susan Haack’s “Foundherentism” in her rewarding *Evidence and Inquiry*. She doesn’t keep alethic consistency and conceptual coherence distinct. I recommend she do so now that there’s a new logic on the block.

After the advent of conceptual logic and the [~/-] negation distinction, the truth-making correspondence dualism of statement/fact is expunged; facts don’t exist in nature; we fabricate them by coherent [A/E]s in sentences. Emplacement facts are *handmade*: Physically move the dot into the spaces occupied by /dot/ and black into /black/ physical tokens; do it. Some assigned facts are *imagined* [A/E] fabrications a la Kant. Our faculty of imagination plays an intermediary role between sensory feeds and cognition.²¹ We also assign a microscope-produced visible liver cell to /cell/ of /[,] cell normal/ or to /[,] cell ~normal/. With this assignment, we make our sensory image of the cell into the sentence’s subject and promote it to cognitive status. The pathologist observes the subject cell’s tropes and pronounces it normal or ~normal. If she gives you a sufficient description or lets you look at the cell through her microscope as mine did, you can assign it to /cell/, ^EcellE @ /cell/^, and its trope to either /[,] cell normal/ or /[,] cell ~normal/.

I consign proponents’ of an alethic coherence account of truth to a history of conceptual confusion: “They didn’t distinguish holistic alethic ^consistency^ from prop-

²¹ See *Kant’s Transcendental Idealism*, pp. 186 – 189; Henry E. Allison, revised and enlarged edition; New Haven, Yale University Press, 2004. My view of ‘facts’ might be mislabeled Conceptual Idealism, because all the historical ^Coherence^s and ^Idealism^s are irrelevant to my ^coherence^ and my ^concept^.

ositions and statements' conceptual ^{coherence}. In the old days, they had no consciously articulated distinction between coherent [~] and alethic [-] negation; for them, both were alethic /non-/s and /nots/. In constructing the Square of Opposition for logic textbooks in the late 19th Century, /non-/ was for alethic contrariety and /not/ for alethic contradiction. This tradition still lives in many current logic texts. Alethic /non-/ should have been classified as conceptual negation, /not~/. See my essay on the Square of Opposition interpreted as a conceptual logic Square on my website.

[=] Identity Inferences

[=] is a count functor that always equals, [=], **one**. [^][=] Mark Twain Samuel Clemens[^] is coherent, because the coherent assignment of *one and the same* man in both /Mark Twain/ and in /Samuel Clemens/ is coherent. [^]Identity[^] of [^]concepts[^] or [^]entities[^] in the plural, as if [=] related two concepts or two entities, is incoherent.

=1 [^]E_{marktwain}E @ /Mark Twain/[^] & [^]E_{marktwain}E @ /Samuel Clemens/[^]
 [^]E_{samuelclemens}E @ /Samuel Clemens/[^] & [^]E_{samuelclemens}E @ /Mark Twain/[^]

[^][=] E_{marktwain}E E_{samuelclemens}E[^] This is a one-count for the entity, hence, coherent.

=2 [^][=] [^]Mark Twain[^] [^]Samuel Clemens[^] This is a one-count for the concept, hence, coherent.

=2 follows from =1's conclusion, because the coherent assignment of one and the same person into one and the same place in lexical space via the premises turns [^]E_{marktwain}E[^] and [^]E_{samuelclemens}E[^] into one concept; hence, a one-count entity entails a one-count concept. A one count description would be a unique conger, [:+], for a singular substantive carrying its own haecitas at the bottom of a subsumption pathway. Tropes don't have 'secondary' tropes. They're distinguished by their places in lexical space via the functors [/], [*], and [~], that is, by their in- and compatible staae.

Similar reasoning holds for tropes. [^][=] [^]partial to[^] [^]~partial/uncommitted[^] is incoherent, because a concept and its negation are incompatible. We're enjoined to put them into *two different places* in lexical space. This is important for reasoning, because the identity of sentences' interpretations/propositions, [^][.] [^]car hot[^] [^][.] car stolen[^], is coherent if and only if the count of the interpretations of each pair of these two sentences' tokens, /hot/ and /stolen/ is ONE. That is, the identity claim for the propositions is coherent if and only if [^]stolen[^] is a coherent rewrite of [^]hot[^], and vice versa. It's not the only rewrite, of course. The same goes for another /hot/ rewrite token, /fast/. Both sentences' and token pairs must occupy an identical place in lexical space. TWO counts for

either of the terms, /hot/ or /fast/, entails an identity claim for the sentences' interpretations is incoherent. Double rather than singular interpretations of sentences' /S/ or /P/ tokens beget invalid inferences due to equivocation as when two /car/s have different rewrites, /auto car/ versus /train car/, or as /hot/ has two rewrites /stolen/ and /speedy/, and have diverse [A/E]s in diverse contexts in which they're used.

Historically, most philosophers have made a mess of *via passiva* [Identify] due to neglect of the *via activa* [Identify]. The mother of all such gaffes is treating [=] as a *via passiva* **binary** relation, which requires TWO tokens not known to have ONE coherent emplacement, such as Frege's Evening and Morning Star. It's incoherent to think there is a *via passiva* **binary relation** between an entity or concept and *itself* rather than a *via activa* **unary** one *count* emplacement. This semantic malfeasance occurs when philosophers don't distinguish a 'binary' pair of tokens, /Mark Twain/ and /Samuel Clemens/, from a unary count of their coherent emplacements and concepts. Expunge the maxim "Each entity or concept is **binarily** identical to itself" from your lexical habits.

The number of interpretations of the tokens in a sentence may or may not equal the number of its tokens; it depends on whether the same or different tokens are given one or more interpretations. The [=] functor advisory enjoins us to give ONE interpretation of a sentence's similar and/or different S|S and P|P tokens to insure the coherence of [=] propositions. Frege's Eve tempted him by offering him TWO apples, the /Morning/ and /Evening Star/--different tokens with one emplacement. To avoid Garden of Eden embarrassment, reinterpret this maxim as "Each entity is unarily identical to itself." This makes [=] a ONE-count functor advisory for *via activa* [Identify].

I do think binary confederates intend to treat [=] as a binary relation, because it's usually listed in logic tracts and texts among 'relations', which have two or more terms being related; this slides over to think-ing that [=], too, is 'relation' that holds between two or more terms as if ^terms^ were identical to ^tokens^. After that, it's hard to cognize and admit that [=] functors enjoin unary counts. The issue for *via activa* [=] propositions is: How many coherent emplacements are there in two tokens? If they have one and the same coherent emplacement, the [=] proposition is coherent, if more, it's incoherent.

The interpretations of tokens may be similar or different, bequeathing them different conceptual counts.

- (a) / [=] /hot/ /hot// Here we have two similar tokens with one or two+ counts of interpretations/rewrites of them.
- (b) / [=] /hot/ /fast// Here we have two different tokens; their concept count may be one or two. In both cases, interpretations of (a)'s and (b)'s tokens' may yield a count of one or two concepts. Suppose we interpret (a)'s terms in the context of concepts of automobiles' tropes.
- (a') ^[=] ^boiling^ ^boiling^^ One concept, if ^high temperature^ for both--coherent.

- (b') $\wedge [=] \wedge \text{boiling} \wedge \text{fast}$ Two concepts--incoherent.
- (c) $\wedge [=] \wedge \text{fast} \wedge \text{speedy}$ One concept if great speed for both--coherent.
 $\wedge [=] \wedge \text{fast} \wedge \text{stolen}$ Two concepts--incoherent

For an identify proposition to have a one count, its token terms must have one and the same interpretation; that is, its token terms occupy the same place in lexical space; they have one and the same functor advisories; they have one and the same coherent routes to other categorematic word tokens; and their term tokens have one and the same [A/E]s in lexical space.

These requirements are the *salva coherentias* of identity propositions.

The coherence of identify propositions with *singular* tokens, such as proper names, indexicals, or pronominal anaphora also depend on a ONE count. In this case, we count how many [A/E]s there are in a sentence's SS or PP terms.

An emplacement--*which is always singular*--into a singular name, /Tom's lilac/, may be a substantive, $\wedge \text{Etom's lilac} \text{E} @ / \text{Tom's lilac} / \wedge$. Tropes, too, are singular; Tom's lilac carries its singular purple trope into /purple/: $\wedge \text{Epurple} \text{E} @ (\text{tom's lilac}) / \text{purple} / \wedge$. This yields a coherent proposition with two singular emplacements into a singular S and a singular P:

$\wedge \wedge \text{Etom's lilac} \text{E} @ / \text{Tom's lilac} / \wedge \ \& \ \wedge \text{Epurple} \text{E} @ (\text{Tom's lilac}) / \text{purple} / \wedge \wedge$.

A coherent interpretation of /Aristotle was The Stagirite/ requires coherent singular assignments of one and the same person, and no other, to both names, which are the premises for this valid inference.

$\wedge \ \text{E} \text{aristotle} \text{E} @ / \text{Aristotle} / \wedge \ \& \ \wedge \ \text{E} \text{aristotle} \text{E} @ / \text{The Stagirite} / \wedge$
 $\wedge \ \text{E} \text{thestagirite} \text{E} @ / \text{The Stagirite} / \wedge \ \& \ \wedge \ \text{E} \text{thetagarite} \text{E} @ / \text{Aristotle} / \wedge$

$\wedge [=] \wedge \text{The Stagirite} \wedge \wedge \text{Aristotle}$ Coherent

$\langle [=] \text{Aristotle} \ \text{The Stagirite} \rangle$ True for these emplacements

These S+S+ emplacements make the concluding statement True, which is all we need for valid alethic inferences from coherent premises in which two similar or different names for the same entity appear. Without a lot of informative buttressing, we can't use the counter-intuitive 'rigid designation' of a singular /Aristotle/ for this inference, knowing that many people have borne and do bear the name "Aristotle" as A. Onassis did, who was no Stagirite. So, 'rigid' designation becomes a 'rubbery' designation. On any occasion in which proper names, of the same or different type, appear in inferences, validity requires only that we emplace one and the same person in that name throughout, unless specifically excepted because other tokens of the same type have different emplacements.

: S Q	: bird feathered
~: S ~Q	^: bird ~feathered^ is incoherent.

B3a : S1 P	B3b : S P	Both B3a and B3b 's conclusions are incompatible for different reasons. B3a because of S1 and S2's incompatibility, B3b because of P1 and P2's incompatibility. You can give yourself examples.
! S1 S2	! P P1	
~: S2 P	~: S P1	

[*] **Link Inferences**

*1 : S P	This is a particularly important inference for clarifying what Wittgenstein was after in the <i>Tractatus</i> , distinguishing between what "can be said" and what "can't be said" (coherently). The range of concepts in a link proposition, * S {Q ~Q}, shows incompatible concepts may be coherently soothed to its S concept; these sooths may "be said". This will be made inferentially explicit in .4, the sooth inference section, p.45. ²²
/ P {Q ~Q}	
* S {Q ~Q}	

*2 / P {Q ~Q}	{Q ~Q} is a range of concepts each contrary to each. Since S isn't bonded to either Q or ~Q, you're free to link any trope concept in the {Q ~Q} range to S. *2 specifies Free-Predicate routes in lexical space.
~: S Q & ~: S ~Q	
* S {Q ~Q}	

*3 : S Q or : S ~Q	*3's premise nullifies the Free-Predicate Condition, making its conclusion incoherent, which is the negation of *2's conclusion.
~* S {Q ~Q}	

*4 . S Q & . S ~Q	The validity of *4 is very important , because it <i>links</i> World → Word, it's <i>the mother of all facts and all alethic truth value</i> . <i>Don't keep this to yourself!</i>
=====	
* S {Q ~Q}	

²² On p. 84 - 91, *Conceptual Logic 3.0*, there are *extended* Link, Pelwalk, and Selwalk inference forms. They provide ways to minimize symbolization of such inferences when there's an "extended" distance between concepts on subsumption pathways. There's no new logic there, just brevity. That's why it's an optional section there.

Interpret the double line between *4's premise-cum-conclusion as **equivalence**; if either is coherent, so is the other. Remember that both contradictory and contrary *propositions* are coherent under the Free Predicate Condition, indicated by the two [Allowed] [Sooth] functors, [.] , while only one of such countered related *statements* may be true. This is amplified in the following Sooth Inferences section.

[.] **Sooth Inferences**

- .1** $.S P \text{ or } .S \sim P$ If either of two contradictory or contrary sooth propositions is coherent, both are. This contrasts with alethic logic's values; I *reject* its alethic equivalent form "If either of two contradictory or contrary statements are true, both are" This difference proves that neither \wedge coherence \wedge nor \wedge truth \wedge value are reducible to the other. I have other arguments for this independence scattered throughout my essays on my website. Some inferences in this precis, particularly in this section, show how the \wedge coherent/true \wedge evaluation concepts and their logic are complementary. So, please keep both their logical non-reducibility and logical complementarity in mind while entertaining my proposals for a conceptual/lexical logic. For complementarity, see this section's **.5**, below for the one place where logical positivists and truth-conditions supporters of meaning were right.
- $.S P \text{ \& } .S \sim P$
- .2** $\sim .S P \text{ or } \sim .S \sim P$ If either of two disjunct, incompatible sooth propositions is incoherent as in **.2's** premise, their conjunction is incoherent as in the conclusion . Further, if \wedge [.] Lincoln-penny is hungry \wedge or \wedge [.] Lincoln-penny satiated/ \sim hungry \wedge is incoherent, both are. Since neither proposition is coherent, neither of their statement correlatives, $\langle \sim .S P \rangle$ or $\langle \sim .S \sim P \rangle$, has a truth value
- $\sim .S P \text{ \& } \sim .S \sim P$
- .3** $\wedge .S P \wedge \wedge P \{P_1 P_2 \dots P_n\} \wedge$ \wedge . Umbrella colored \wedge
The subsumed concepts in \wedge colored \wedge 's range, $\{P_1 \dots P_n\}$, are contraries: \wedge {red yellow green ...} \wedge .

$\langle .S P_1 \rangle$ **iff** $\sim \langle \sim .S P_2 \rangle \text{ \& } \dots \langle .S P_n \rangle$ Only one statement with a predicate from a range of contrary concepts can be true; all others are false. Not both $\langle [.] S P_1 \rangle$ & $\langle [.] S P_2 \rangle$ may be true, but both may be false because another contrary proposition, $\langle [.] S P_n \rangle$, is true. Incompatible trope concepts, \wedge [!] $P \sim P \wedge$, entail that if $\langle [.] S P \rangle$ is true, $\langle [.] S \sim P \rangle$ is false and vice versa. This clarifies the standard fare met with in School expositions of [non-/ \sim]'s role in the traditional Square of Opposition's contrary relation. If $\langle [.] \text{umbrella yellow} \rangle$

is true, then none of yellow 's contraries, $\{P_1 P_2 \dots P_n\}$, such as red , may be truly soothed of the umbrella.

.4 $\sim: S P \ \& \ \sim: S \sim P$ This equivalence inference is *2's *Free-Predicate*
 =====
 $*S \{P \sim P\}$ Condition, p. 43. [Ignore or erase the dark lines;
 I don't know how to erase them.]

.4 is a *very important* inference schema. It marks the descent from the lexically enjoined [*] to the allowed [.] functors, which opens entry into the fracas of statements about the world of substantives and their tropes out of which emerge factual statements on which we place our bets of true and false claims. Note that .4's first premise frees us from [:] bondages and yields the Free Predicate Condition. Its [Link, *] conclusion tells us what "may be said", recalling that $\sim P$, $\sim \text{large}$, is the contrary of P , large , and that $\sim P$ subsumes other contrary trope concepts that may be coherently soothed of S , such as $\{ \text{small tiny miniscule subatomic } \dots \}$. Wittgenstein didn't know about link ranges of contraries (Laurence Goldstein disagreed; I don't know why) and their logical connection to [Sooth] propositions in the *Tractatus*, so, until now, his "what may be said" was too vague for him or anyone else to know how to answer <What may and may not be said?>, which is a very important lexical question for linguists, semanticists, philosophers, and concerned citizens to answer.

.5 $\langle .S P \rangle \text{ or } \langle .S \sim P \rangle$ If either of two sooth contradictory or contrary *statements* is true, both of their correlative *propositions* are coherent. This is logical positivists' principle of the relation between truth and meaning. While .5 supports them, they leaned too rhetorically on a sloganized 'principle' they couldn't get beyond without a decent conceptual logic. Writing .5's third line in the via passive mode gives us the .5 via passive conclusion:

$\langle \langle .S P \rangle \text{ True or False} \rangle$

$\wedge .S P \ \& \ \wedge .S \sim P$ are *Coherent*, 'meaningful' in old speak.

.5 and its via passive variants are my spare version of a 'truth conditions' theory of meaning. Although presented by its legions of advocates for decades in various versions, they were never able to close the gap between truth conditions and meaning . The early birds were so engrossed in their rampage against 'metaphysics' they never realized how complicated the relations between truth and $\text{coherence}/\text{meaning}$ are. Their slogan never revealed the relations. It had to await a conceptual logic to unearth

the deep relations between conceptual coherence and alethic truth. We know now that truth conditions alone do not fully deliver [^]coherence[^]/meaning[^]; schemas, .1 - .5 prove this.

I don't find an account of the logical relation between truth and meaning in Donald Davidson's adaptation of Tarski's T-convention. Invoking 'charity' towards the truth of what a person is stating is no substitute for providing a specified relation(s) between truth and meaning. Charity is no explanation for it; it presupposes it. Perhaps a 'negative' version is the stealth message: If you don't know the truth conditions for a statement, you don't know its meaning. That is, "If you don't know which substantives and tropes are the coherent, truth-making emplacements in a sentence's word tokens, you don't know its 'meaning' nor its correlative statements' truth value." (Getting warm.)

This gives priority to words' 'meanings', which counters Frege's (and Plato's), widely accepted "Words have no meaning outside of sentences", which gives priority to sentences' meanings. These are mutually cancelling orientations. How can I go from the meaning of a sentence to the meaning of its words? Tell me the procedure, Sir. Theorists who rely on these vagaries need to be specific, especially since many of them also inconsistently promote the Haggis slogan: "Sentence meaning is composed of its words' meanings." These slogans, often endorsed together, pull in opposite directions: *Sentence meaning* → *word meanings* **versus** *word meanings* → *sentence meaning*, decomposition versus composition. This untethered wandering in the sere plains of alethic logic, needs a little coherence logic to shift theorists' foci to help them bridge the gap twixt truth and 'meaning', to which champions of alethic meaning conditions foredoomed us.

Lexical inferences shrink the verifiability account of meaning to its proper size. They do show that neither truth conditions nor the verifiability account should be wholly discredited. They're obviously not up to a full meaning theory; they're but one amongst a throng of conceptual inference schemas presented here. The trick is to entwine them in a wider, more complex, and detailed conceptual logic I'm proposing. Twentieth Century's logicians' obsessive devotion to a limited alethic logic abandoned us to a gap twixt truth and meaning.

Here's what you've been waiting for, Tom: An explanation of why sooth truths **sire** sooth coherence.

(a) Sooth propositions' coherence requires there be a coherently allowed de facto, de dicto, or de jure sooth route between a substantive concept, [^]S[^], and a trope concept, [^]P[^].

(b) If emplacements into a sentence's substantive /S/ and the trope emplacement it carries into /P/ are coherent, the de facto condition for the truth of

<E_sE @ /S/ & E(s)tE @ /P/>,

S+ P+, has been satisfied. It *also shows* that it has satisfied the coherence conditions of the proposition

[^]E_sE @ /S/ & E(s)tE @ /P[^].

The coherent substantive's emplacement **EsE** into /S/ carries the coherent trope emplacement **EtE** into /T/. Suppose **EsE** is a ball and **EtE** is red. With such acts of coherent emplacements we construct both a true statement about $\wedge S^\wedge$, and a coherent propositional sooth route between $\wedge S^\wedge$ and $\wedge T^\wedge$ in lexical space, $\wedge, \wedge[.] \text{ball red}^\wedge$.

This explanation of the logical relation between truth and meaning supports the old saw: What is actual is possible. The new saw to add to the old one is: What isn't actual is also possible, because sooth falsity, $\langle[.] \text{ball } \sim\text{red/green}\rangle$ also yields sooth coherence. Suppose a ball carries a green trope.

(F) $\langle\wedge\text{EballE @ /ball/}^\wedge \ \& \ \wedge\text{E(ball)greenE @ /red/}^\wedge\rangle$.

(F) is false, because **EgreenE** is not coherently emplaceable in /red/. [S+ T~] is the short version of (F). See the Emplacement Chart, Appendix II, p. 53, line 3.

(F) is false, because

- (a) **EredE** and **EgreenE** are emplaceable respectively in /red/ and /green/~red/;
- (b) $\wedge\text{red}^\wedge$ and $\wedge\text{green}^\wedge$ are incompatible because they're both subsumed under
- (c) the concept $\wedge\text{colored}^\wedge$, as in *1 Link inference on p. 44; and
- (d) with the aid of .5's conclusion, p. 46, we know both $\wedge\text{red}^\wedge$ and $\wedge\text{green}^\wedge$ are
- (e) coherently soothable of $\wedge\text{ball}^\wedge$; and
- (f) because a false statement is validly inferable from a true contradictory or contrary statement that have the same substantive concept and an incompatible trope concept.

The following inferences prove (f), refuting Parmenides' claim that we can't make false statements.

$$\begin{array}{l} \langle .S \ P \rangle \text{ True} \quad \text{or} \quad \langle .S \ \sim P \rangle \text{ True} \\ \wedge ! P \ \sim P^\wedge \quad \quad \quad \wedge ! P \ \sim P^\wedge \\ \hline \langle .S \ \sim P \rangle \text{ False} \quad \quad \quad \langle .S \ P \rangle \text{ False} \end{array}$$

These inference schemas summarize Plato's refutation in his *Sophist*, 236d8 – 261c4, of the widely shared view that Parmenides claimed we couldn't say what is false. Plato explicitly uses [~!], and [Sooth, .] functors, and implicitly relies on [Link, *] in that section. Statements' falsity is inferred from incompatible statements' truth value. I substitute [~] for $\wedge\text{other}^\wedge$ and $\wedge\text{different}^\wedge$ in that dialogue. These inferences show why we don't need Russell's once proposed 'negative facts'.

Some logicians worry about how to identify negative statements; that worry's over. Either of two contradictory statements may be used to *deny* or *affirm* the other's truth. Once they distinguish the via attiva [Deny] and [Affirm] functors from the via passiva $\wedge\text{negative}^\wedge$ and $\wedge\text{positive}^\wedge$ concepts, and opt for the via attiva, their sleepless nights vanish. The problem leaves only its Chesire grimace behind.

[:+] **Congery Inferences**

:+1 $\wedge [:+] S [A1...An]^{\wedge}$ This is a form for a congery of $\wedge S^{\wedge}$'s attributes for identifying kinds of substantives. If an emplaced substantive, S1, coherently carries a congery of coherent emplacements into an $\wedge[A1...An]^{\wedge}$,
 $\wedge\wedge[:+]^{\wedge}E_{s1}E @ /S/^{\wedge}$ & $\wedge E_{(s1)a1...an}E @ /A1/.../An/E/^{\wedge}$, then
 per the congery form, the proposition is coherent and its attributes specify S1's kind concept, $\wedge S1^{\wedge}$.

[**Any**] substantive satisfying $\wedge S^{\wedge}$'s congery is of the $\wedge S^{\wedge}$ kind. That determiner saves S from being a 'member' of a 'class', $\wedge[+]$ class member \wedge . \wedge Class \wedge and \wedge kind \wedge aren't identical; the former may be an ontological concept, the latter is epistemological, <[.] pig DNA (x or y or ...)> There will be borderline cases when an S won't satisfy all of a congery's attributes. If a pig is born with three legs, but possesses all the remaining attributes, we can de jure preserve its \wedge pig \wedge kindhood. "How many congery attributes must Porco satisfy to preserve its \wedge pig \wedge kindhood?". I suggest you ask your corner zoologist.

\wedge Water \wedge in normal English speech has a congery of attributes, such as \wedge [transparent liquid potable] \wedge . Chemists have justifiably de jure added $\wedge H_2O^{\wedge}$ to its congery. The earlier congery may be kept concurrent with $\wedge H_2O^{\wedge}$. In case these attributes are incompatible on some occasion, chemists have decided to favor $\wedge H_2O^{\wedge}$. A liquid sample, **EsE**, may be coherently emplaced in /water/ if it satisfies the stipulated congery of its $\wedge H_2O^{\wedge}$ attributes, after which it becomes, at the bottom of its subsumption pathway, its own haecceitas.

Each of the attribute concepts in a congery are *bonded* to the same substantive concept. Congery ranges differ from link ranges, because only one of the concepts in a link range may be bonded to a given substantive concept. Concepts in a bonded range are **complicit**, because each are bonded and collude to identify a single substantive as a kind. $\wedge H_2O^{\wedge}$ helps identify this liquid as a kind of liquid. One of \wedge train \wedge 's older complicit concepts is \wedge moves on rails \wedge , which differs from a new complicit entry into \wedge train \wedge 's congery, \wedge moves suspended by magnetic force \wedge . The basic idea here is that any substantive has many attributes, some of which may be stipulated as complicit and bonded. Substantive conceptual kinds live and die by their bonded ranges of congery attributes. Which are complicit depends in part on our de jure supported grounds for stipulated choice. See "Stipulating and Conceiving 'Natural Kind Concepts' " on my website.

The following inference schemas have conclusions negating via attiva [Identify, =] propositions, because different kinds of substantives have different ranges of congeries. Different forms of congery ranges are illustrated in **:+2a**'s first two premise forms.

:+2a $\wedge [:+] S1 [A1...Am]^{\wedge}$
 $\wedge [:+] S2 [An...Aq]^{\wedge}$

 $\sim [=] [A1\dots Am] [An\dots Aq]^{\wedge}$

Concepts in a congerie's range are compatible²³, but some concepts in different congeries' ranges are incompatible. One kind's congerie can't have all of another's. This assures uniqueness of kind concepts.

 $:+2b \sim [=] S1 S2^{\wedge}$

If two congeries have but one incompatible concept, their substantive concepts aren't identical. This is typical of species' different congeries. \wedge Hoot \wedge and \wedge barn \wedge owls congeries will share most attributes, but if there's one they don't share, $:+2b$ holds.

Each subsuming substantive concept on a subsumption pathway **bestows** its congerie on its subsumed concepts; \wedge mammal \wedge 's congerie is bestowed on \wedge bear \wedge . Ascending from the lower, determinate depths of subsumption pathways, which have finer grained congeries, we reach the top determinables' complicit concepts. Consider \wedge object \wedge . It's top bonded trope concept is \wedge physical \wedge , \wedge [:] object (p.)trope \wedge , that subsumes, \wedge [/]trope {size shape weight ...} \wedge . If that range is chosen as the congerie [size shape weight ...], then it's part of the congerie that individuates the concept \wedge physical object \wedge . Subsumption bottom dwellers, such as my left incisor's size and shape, keep general concepts in touch with reality, keep them from being bloodlessly 'abstract'. I just scare-quoted /abstract/; it's logically superfluous. We don't need, for example, 'abstract' \wedge redness \wedge , only \wedge red \wedge , and its subsumed range(s) levels, and their coherent emplacements, \wedge EscarletE @ /red/ \wedge , \wedge EcrimsonE @ /red/ \wedge , \wedge E...E @ /red/ \wedge , to communicate and reason together. This example shows that when you use Ockham's razor to eliminate \wedge ness \wedge s, you cut closer to the conceptual bones of our lexical structures.

Congeries breed link ranges, 5., in the subsumptions below, and, through them, of sooth propositions, 6., also below; the latter may flower into speakers' coherent sooth statements. The subsumed concepts of each concept in a congerie are gathered into linked ranges, 5. below. They may be severally soothed of a specified object concept without committing incoherence, 6. All sooth statements using trope concepts subsumed under a congerie's concepts may be true or false, providing one of them isn't bonded to a substantive concept. These points are exhibited in the following series of inferences. I start at the top of a subsumption pathway to identify part of \wedge (physical) object \wedge 's congerie.

²³ Although \wedge red \wedge and \wedge green \wedge are incompatible, they don't necessarily make the propositions \wedge The apple is red \wedge and \wedge The apple is green \wedge incompatible, providing we modify the substantive concept. For example, one *part* of an apple may be red while another *part* is green. This shifts the substantive in these propositions from \wedge apple whole \wedge to \wedge apple parts \wedge ; thus, the two sentences become logically independent and compatibly coherent. Plato did this with the top's static and spinning parts, the center versus the periphery.

- | | | |
|-----|---|--|
| 1. | [:] object (physical)tropes | This trope subsumes a physical object's |
| 2. | [/] | sampling of a congery of tropes |
| 3. | [:+] object [size shape surface...] | 2. subsumes a congery, a bonded range of |
| | | tropes |
| 4. | E:+E eel length sinuous scales | Emplaced examples of a congery of tropes |
| | | of the same substantive concept, here an |
| 4'. | [/] 2' – 4' finned embedded adult, ~electric eel. | |
3. and 4./4'. entail coherent linked propositions, 5.. Note that in 5., there are optional tropes in some congery concepts, {length: long short}; it may or may not have scales, {embedded ~scaled}; but there's no give on the fins, ^electric^ or ^~electric^, folks.

-
5. [*] eel {4' long ... 2' short} {dorsal anal ~pelvic fins} {embedded ~scales}
- These coherent links propositions entail, for example, these coherent sooth propositions.
6. [.] eel 4' long ... [.] eel 3'7" long ... [.] eel 2'4" short ...
 [.] eel embedded-scales [.] eel ~scaled

Coherent sooth propositions entail statements with a truth value.

7. <[.] eel 4' long> <[.] eel 3'7" long? ... <[.] eel 2'4" short> ...
 <[.] eel embedded-scales> <[.] eel ~scaled>

The truth value of such statements is determined by assigned/emplaced coherence, partially explained in the inferences, above. More may be found in my "Assignments and Varieties of Emplacements", which is on my website, and in the section that follows.

The Methodological Shift Starts Here: The Upshot of Conceptual Inferences for the Practice of Future Philosophy

Every field of intellectual endeavor has its methodology. If workers in a field change their methodology, they will change the outcomes of their work. This holds also for philosophy and its active agents. Heretofore, their methodology has been governed by alethic logic; they thought under its canonical shelter. I think, therefore, I infer.

^[:] think infer^.

If you practice different ways of validly inferring, alethically versus conceptually, you will have different outcomes. The inferences I've set out here introduce a new canon; the **upshot** for philosophers is that, if they choose to use conceptual logic as their canon, they will get different, and, I've argued, better results than were produced by those who wrote, thought, talked, argued, reasoned, competed with the use of an alethic methodology less suitable to philosophy. Philosophy is a conceptual field of work; it profits when its workers adopt a conceptual canon.

My essay, “The Advent of Conceptual Logic: Extending Kant’s Copernican Revolution” (on my website) illustrates the different results analytic philosophers get from what I get with my conceptual canon. There, I argue, almost everything they assume is worn and needs replacements, which I supply. The “Advent ...” essay shows you what the future of philosophy will be like if conceptual logic replaces the alethic canon. I suggest you read the “Advent ...” in conjunction with this essay to learn details of the “different outcomes” I’ve gotten, accompanied by edgy critiques of current analytic philosophy. It’s a useful essay that befriends this Upshot’s cheery promises of the exciting work ahead, especially for philosophers under thirty by birth or a youthful mentality, who are wary of the complacent, blanket acceptance of the alethic methodology used by most published philosophers today. The philosophical Mafia keeps the markets under continuous surveillance. White Hat editors like to vary the fare.

Philosophy will be harder in the future than in the past, because the finer tuned conceptual inferences force you to supply premises that aren’t demanded of you with the grosser alethic logic. Conceptual logic is a more demanding canon. It has seven interpretations of the copula rather the spare two or three alethic logicians use. I don’t know if you’ll think this is a downside of replacing the canon or not. I hope not. It didn’t inhibit Plato who I claim was the first consciously conceptual philosopher. He did well. “It was Aristotle who done him in with those darned syllogisms.” Ever after, the alethic canon has reigned. Millennial mistakes need timely correcting.

The Coherence Theory of Truth Grounds the Validity of Conceptual Inferences

This section is not in *Conceptual Logic 3.0.*, but should/will be. (~ p. 43)

The validity of conceptual inferences is certified empirically; banal premises and conclusions may be via attiva propositions or via passiva de dicto reports on our widely shared lexical practices, except for de jure premises. Agreement by qualified speakers on the validity of inferences in their language is the only authority that serves to justify judgments of their validity. Aristotle’s basic Barbara syllogism relies on it. Such banal propositions are the most reliable ones to use, because they provide the most secure agreements on the validity of conceptually related premises and conclusions.

[/] animal dog	[:] square four-sided
[/] dog terrier	[.] my garden three-sided
	[!] three-sided four/~three-sided

[/] animal terrier	[.] my garden ~square
--------------------	-----------------------

The left inference is a conceptual interpretation of the Barbara inference, which might have been intended by Aristotle. I don’t know; neither do I know he intended the relation between these terms to be class inclusion, as Boole and his successors did. I doubt it. British extensionalism grew like Topsy but isn’t the only way to read Barbara.

Basically, I'm just going to move validity tests down one level from Wittgenstein's alethic truth tables to their basement logic's **coherence tables**, Appendix II, p. 54. Barbara is a conceptual inference, on the left above. Since a proposition is coherent if and only if its emplacement profile is S+P+ (Emplacement Chart, line 1.), it's easy to see that if we assume the following emplacement profile for Barbara's propositions,

$$\begin{array}{l} \text{^[/] animal+ dog+^} \text{ Coherent } [\rightarrow] \text{ <[/] animal+ dog+> } \text{ True} \\ \text{^[/] dog+ terrier+^} \quad \text{“} \quad [\rightarrow] \text{ <[/] dog+ terrier+> } \quad \text{“} \end{array}$$

$\overline{\text{^[/] animal+ terrier+^} \text{ “} \quad [\rightarrow] \text{ <[/] dog+ terrier+>, \text{ “}}$
they're all coherent. This shows the conceptual inference on the left is valid, because ^animal^ and ^terrier^ have coherent emplacements in the premises; therefore, unless you've committed the fallacy of equivocation, they must have the same coherent emplacements in the conclusion. This satisfies the conditions for conceptual validity.

Since any coherent conceptual proposition with an S+P+ profile, satisfies the coherence conditions for statements' truth, the alethic inference on the right is valid, because it, too, satisfies the conditions for validity. If the premises are true, so must their conclusion be true. The above inferences empirically, visually, show this—all +s.

From banal coherent propositions, even modestly equipped English speakers can recognize the validity of these inferences. Most do not deny the coherence of the conclusion if they have enough English to acknowledge the coherence of the premises and to perform the operations called for by the functors.

If you don't agree these inferences are valid, I suggest you first check to see if you have a firm grasp of the functor operations. Try out your grasp of the S+P+ coherence test for validity on the right hand triangular-garden inference, prior page.

We move from a banal valid inference to its valid form, thereby increasing the extent of our reasoning capacities about conceptual coherence when we do the following: **Substitute variables for concepts, same concept, same variable.**

The following valid inference forms are the result of these recommended substitutions for the ^animal^ and ^square^ inferences, respectively.

$$\begin{array}{ll} \text{[/] ^a^+ ^d^+} & \text{[:] ^s^+ ^f^+} \\ \text{[/] ^d^+ ^t^+} & \text{[.] ^g^+ ^t^+} \\ & \text{[!] ^t^+ ^f^+} \end{array}$$

$$\overline{\text{[/] ^a^+ ^t^+}} \qquad \overline{\text{[.] ^g^+ ^\sim\text{s}^+}}$$

These forms are useful for logically extending reasoning about the coherence of premises and conclusions that are not banal and about those whose coherence we disagree. We move from the easily known, the banal, to the arduously known, the controversial, with the substitution of variables for emplacements/assignments: All subsequent inferences that share the same form are valid, even though they have variant emplacements.

We don't need Goedel-Frege appeals to 'third-realm' intuition to support the 'truth' of logical or mathematical 'statements' since they have no truth value. We have our lexical knowledge to support the coherence of our world's emplacements into pure logical/mathematical propositions. By substituting variables for the constants in exemplary conceptual inferences which most qualified speakers employ, we produce valid inference *schemas*. Alethic axioms have no more claim to our consent to 'their truth' than is handed to them as banal coherent conceptual propositions. Pure logic and mathematics have no true or false statements, because all their terms are variables. They acquire the truth value of statements only after we emplace constant substantives and tropes into their S and P variables.

Models are often used to support a system's axioms and theorems, which depend for authority on precisely the same grounds as "shared lexical practices". Arithmetic, a favored *coherence model* for 'alethic' systems, is as banal a source of axioms' 'truth' and of alethic 'validity' as you can get, and for that reason is correctly favored as a model by alethically oriented logicians and mathematicians.

Appendix I **Table of contents**

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Appendix II

This Emplacement Chart is a combination a two-valued (coherent/incoherent) logic for propositions' coherence, and a three-valued epistemological logic (entitled to claim a statement is True, False, or Unknown) for statements' truth value. That's why there are sixteen rows in the Chart; from "On Emplacing", p. 43ff.

EMPLACEMENT CHART

	S	P	V	
1	+	+	T	S+ P+
2	+	-	F	S+ P-
3	+	~	F	S+ P~
4	+	?	U	S+ P?
5	-	+	F	S- P+
6	-	-	F	S- P-
7	-	~	F	S- P~
8	-	?	F	S- P?
9	~	+	U	S~ P+
10	~	-	F	S~ P-
11	~	~	U	S~ P~
12	~	?	U	S~ P?
13	?	+	U	S? P+
14	?	-	F	S? P-
15	?	~	U	S? P~
16	?	?	U	S~ P?

In the S(ubject) and P(redicate) columns, "+" indicates you know there is a coherent emplacement; "-" indicates you know there is no coherent emplacement; "~" indicates there's an incoherent emplacement; "?" indicates you don't know if there is or isn't a coherent emplacement for a grammatical subject or predicate. In the V(alue) column, T is true, F is false, and U is unknown.

Now, get out your red pen and make a red dot. You're entitled to say <The dot is red> is true if you've done the following:

You've coherently emplaced, literally put the dot into the space occupied by the sentence's subject, /dot/, and put the (dot), the red trope's carrier, into the predicate token /red/'s space. /Dot/ and /red/ are the sentence's categorematic tokens. Your emplacements satisfy Row 1 of the Emplacement Chart, S+ P+: dot+ red+. I write coherent, collocated emplacements, surrounded by the bold /E/s, in /The dot is red/ this way:

^E.E @ /dot/ & E(.)redE @ /red/.

This emplacement proposition shows we're entitled to claim <This dot is red> is true.

^E.E @ /dot/. shows a dot is coherently emplaced in-/@/-- /dot/'s space.

^E(.)redE @ /red/. shows (.) has carried a red trope coherently into that sentence's predicate token, /red/. We now have dot+ red+; this indicates **^E.E^** and **^E(.)redE^** are

coherent collocated emplacements of the dot and its red color into the sentence. The parentheses around, (.), in ^E(.)redE @ /red/ shows the dot has carried a red trope coherently into /red/.

When these two coherent emplacement operations occur, I say the dot and the red trope are **collocated** in a sentence. And when they're collocated, S+P+, we're entitled to claim <The dot is red> is true; or, more colloquially, we 'know' the dot is red. **E.E** is the **semantic subject**, /dot/ is the **grammatical subject**. There can be no truth ascription to statement tokens without the world's semantic subjects and predicates. This is ground zero for truth entitlements. That's why you should hug ^emplace .

TOM: The dot is emplaced twice; first, in the subject, then in the predicate.

THELMA: It's emplaced first in /dot/ and again when you emplace the red trope into /red/, because you can't detach a trope from its host. "Carries" doesn't designate an ontological relation between substances and their properties, but reports that I've physically carried the predicate's emplacement on the back of its host into a sentence's predicate place. If the red trope goes where my dot goes, they're collocated, and that's all we need for verifying the truth of <The dot is red>.

This hands-on nominalism extends the promise of "direct" reference, and gives a literal interpretation of Frege's figurative "falling under" a concept: An argument, **E dot E**, coherently emplaced in a sentence's subject, "falls under a concept" if it carries a trope coherently emplaceable in the 'function'/predicate token.

^EleafE @ /dot/ shows I've incoherently emplaced a leaf in /dot/'s space, and $\text{^E(.)greenE @ /red/}$ shows I've incoherently emplaced green in /red/'s space.

Diego Marconi reports that Donald Davidson, in his Hermes Lectures, given at Perugia in May, 2001, asks "...what is the connection between a subject and a predicate that unifies them into a proposition?"²⁴ That's looking for unity in "all the wrong places", as Tarski does, on whom Davidson leans: Statements' are unified because the predicate contributes the truth conditions of a statement with that subject. This is deceptively near the right answer, except for one affliction: Predicates can't unify; they're inert. Humans carry an object emplacement from the subject to the predicate during emplacement maneuvers; humans unify subject and predicate, if the emplacements are coherent. This is the way of *via attiva*. When such emplacements fail, there is no lexical unity; incoherence is the result. Once again, honor the agents, and the coherence value of the propositions they construct. When agents are left out, we're left with reliance on magical acts by inert parts of speech.²⁵

Try tenderly, doubly emplacing your tender pinky in /My fingernail is pink/, Tom. Write it big. Now, unify the subject and predicate tokens in that sentence token by tripping in lexical/conceptual space from ^fingernail to ^pink . Driving from San

²⁴ Marconi's review of Donald Davidson's, *Sulla verita'*, Trans. S. Levi; Roma-Bari, Laterza, 2006(?).

²⁵ Diego Marconi, "Predicazioni della verita' (True Predications)"; *Il Sole-24 Ore*, 17 April, 2006.

Francisco to Los Angeles is **one** trip; so is strolling from **one** token, /San Francisco/ to another, /Los Angeles/.

Seriously, write that sentence down and put your pinkie in /fingernail/'s space, then *move it* into /pink/'s space. Is your <My fingernail is pink> true or false?

Appendix III

The *historical setting* of conceptual logic (pp. 1 – 9, from *The Logical Structure of Conceptual Coherence 3.0*. In this appendix, pp. 57 – 65. Revised slightly, 2016)

THE LOGICAL STRUCTURE OF CONCEPTUAL COHERENCE 3.0 What They Said about Coherence

"Now, Bob, I don't want you to think I'm not incoherent."
Harold Ross (letter) to Robert Benchley

"All reasoning is nothing but the joining and substitution of characters,
whether these characters be words or symbols or pictures."
G. W. Leibniz

"State (California), tribe debate definition of slot machine"
Headline, *San Francisco Chronicle*, 12/01/04

"Those who can make you believe absurdities, can make you commit
atrocities."
Voltaire

"There were little bits of typed sense that began only very slowly
to have a larger coherence."
Eli Gottlieb, *The Boy Who Went Away*

"...the medieval makers of mappae mundi...were less interested in seeing the
world as measured space than as an itinerary... Their job was to give some
idea of the marvels to be encountered along the way."
Simon Schama, "Maps", *The New Yorker*, 02/21-28/2000

"Other dreams came and left while the bank
Of colored verbs and adjectives was shrinking from the light
To nurse in shade their want of a method
But most of all she loved the particles

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That transform objects of the same category
 Into particular ones, each distinct
 Within and apart from its class."
 John Ashbery, "Scheherazade"

"A mountain is as indescribable as a man, so men give mountains
 names: Ovarda. Civriari. Orsiera. Ciamarella. Viso."
 John Berger, *To the Wedding*

"An object is never so closely attached to a name that another can't be
 found that suits it better."
 Rene' Magritte

"What I have presented here is a messy and plural ragbag of lives and deaths
 that cannot simply be ordered into a coherent conceptual schema."
 Simon Critchley (*The Book of Dead Philosophers* 2009)

1. Orientation and terminology

This is an informal summary of some coherence logic, a logic of concepts. I have put enough here to help you get a start on the [Emplacement] functor and the concept of [^]coherence[^] to understand the coherence of subject/predicate attributive propositions, and of some valid conceptual inference forms that may be used in reasoning about concepts. It does not cover relation sentences beyond pregnant suggestions (Forthcoming in 2017, ?).

Tom, this essay should help you comprehend our conversations in "On Emplacement" at a deeper level and assess our conclusions about the Liar paradox.²⁶ This is a precis of *The Logical Structure of Conceptual Coherence 3.0*, with a list of the symbols and their names used in our conversations about paradox, with brief explanations of them, as well as a list of new conceptual distinctions and some valid inference schemas for conceptual logic.

If you give this essay to anyone else, Tom, advise them to read our conversation of "On Emplacing" before or after reading this.

The chiefest result I aim for is a mature concept of [^]coherence[^], which presently is seriously embryonic. In my version, it unifies lexical meaning and reference by incorporating them into a logic of concepts. This project is deeply antithetical to Quine's summary remark, which could serve as an anti-epigraph to this essay:

"When the cleavage between meaning and reference is properly heeded, the prob-

²⁶ For more extensive applications, see A. K. Bierman and R. N. Assali, *The Critical Thinking Handbook*, Part III.

lems of what is loosely called semantics become separated into two provinces so fundamentally distinct as not to deserve a joint appellation at all." W. V. O. Quine, "Notes on the Theory of Reference".

There is a "joint appellation" and it's called "coherence conditions", and Quine could have welcomed them as a confirmation of his strictures against analyticity and the utility of alethic modal logics. He could have happily greeted a new vision of the Promised Land, *Coniunctio*.

One of the corollary results is the maturation of \wedge concept \wedge , which has been arrested in a fetal state for centuries. It should have been consigned long ago to a jar in a dusty case in Sicily's philosophical museum in Agrigento. This maturation includes an account of concepts' identity and individuation. Two other corollary results are a theory of predication and (symbol)leutic modalities for agents' semantic travels. Leutic modalities put various limits and allowances on agents' travel between concepts in lexical space and replace agentless alethic modalities and possible world semantics.

Contrasting Alethic and Conceptual Logic

Alethic logicians study truth value relations between statements. Coherence logicians study coherence value relations--coherent and incoherent--between concepts in sentential structures. I treat concepts as interpreted categorematic word tokens/types. This part of coherence value holds of combinations of categorematic concepts related by the copula in grammatical sentences, which I call propositions, ignoring all other sentence words, except "not". This logic needs only the [Any] quantifier. Truth value presupposes that we may coherently travel between the interpretations of the categorematic words of a sentence used to make a statement, subject to an interpretation of the copula.²⁷

Tom, please do not confuse what is being outlined here with semantic theories having the more comprehensive aim of providing readings for every element of all sentences in a language, such as J. J. Katz's in his *Semantic Theory*²⁸ nor George Lakoff's in his "Linguistics and Natural Logic"²⁹ nor with Ray Jackendoff's wider lexical investigations.³⁰ Jackendoff sidles up to something like coherence logic in that book at 6.2 - 6.4, but does not pursue it there. Coherence logic has closer alliance with the University of Buffalo's "ontology" and "expert systems" project, although, so far as I've read, their inferences are restricted to conceptual relations in single trees/pyramids, whose master is a subsumptive interpretation of the copula, unlike coherence logic whose inference sche-

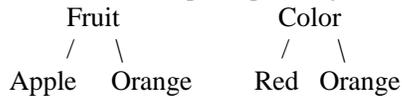
²⁷ A de facto exception is explained later, page 34ff. Also, see Bierman & Assali, *Handbook*, p. 369.

²⁸ New York, Harper & Row, 1972.

²⁹ *Semantics of Natural Languages*, eds. Donald Davidson and Gilbert Harman, Dordrecht/Boston, R. Reidel Publishing Co., 1972.

³⁰ *Semantics and Cognition*, Cambridge, Mass., MIT Press, 1983.

mas include relations between two conceptual trees/pyramids with substantive and tropes with (here truncated) subsubsumption pathways.³¹



A theory of predication that requires two conceptual trees or pyramids, one of substantives the other of property/trope concepts, is central to coherence logic. In his early work, 1740, Johann Andreas Segner, a professor at Jena and Goettingen, attempted a conceptual/ "idea" logic for the syllogistic in his *Specimen Logicae Universaliter Demonstratae*, edited and with a brilliant introductory explication by Professor Mirella Capozzi, University of Rome, Sapienza.³²

There are eight coherence relations, one monary and seven binary, between categorical concepts of subject-predicate attributive sentences. This restricted range, gives us a surprisingly wide coverage of the kinds of arguments we find in philosophical texts and daily discourse. To the extent that this initial coherence logic may not cover all plausibly valid conceptual arguments, it has to be supplemented. Many lexical studies precede this one, although to my knowledge no one before me attempted to extract coherence logic from them. Plato exploited [Subsume], Link], [~] functors in the *Sophist* when he constructed his fisherman and Sophist conceptual trees to clarify the concept ^sophist^. Aris-totle hinted at lexical functors in *Categories*. Bernard Bolzano did good work on the relations between "ideas". Although he defined lexical relations in class terms, he made useful advances on earlier treatments of concepts.³³ See Part I, Ch. 3, and the Appendix to that chapter. John Lyon deployed conceptual relations in his *Structural Semantics*, applying them to "Some Lexical Subsystems in the Vocabulary of Plato" made up of Greek epistemological terms.³⁴ Relevant work has been done under the name of "semantic fields". See, for example, Adrienne Lehrer's *Semantic Fields and Lexical Structure*.³⁵

I decided that "a structural theory of concepts" is the right way of baptizing my account of them after reading Charles Parsons' remarks about a structuralist view of mathematical objects: "... reference to mathematical objects is always in the context of some back-ground structure, and that the objects involved have no more to them than can

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³¹ See <http://wings.buffalo.edu/academic/department/philosophy/ontology>.

³² CLUEB, Bologna, 1990. Thanks to Capozzi, I learned of this forgotten work. Her introduction is in English.

³³ *Theory of Science (Wissenschaftslehre, an Attempt at a Detailed and in the main Novel Exposition of LOGIC With Constant Attention to Earlier Author)s*, (Trans. George Rolf), Univ. of California Press, Berkeley, 1972.

³⁴ Basil Blackwell, Oxford, 1963. See also his *Semantics*, Volume 1, Chapters 8 and 9. Cambridge University Press, Cambridge, 1977.

³⁵ North Holland, Amsterdam, 1974.

be expressed in terms of the basic relations of the structure".³⁶ That this applies to my account is evident if you substitute /concepts/ for /mathematical objects/ in his remark.

The main difference between others' works and mine on lexical relations is that they have not extracted a logic from them. Lyon and Lehrer have concentrated on descriptions of them. A useful elaboration of Lyon's work that proceeds from a structural theory of concepts/meanings may be found in D. A. Cruse's *Lexical Semantics*.³⁷ He stresses the need for uncovering systematic lexical relations, but does not aim at a logic as I do. His book serves a different purpose but is a steady restraint on the presumption that a proposed coherence logic is fine-grained enough to capture all the lexical relations that contribute to distinctions between words' 'meanings'. However, this is no more a shortcoming of coherence logic than it is of truth logic. Both kinds are designed for specific purposes. The novelty here is that coherence logic uses seven functor interpretations of the copula and conceptual negation to the conceptual relations cited and explained in lexical field theory. Without these additions, a conceptual, lexical logic would not have enough reach to be interesting or useful, especially for philosophers. Linguists tend to let grammar influence their research beyond the needs of philosophers, a natural tendency; it is an obstacle for uncovering and isolating lexical logic from each language's grammatical peculiarities.

The basic, minimum truth logic philosophy students need in order to master conceptual/coherence logic is propositional logic. Quantified logic beyond [Any] is of no use to conceptual logic; it contributes little to conceptual understanding and investigations; it's even pernicious when it's underwritten by possible world semantics, which, although favored by current (2015) journal-sponsored editors, is useless as a guide to judgments about the coherence (meaningfulness, sense) of lexical interpretations in our natural languages, which are our primary loci for thinking, reasoning, and intersubjectively sharing our lexical practices. The Owl of Possible Worlds doesn't fly at midnight.

Fred Sommers published related work with logical intents in 1959, "The Ordinary Language Tree".³⁸ His mature master work is *The Logic of Natural Language*.³⁹ My in-

³⁶ Parsons, "The Structuralist View of Mathematical Objects," p. 303: *Synthese*, #84, pp. 303-346. Parsons says he tries "to make clearer the version of the structuralist view of mathematical objects" he defended earlier in his "Structuralism and Metaphysics", *The Philosophical Quarterly*, Vol. 54, No. 214, January 2004. See also Stewart Shapiro, "Theories of Structure", *Philosophy of Mathematics: Structure and Ontology*, Part II, Ch. 3, Sect. 4, pp. 84 – 9; On p. 135, he writes, "I take 'coherence' to be a primitive, intuitive notion, not reduced to something formal, and so I do not venture a rigorous definition. The notion can be usefully *explicated*." Also see his "Existence and Uniqueness: Coherence and Categoricity", Part. II, Ch. 4, Sect. 8, pp 132 – 136. (Oxford, Oxford University Press, 1997) I want to emphasize that, unlike Shapiro, I do have a semi-formal, non-axiomatic account of ^coherent^ which differs from his. He relies on alethic logic and set-theoretic notions whereas I rely on coherence logic. In any case, I don't think a 'definition' would be useful any more than most are, mainly because they don't specify the conceptual relations between the concepts used in 'definitions'. Resort to 'implicit' definiens is a soft way of admitting failure; so is saying they're 'parts' of a concept, as if all 'parts' stood in the same relation to the definiendum. What is required is laying out a conceptual structure with the use of its functors, which yield a canon for inferring from coherent premises to the coherence value of combinations of concepts.

³⁷ Cambridge University Press, Cambridge, 1986.

³⁸ *Mind*, LXVIII, April 1959, pp. 160-185.

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itial work on conceptual logic was published in *LOGIC: A Dialogue*, "Twelfth Conversation".⁴⁰ Wide amplification and revisions of that version appear in *The Critical Thinking Handbook*, Part III, "Reasoning about Concepts", which I call version 2.0.

Conceptual logic could provide a systematic basis for machine translation instructions, utilizing conceptual inference rules, thereby approaching closer to human interpreters' lexical competence. In a related endeavor, it could provide a non-standard form of a lexicon, resembling John Wilkins' dictionary, which relies heavily on a categorical tree structure.⁴¹ Wilkins was the founder of the British Royal Academy. He attempted to construct an artificial, symbolic language, with which, by avoiding the faults of popular language, he could "repair the ruins of Babel". He is said to have influenced Leibniz who, however, considered his own *Lingua Philosophia* superior to Wilkins' effort. Expert systems" use Wilkin's lexical [Subsume] functor, which is but one functor in my logic.

Coherence logic rests in a cut beyond Husserl's grammatical preconditions of meaning and S. Lesniewski's "meaningful" expressions.⁴² Husserl's notions of Sinn (sense), Widersinn (absurd), and his grammatical notion of nonsense (Ursinn) exclude what I am calling coherence and incoherence. Lesniewski's notion of "meaningful" expressions, which L. Lukasiewicz turned into explicit recursive rules for well-formed expressions, is also grammatical rather than lexical. J.-L. Gardies points out that, although Husserl and Lesniewski were after grammatical criteria, they are important for meaning. "...It is precisely the task of grammar to define, independently of meaning, the basic conditions of the possibility of meaning".⁴³ It is precisely the task of coherence logic to specify the basic conditions of coherence without which there is no 'meaning'. Although grammar is not a sufficient condition for 'meaning', Gardies' rational grammar is a suitable base for conceptual logic's slim grammatical requirements. My work falls within Ferdinand de Saussure's structuralist framework, because, like him, I give primacy to *la langue* (via attiva tongue) over *la parole* (via passive word).

Reichenbach: Russell discovered 'meaningless' expressions/[^]incoherent propositions[^]

Hans Reichenbach writes, "I must turn now to a discussion of Russell's *theory of types*...It is the basic idea of this theory that the division of linguistic expressions into

³⁹ Oxford, Oxford University Press, 1982. The fulcrum of this book is negation. Traditional logic called for negation of terms while modern logic focused negation on statements, a *big* difference. My conceptual negation, [~] applies to both propositions and their concept/terms. Sommers sticks close to alethic and class (quantified) logic; my coherence logic does not. He's defending Aristotelian term logic as a more suitable canon for reasoning in natural languages.

⁴⁰ A. K. Bierman, Holden-Day, San Francisco, 1964. Amplification and some revisions of that version appear in my and Robin Assali's *The Critical Thinking Handbook*; Prentice Hall, Upper Saddle River, NJ, 1996. These two earlier version of my logic gave rise to the 3.0 in the title of this essay.

⁴¹ *An Essay towards a Real Character and a Philosophical Language*, Gellibrand, 1668, London.

⁴² For Lesniewski's *Logic of Names*, see C. Lejewski, "On Lesniewski's Ontology", *Ratio*, Vol. I, No. 2, 1958.

⁴³ J.-L. Gardies, *Rational Grammar*, p. 32; trans. Kevin Mulligan, Philosophia Verlag, Munich, 1985; available from The Catholic University of America, Washington, D.C..

true and false is not sufficient; that a third category must be introduced which includes *meaningless* expressions. It seems to me that this is one of the deepest and soundest discoveries of modern logic."⁴⁴ Reichenbach is a bit parsimonious here; he should have included the fourth category, *meaningful*. I prefer the pair *coherent* and *incoherent* to *meaningful* and *meaningless*. The latter two carry a lot of contested, useless freight.

Coherence logic makes such concepts as *^meaningful/meaningless^* and *^significant/nonsense^* more precise, and matures the embryonic *^coherent/incoherent^* now popular in the philosophical literature. There's an inarticulated sense that it's a logical concept but not identical to truth logic's *^consistent/inconsistent^*, which distinction I aim to clarify here. This essay on coherence/conceptual logic will damp the pain evident in the following examples where "coherent" aches for a mature elaboration that can turn it into a more precise concept, and retires the casually used, frequently vague "makes/does not make sense" and, instead, promotes *^coherent/incoherent^*.

Examples of contemporary use of *^coherent^* and *^incoherent^*

"But is any form of non-reductive *physicalism* coherent? Any *coherent* form of non-reductive physicalism would come at a price. It would have to make *sense* of the *idea* that there are certain modal facts..."⁴⁵

"On the main issue of the *compatibility* of free will with determinism, Kane argues ...that there is no *incoherence* in the *idea* that free choices that are undetermined by their antecedents can nevertheless be things that the agent does..."⁴⁶ Ginet also mentions the "*coherence of indeterministic free will*" (p. 313).

I allow, Wedgwood may be confusing *^idea^* with *^statement^* as may Kane (via Ginet's reading), a common error, somewhat like Hegel's mixup in his *Logic*. Wedgwood's "there are certain modal facts" looks like a statement that may or may not be true. Kane's "agents" make "free choices (undetermined by their antecedents)" also looks like a statement; his "*indeterministic free will*" looks less like a statement. However, I don't think either is repeating Hegel's mixup. To do so, they'd have to be interpreting "coherent" as *^consistent^* and "incoherent" as *^inconsistent^*. Charity calls for crediting them with knowing that consistency holds between two or more statements with respect to their truth value whereas in their examples they credit coherence value to but one 'statement'.

⁴⁴ Hans Reichenbach, "Bertrand Russell's Logic", p. 37. *The Philosophy of Bertrand Russell*, Ed. Paul Arthur Schilpp; Evanston and Chicago, Northwestern University, 1944.

⁴⁵ Wedgwood, Ralph, *Proceedings and Addresses*, American Philosophical Association Bulletin, Vol 72, No 3, January, 1999, p. 129. (My emphases) This remark presumes alethic modalities are the only pertinent ones. I challenge this later, suggesting that in conceptual logic we rely on *via activa* lethic modalities—[Enjoined to say], [Enjoined not to say], [Allowed to say]—rather than *via passiva* alethic modalities—[Necessary], [Impossible], [Possible].

⁴⁶ Carl Ginet's review of Robert Kane's "The Significance of Free Will", *The Philosophical Review*, April, 1998 (Vol. 107, No. 2), p. 312. (The first two emphases are mine.)

This leads me to believe they're thinking about the coherence value of combinations of concepts in their cited sentences. With this interpretation, Wedgwood is wondering whether the combination of *non-reductive* and *physicalism* in a sentence is "coherent", and whether the combination of *modal* and *fact* in a proposition makes "sense", whether it is "coherent". Likewise, Ginet is attributing to Kane the claim that the propositional combination of *free choice* and *things the agent does* versus *is determined to do* is not "incoherent", and that the combination *free will* and *indeterministic* is "coherent".

* * * *

One end result I want for this essay is your recognition that inferences about the coherence value of conceptual combinations in single propositions must use a logic different from the one you use to determine several statements' consistency. Notice, too, James Griffin's "conceptual truth" in the following remark: "It is, I believe, a conceptual truth that promises create obligations...".⁴⁷ I gather he's consciously contrasting conceptual truth/coherence from factual truth.

From the distinction between conceptual coherence and consistent truth, it's but a short step to one between coherence logic and truth logic.

The mentions of "coherent and "incoherent" in current literature shows philosophers are aware of this distinction but haven't formulated it nor provided a logical canon we can use to establish coherence value. Please note that I deliberately haven't chosen 'horrible' examples; they're standard specimens collected from highly competent philosophers' discourse to exhibit how embryonic *idea* and *sense*, *notion* and *concept*, are in contemporary philosophy, and, consequently, how inchoate the attribution of coherent and incoherent presently are to propositional combinations of concepts.

The Lexical Imperative

Conceptual logic plays a parallel role in reasoning about concepts that truth logic plays in reasoning about statements. As valid inferences of truth logic preserve the truth of premises in the conclusion, so do valid inferences of conceptual logic preserve the coherence of premises in the conclusion. Benson Mates, in personal conversation with William Craig and me, called my conceptual inference schemas "production rules" for coherent sentences. The accent on agents' productions is right; but, for rules I substitute advice. Games thrive on rules, natural languages on advice, on counsel. Wittgenstein's strictures in the *Tractatus* led only to the outskirts of the Vienna Woods, in which "the best minds of his generation" lost their way. He was faithful to Russell's Proteus-model for philosophers: Always be open to revising your thought. Wittgenstein was when he shifted from hard- to soft-boiled 'rules', the latter akin to advice. I put his 'game' meta-

⁴⁷ Griffin, James, *Well-Being*, p. 79, Oxford, Clarendon Press, 1986.

phor and “forms of life” under the rubric of the *hypothetical* “**Lexical Imperative**”, p. 105ff, this essay to which the following is an introductory approximation.

If you want your sentences to be understood by others as you understand them and to understand others’ sentences as they understand them, interpret their word→concepts and copula→functors and combine them as they do, if you believe their sentence rewrites are coherent.

Words enclosed in **carets**, *^bog^*, are interpretations of tokens and types. Check page 7 – 8 of our first conversation in “On Emplacing”: A word type is *any* token that fits a given description of a token; its not an entity over and above this or that token, nor is it a set of tokens; it’s a mode of counting several tokens as ONE (type). See the discussion about *^any^* and *^all^* in our first “On Emplacement” conversation, p. 17.

I call an interpreted word token/type a concept, with not a whiff of mental(ese) tolerated, whether it’s a materialistic or purported mental version. I use **slash** marks, */.../* as in */bank/* to indicate a token and **double quotes**, “...” to indicate a type. *^Bank^* is a concept, an interpretation, a rewrite, of the token */bank/* that fits the physical description type for “bank”.⁴⁸ **To interpret a type’s token is to place it in lexical space.**

Each place different place occupied by a token individuates a distinct concept. “Bank” has tokens in several places in lexical space; so, tokens in different places are different concepts. Tok-ens that occupy the same place in a system of lexical relations have the same interpretation whether or not they count as the same physical type of token; */red/* and */rosso/* have the same place in lexical space, hence, are identical concepts, although they’re normally counted as different physical types, English in contrast to Italian tokens.

An interpretation of a token is a **rewrite** of it; the rewrite might use a similar or a different type of token. That’s why I asked you to avoid ‘mentalese’, Tom. *^Red^* is a rewrite of */rosso/* and *^rosso^* is a rewrite of */red/*. *^Commie^* is a different rewrite of */red/* if */red/* were subsumed under */political party/* in lexical space.

A concept is a token in lexical space; they’re physical entities nested in a structured network; their locations are identified by the lexical relations they have to other tokens. (I don’t claim my list of these lexical relations in this essay is exhaustive.). We may determine where they are with the help of conceptual logic. Concepts aren’t our ‘ideas’ of where interpreted tokens are in lexical space—that’s knowledge—but where the tokens themselves are. Our ‘idea’ of where they are may be mistaken; and we may disagree about where they are. Conceptual logic helps us settle differences in our ‘ideas’ of where they are.

By contrast, to say I *have* a concept is to say I *know* where a token I speak, write, sign, hear, or read is in lexical space. But *to know* where C is is not *to be* C.

⁴⁸ For a useful discussion of *^type^*, see Roy Mash’s *Use, Mention, Type*, MA Thesis, San Francisco State University, 1987, especially Chapter III, “Token-Kinds”, pp. 5-8.

Although my lexical relations are pretty minimal, they're enough to identify lots of concepts and to symbolize a wide range of arguments used by professional philosophers and alert researchers. And, importantly, they're rich enough to back up the claim I made in "On Emplacing": Past attempts to show the Liar is a paradox are incoherent. Since it's not a paradox, it doesn't need a 'solution'. I show also that conceptual logic is a sufficiently refined tool for rethinking ^natural kinds^. See "Stipulating and Conceiving 'Natural' Kind concepts" on the website:

A. K. Bierman: <http://philosophy.sfsu.edu/philosophy/page/arthur-bierman>.
Easy access: sfsu arthur bierman.