ASSIGNMENTS & VARIETIES OF EMPLACEMENT

Addendum to **"On Emplacing"** and **"The Logical Structure of Conceptual Coherence 3.0":**[1]
Dots, fingernails, oceans, sub-atomic particles, and the starry skies above,
plus challenges to internalist accounts of referring

> I believe that in spite of all its snowfields Mont Blanc is a
> component part of what is actually asserted in the proposition
> "Mont Blanc is more than 4000 metres high."
> --Bertrand Russell (Letter to Gottlob Frege)

> Russell's analysis of the proposition expressed by "John is tall" pro-
> vides us with two components: the property expressed by the pred-
> icate is tall, and the individual John. That's right, John himself
> right there, trapped in a proposition. [I prefer "lodged in". Thelma]
> --David Kaplan, "Dthat"

> One scientist has created a sensor that transmits visual information via
> the tongue. Sounding remarkably like E. H. Gombrich, he says, "you
> don't see with your eyes, you see with your brain."
> --*Art in America,* 2008

> I never read of a hermit, but in imagination I kiss his feet; never
> of a monastery, but I could fall on my knees, and kiss the pave-
> ment.
> --Samuel Johnson, *Journey to the Western Islands of
> Scotland*

> **Imagination** is the power of presenting an object in intuition (sensed)
> even *without the object's being present*.
> --I. Kant, *Critique of Pure Reason*, (B 151) (Trans. Werner S.
> Pluhar)

> At one point, he (Neil deGrasse Tyson) read copy that described dif-
> ferent kinds of light, visible and invisible. "In microwave light we
> can see all the way back to the birth of the universe...We have only just
> opened our eyes".
> --Rebecca Mead, *The New Yorker*, 02/17 & 24/2014

---

[1] They can be accessed at "sfsu arthur bierman".

Dooyng and thynkyng are clossyr than you thynke.
              --Fanebius Perlyng

From when I first exposed my conceptual logic to public scrutiny,[2] the most controversial and most criticized functor of my copula interpretations has been [Emplace]. It clarifies Russell's and Kaplan's remarks quoted above.[3] The [Emplace] functor in my conceptual logic provides an elaboration of their unripened comments. In them, they in effect reject ^referring^ and promote [Emplacing], which in the old terminology, could be labeled as a very direct, account of that concept. Referring's been so mercilessly and confusedly booted about in the 20th Century's philosophical literature as to bequeath us naught but a multi-bruised cadaver. They're still kicking it around. Time to move on. I'm here to help.

I don't, however, try to explain why Russell inserted "in spite of all its snow fields". A stylistic flourish, perhaps? Or "Don't include the snows as if they were part of Mont Blanc"? Or was it Russell's early warning of global warming?

I introduced new quotation devices in "On Emplacing" and "The Logical Structure of Conceptual Coherence 3.0" on my website, which I summarize in Fn. 3. below. They mark distinctions that boost precision in complex, encrusted discourse on contested philosophical topics.[4]

In this essay I elaborate on the [Emplace] functor by adding an [Assign] functor. They replace ^refer^, the major semantic crutch for alethic logicians. [Emplace] shows also that we must reject internalistic versions of referring, because they're private cognitive states unfit for publicly confirming that we understand each other's sentences. Internalism impedes shared, empirical verifications of our propositions' coherence; further, it's extraneous to the conceptual logic

---

[2] A. K. Bierman, *Logic: A Dialogue*, "Twelfth Conversation"; (San Francisco, London, Amsterdam; Holden-Day, 1964,) holds version 1.0 of conceptual logic; version 2.0 is in *The Critical Thinking Handbook*, Part III; (Arthur K. Bierman and Robin N. Assali; (Upper Saddle River, NJ; Prentice-Hall, 1996). Both were marred by infelicitous symbols and symbolization and by the lack of a modal component, which I supply in "The Logical Structure of Conceptual Coherence 3.0". (http://philosophy.sfsu.edu/philosophy/page/arthur-bierman). "sfsu arthur bierman" gives you quicker access to that website. Suggestions for changes, corrections, and additions are welcome. I acknowledge and thank Robin Assali for his critical help on 2.0.

[3] For an earlier introduction of my emplacement functor, see "On Emplacing", pp. 11 – 26, my website.

[4] **/…/** , a token word or sentence; **"…"** , a type word or sentence; **^…^**, a concept, a word's interpretation or a proposition, a sentence's interpretation; **<…>,** a statement; an alethic claim made with the use of an interpreted sentence. Medieval logicians called the above four references material supposition. **E…E is** used to indicate a substantive or a trope is emplaced, respectively, in a subject or predicate token embraced by /…/; when both are emplaced in a sentence's subject/ predicate sentence tokens, /S/ and /T/, we create emplacement propositions, ^EsE @ /S/ & E(s)tE @ /T/^. **{…}** is a link range of incompatible trope concepts. A subsuming concept is adjacent if it does not subsume any concepts intermediate between it and the subsumed range; for example, ^colored^ is adjacent to {red blue …} but not to ^scarlet^ or ^cerulean^;. Medieval logicians called this formal supposition. **[F]** bracket quotation marks distinguish functors|interpretations of the copula, from conceptual components of sentences, propositions, and statements whose quotation marks are ^…^. **[…]** is a congery of predicate concepts, each of which is bonded to a single substantive concept. I place "|" and "/" between words; "|" indicates words are roughly equivalent, as in "conceptual|lexical" coherence, "/" indicates they're not, as in "subject/predicate". Don't be daunted by these new symbols; it's just a matter of learning new spellings. Make a table.

embedded in natural languages. Reference theories lacking conceptual logic are undernourished; their alethic logics are ill-designed to trace and logically formalize coherent relations between sentence terms and 'referents'. To replace the embryonic ^refer^, we need an underwriting conceptual *ur* logic, a **basement logic**, with its eight copula functors, and particularly the [Emplace] functor to connect sentences' subjects and predicates, respectively, to the world's substantives and tropes. In this essay, [Assign] replaces [Emplace] as the primary, more generic functor we use to insert substantives and tropes into language: ^[Subsume, /] [Assign] [Emplace]^].

(4), below, shows my conceptual logic clarification of a Russellian predication sentence, 2., whose copula is interpreted as [Sooth, **.**], as predication. Its truth depends upon coherent emplacements in its subject and predicate via the [Emplace, E…E] functor. 4. has ground zero emplacements.

1. **^E...E** @ /…/^   - The [Emplace] functor
2. /The dot is black/   - Sentence token
3. **^ E**s**E** @ /S/ & **E**(s)t**E** @ /T/   - The emplacement *form* for 2.
4. **^E.E** @ /dot/ & **E**(**.**)**.E** @ /black/^   - Coherent subject and predicate emplacements of 2. via form 3.

1. shows the emplace functor for a substantive or trope.

2.'s /dot/ and /black/ tokens are variable place-holders waiting to be filled coherently with, respectively, a substantive (s) and a trope (t) within emplacement form 3..

3.'s left conjunct is for substantive emplacements, the right one for trope emplacements.

4. presents coherent emplacements in 3.'s conjuncts. E**.**E is coherently emplaced in /dot/ and "is a component part of what is actually asserted in the proposition"; but ^EneedleE @ /dot/^ is incoherent. The black dot to the right of (**.**) in the predicate place is the substantive (**.**) that carries a black trope into /T/, and, because its trope is coherently emplaced in /black/, it, too, "is a component part of what is actually asserted in the proposition". A red trope carried by (**.**) into /black/ is incoherently emplaced in /T/.

To be clear: On 4.'s right hand side, the trope/predicate field, the parenthesized dot (**.**) carries its black trope into /black/. Tropes don't have stand-alone existence; they need substantive porters, even in dreams, fantasies, and sunsets as in ^The buttermilk <u>sky</u> is white^.[5] Frege should have said subject as well as pred-

---

[5] A perceived trope collocated with a substantive, with or without the aid of intermediate instruments (microscope, camera, cyclotron), is often thought to be a property of a substantive. Tropes are events, which I explain later. Think of a perceived *trope* event as ^blue^ when coherently emplaced in /blue/, and think of the *property* blue, as *any* trope coherently emplaced in /blue/, that is, as "blue". The miniature world revealed by the microscope is one or more removes from unaided observation. Warning: Relations are not tropes and can never be so, as I argue in

icate tokens are "unsaturated". Emplacement literalizes "saturated" and "un-", which frees us from reliance on his metaphor.

I distinguish **grammatic** from **semantic** subjects and predicates. Subject and predicate tokens in token sentences are *grammatic* tokens; assignments and emplacements in them are *semantic* tokens. The former are physical language tokens. The latter are **substantives**—objects/ants; actions/rounding third base; processes/sugar melting--and **tropes**—temperature/chilly; colored/brown; humidity/damp—which may be coherently or incoherently emplaced, respectively, in grammatical subjects' and predicates' token places. It's coherent to say <The author is a fine stylist>, attributing the trope to a person, but it's incoherent to attribute that trope to a grammatical token, </The author/ is a fine stylist>, just as it's coherent to say </Horrible/ is made up of eight alphabetical letter tokens> but incoherent to say <My wife is made up of eight alphabetical letter tokens>. Anyone who says that of his wife, risks her thinking those letters are /d-u-m-b w-i-f-e/; she forbids hubbie to come home again. The distinction between grammatic and semantic subjects and predicates is due to the [Emplace] and [Assign] functors.

Edot/blackE kind of emplacements bring physical content into sentences in conjunction with the [Subsume] functor. Just as we subsume ^dog^ under ^animal^ and ^terrier^ under ^dog^, so do we subsume your beloved Scotty under ^terrier^ when Scotty is coherently emplaced in /Scotty/ of /Scotty is a collie/. With that act, Scotty becomes ^Scotty^ via [**E**…**E**] and [Subsume], because, with these functors, we conscript Scotty into a unique place in our lexical/conceptual space per a *structuralis*t account of concepts. Any entity that's given a place in that structure becomes part of a language and is endowed with conceptual status.

The copula isn't univocal. I distinguish eight kinds of functors in my interpretations of the copula in subject-predicate sentences. We construct a lexical structure with these functors, a conceptual homeland for linguistic tokens. Not all tokens are linguistic. /Mulp/ is a token, but isn't a word in English and has no interpretation in it, because it's not functorally related to any other English tokens; it could, of course, be an English word if you reversed the order of its letters, /plum/, because we've assigned it a unique place in our English lexical structure. The [Subsume] and [Emplace] functors together provide a rite of passage for your Scotty to transform into ^Scotty^ when emplaced in /Scotty/. That's how pet dogs and Mont Blanc are "actually 'asserted' in propositions", mein Herr Frege.[6]

The Logical Structure of Conceptual Coherence 3.0, and "A Conceptual Logic for 'Relations'", forthcoming. They require separate status and appropriate investigation.

[6] Care must be taken with the "asserted' part of Russell's sentence. It's coherent to assert statements but incoherent to assert substantives such as Mont Blanc. It is, however, coherent to assert statements whose grammatical subjects and predicates have been emplaced, respectively, with semantic subjects, such as Mont Blanc, and with semantic predicates, such as 4000 meters high, because both, having been assigned a place in our lexical system, are semantic parts of a statement.

Here's another emplacement example that I want you to execute.

      2.* /My left thumbnail is pink/.

Write sentence token 2.* on a piece of paper. Your task is to emplace a substantive and trope into 2.*, as I did in 4., page 2.

      4.* ^**E**my-left-thumbnail**E** @ /**M**y left thumbnail/ & **E**(my-left-thumbnail)pink**E** @ /pink/^.

Put your left thumbnail in 4.*'s /My-left-thumbnail/ and put your left thumbnail, the porter of pink, where /pink/ is. You will have coherently emplaced both, **S+P+,** if your emplaced left thumbnail does carry a pink trope as in 4.*. Do it; emplace your left thumbnail and its pink in 2.* now. The asp won't bite.

Congratulations! With these coherent, S+P+, emplacements you've verified the truth of <My left fingernail is pink>.[7] Coherent emplacements into sentences' grammatical subject and predicate places, ^S+P+^, spawn coherent semantic propositions such as 4.*, which in turn entail the truth of their paired alethic statements:

      ^S+P+^ entails the truth of <My left thumbnail is pink>.

If you'd emplaced a conceptually incompatible **E**bruised-black**E** into /pink/, S+P-, you'd have made an incoherent emplacement, ^S+P~^, which falsifies, <My left thumbnail is pink>. Remember: In conceptual logic, both contradictory and contrary statements may be coherent; whereas, in alethic logic, only one of them may be true.

This coherence based account of truth is more transparent than positivists'; their canonical, exclusionary mantra has been, roughly, 'Meaning relies on truth conditions; if you can't specify the truth conditions for a statement, the statement is meaningless'. Have you really understood positivists' mantra, Tom? So you can explain it to a skeptical, sharp graduate student, who might ask "How could anyone know a statement's truth conditions if they didn't know its meaning?" What are the truth conditions of "Per istinto sanno che il divino non e' permaloso"? I reverse positivists' mantra:

      Truth value entitlements rely on coherence|'meaning' conditions.

Coherence is ur, truth is junior. Conceptual|coherence logic is the **basement logic** of alethic logic. Note that statements' truth and falsity are grounded in coherent semantic values, S+P+, for a proposition's subject and predicate. A 'relational proposition calls for a coherent order of its terms; if ^Jill is taller than Jack^ is a coherent order, ^Jack is taller than Jill^ is an incoherent asymmetrical order for the functor [Taller than].

Notice I've not mentioned a fact/statement dualism nor said anything of their correspondence. What's happened in this story is the begetting of a **monary fact**. Sentences await **a**ssignments/**e**mpla**c**ements, **a/e**s, for short; if they're subject/predicate terms have coherent **a/e**s, the emplaced substantives and tropes become con-

---

[7] See "On Emplacing" on my website, pp. 43ff, for the truth-value entitlement Emplacement Chart.

cepts, residing in a single linguistic proposition, **^**Tom's sleeping**^**, which serves as the basement source of its companion statement's truth or falsity, <Tom's asleep>. That's all there is to alethic verification via coherence. Conceptualize this constructed entity as a *single*, linguistically molded **fact**. World and language have coalesced. Now, re-read the opening sentences of Wittgenstein's *Tractatus* with this concept of **^**fact**^** in mind to see where he went off on the doomed binary track.

4.*, previous page, exemplifies the ground-zero Gold Standard for visually observed emplacements in sentential inscriptions whose copulas are interpreted as predication, which I call the [Sooth, **.**] functor. Sooth's office prompts us to perform via attiva acts of emplacement, transporting substantives and their tropes into their grammatical places in categorematic sentence tokens. It's our habitual "down home", "everyday" way of identifying the physical content of our statements that we use to verify and disverify statements. If you don't cotton to this, please, Sir or Madam, contritely turn in your Empirical Society membership card to your nearest philosophy department or the Hume Society.[8]

Physically emplacing substantives and their tropes into the places occupied, respectively, by token sentences' grammatical subject and predicate tokens, shifts us beyond the vexed procedures attending mentalistic, **a**physical **R**eferring **& R**epresenting, **aR&R**. I detect too often the lingering odor of psychological perfume emanating from philosophers' aR&R accounts. When I smell it, I realize tainted aR&R accounts are luring the innocent to let intentions pass as players in the logic of our cognitive enterprises. They are not such and can never be such. Mental powers internally exercised are conceptually distinct from the overt coherent and incoherent public emplacements they beget. Thoughts, being private, can never be publicly observed; but, we do observe others' physical emplacements in visual, aural, semaphored, et cetera, tokens, which are what we need and all we need to know we're making the same a/es as our interlocutors are.

Speakers and auditors participate equally in the illocutionary acts of referring; such acts are successful only when the parties' referents are one and the same and when they can publicly verify they are. H. Putnam's meanings "ain't in the head" is on target; what's outside has standing; that's what assignment/emplacement is 'all about'.

Tom, seek logical, not psychological, game if you would be a philosopher. 'Cognitive psychology' is an enterprise apart from conceptual logic, and from al-

---

[8] My friend, Professor Don Gieschen, expressed my orientation nicely. "First of all, truth is not about some reality as it is in and of itself, in other words, as it is independent of thought or language…I accept what is often called a minimalist or quasi-realist notion of truth that in common sense fashion accepts a world that causally exists independently of human experience, thought, or language, but can only be understood by means of human concepts and language." Donald W. Gieschen, *An Uncommon Conversation*, p. 48. www.Xlibris.com; Bloomington, IN, 2009. I, however, modify his last sentence as follows, "can be discursively understood only by transforming the world's substantives and tropes into concepts by coherently emplacing them into tokens with unique locations in lexical space". This is a result of recognizing my world/language order: World --> Language, rather than the reverse.

ethic logic, too, for that matter. This isn't intended as a criticism of philosophers' engagement with cognitive psychology nor of their results. I just want you to honor the difference between the exercise of our brain's private black-box capacities and the publicly observable results they produce, just as you distinguish computerized printers from their printed matter. Brains are observed only as scanned, blood engorged gross brain areas in contrast to specifically observed emplacements and precise locations of our concepts in lexical space. Note "underdetermines" in the following quotation from Bach and Harnish where they clearly expressed their aR&R account of communication, which includes referring.

> "We view linguistic communication as an inferential process. The speaker provides by what he says, a basis for the hearer to infer what the speaker intends to be thereby doing. However, what he says underdetermines what he can reasonable expect to be taken to be intending".[9]

I agree with the last sentence; emplacements are the very resource we can use to remedy that defect. As you know, I disagree with the first two sentences of the quotation. That's because with emplacements both speakers and auditors can observe physical substantives and tropes emplaced in a variety of ways in observable tokens. We don't need to infer to speakers' intentions; we can see/ hear/… observe their 'references' when we see them emplacing substantives and tropes in tokens' places within the context of assertive discourse. Of course, in daily discourse, we don't emplace as literally as I did in the Edot/blackE example. I did that for expository purposes to make you aware of what you do unconsciously in a variety of ways when you're referring and asserting.

Tom, you say, "This is a red-legged frog". I check to see if I can coherently emplace your 'frog' in /frog/ and its alleged attribute into /red-legged/. I don't do it literally as in my expository examples. Being acquainted with English grammar, its lexicon, and the relation between them, I know I'm to emplace the 'frog' into the subject and its attributes into the predicate, transforming the emplaced entities into concepts. This is the most basic aspect of emplacement. As Christ asked his Father to forgive his crucified companions, "Father, forgive them for they know not what they do", so champions of emplacement, too, should forgive philosophers who know not that they're nominalistically referring and asserting. But if they persist in their unacknowledged habits for too long, they should know the grace period for forgiveness does have an end. To help you avoid this fate, Tom, I'm going to provide other varieties of emplacement. But first, here's the expository version of Efrog/red-leggedE's emplacements that requires some elaboration of

---

[9] *Linguistic Communication and Speech Acts*, p. 4f, Kent Bach and Robert Harnish, (Cambridge, MA; MIT Press, 1979).

Efrog**E** @ /frog/^.

What do you do if you can't catch a slippery frog, but, if you do, can't hold on to it long enough to emplace it in /frog/? Well, you can point to the lively frog jumping around on your desk, skipping over your computer and say "That's what I'm emplacing in /frog/". The ostensive 'definition' has long been used successfully with with cautionary reservations. But what if the frog's hopped away and you can't point to it? Vee haf udder vays.

One "udder vay" is to use the [Conger, **:+**] functor. This functor, [**:+**], is a hyper, [+], bonding functor. [Bond, **:+**] modally *enjoins* you to travel coherently in lexical space from ^frog^ to *several* tropes in its bonding range, indicated by the square brackets, which I call its **congery**:

^[Conger, **:+**] frog [tailless leaping smooth-skin amphibian webbed-feet ...]^. Because ^[Subsume, **/**] amphibian   frog^ is an enjoined proposition, it belongs to ^frog^'s enjoined congery, [**:+**]. (Check your *Webster* for its congery 'definition'.) Other congery concepts belong to that range partially on de jure grounds. More on that on my website in these trope concepts are a **congery** for ^frog^. They enable us to distinguish ^frog^ from every other kind of substantive concept. A new, better way of congering ^frog^ is to use concepts of genetic tropes. With a list of congered trope emplacements, we need not infer to your intentions, Tom. English speakers need not know what's going on inside your lovely skull to know what you're referring to, nor to know what you're intending to refer to, nor to know that you're also classifying the kind of creature a frog is. You're telling us ^frog^'s congery and we can understand you if we share coherent emplacements for these tropes in lexical space, which probably were acquired on other occasions. We can even know what your assignment/emplacement to /frog/ was even if the frog skipped away without our having seen it. Moreover, any reliable inference to speakers' intentions rests on just such shared, coherent assignments.[10]

Wouldn't it be bizarre if the firehouse dispatcher asks you why you're calling him after you've told him "My house at 222 Lacke St. is on fire". It would be even more bizarre if the explanation for his question were "I'm not good at inferring others' intentions". Competent dispatchers don't need you to tell them you're referring nor what you're referring to, nor do they need to infer them from what've you said, because you've *told* them and they've *understood* what you've said. Dispatchers routinely **assign** your 222 Lacke Street house to your aural /222 Lacke Street/ token and your house's fire to your aural predicate token /on fire/. They'll be there in three minutes, if the dispatcher doesn't waste time inferring your intentions, and, hopefully, promptly dispatches firemen with their equipment to your house before it's turned into charred ruins.

---

[10]   See "Stipulating and Conceiving Natural Kind Concepts" on my website. (sfsu arthur bierman)

I sometimes lapsed ontologically in my earlier accounts of what is emplaced. I sometimes didn't honor the distinction between physical entities and conceptualized perceptions of them. Substantives and tropes excite sensations in us by the energy they transmit to us. We transform these sensations into perceptions of subsantives and their tropes by conceptualizing them. We do this by conceptually outfitting them with the cloak of language, assigning or emplacing them in lexical tokens with unique locations in structured lexical space. This is how sensation-exciting substantives and their tropes are eased into lexical space.

Conceptual logic furnishes an explanation of how we turn sensations into perceptions. Functors ([Subsume], [Sooth], [Link], [Assign]/ [Emplace] …) are tools with which we construct conceptual/lexical space and forge concepts as lexical entities whose existence and identity depend only on functor sanctioned coherentg travels between concepts in lexical space. There are as many lexical spaces as there are languages. With a confluence of functors we *create* unique places in lexical/conceptual space for each concept in any language. With the aid of valid *inference forms*, we can *find* where they are; and also determine the coherence value (coherent or incoherent) of propositions if we have coherent premises. Concepts have a tenuous life, because any change in their functor relations destroys them; new ones replace them.[11] Uniqueness is always under threat.

In the beginning, I leaned too much on emplacing by manual acts that move objects and their collocated tropes into spatial lexical tokens, but neglected, among other possibilities, **assigning** imagined perceptions of them to a place in lexical space. This co-movement of substantives/tropes and our imagined perceptions of them a la Kant (per my quotation of him on p. 1) needs the [**Assign**, **A**] functor. Basically, we want a means to identify a unique substantive and its tropes that we can coherently assign to a unique place in lexical space. That unique substantive is assigned a unique place by some means or other; my unique fingernail (right hand index fingernail) is what I see and put in the space occupied by /my fingernail/.

We have to identify what substantive and what trope may be coherently assigned to/emplaced in the subject and predicate of /Harold is wounded/ and what of the world's content may be coherently assigned to/emplaced in the 2+ terms of the 'relational' sentence /Harold is taller than Lowell/ or /Yellow is brighter than dun/.

Substantives and tropes differ; consequently, so do their caused sensations and our perceptions of them. This forced me to recognize that we need a more inclusive functor than the [Emplace] ^fingernail/pink^ transporting act allows. For example, I can't physically emplace|transport Mont Blanc and its tropes into the /Mont Blanc/ token as I can move my fingernail into /fingernail/. I know I'm em-

---

[11] ^Displace^ is chosen deliberately and isn't identical to ^change^. Concepts don't change. Any alteration in the structural relations of its mother token thereby destroys a concept's former uniqueness and creates a new, unique functor structure and, so, a new concept. Concepts are structure-sensitive.

placing it via my coordinated tactile and visual sensations, upon which follow perceptions and conceptualizing the manifold sensations caused by substances and tropes. But Russell and I can assign Mont Blanc to /Mont Blanc/ by assigning sensations of it to /Mont Blanc/ and assigning the measure of 4000 metres to /4000 metres/. We began early on to learn which emplacements are coherent and which are not. Follow the crowd—usually. Philosophers and other conceptual workers such as Einstein, Galileo, and Durac are the "usual suspect" renegades.

I elaborate later, Tom.

You can see I'm not a friend of the New Realists who promoted the direct-perception movement in early 20th Century American philosophy of which Durant Drake was a prominent exponent. I favor Roy Wood Sellars' counter, Critical Realism. I favor Kant, also, who didn't confuse a manifold of sensations with dis-cursive 'abstractive' concepts. RW Sellars and his son Wilfrid both took the route from unsummoned, caused sensations to cognized percepts. They opted for turn-ing a manifold of unruly wild weeds into cultivated flowers in a formal garden.

It's clear we need a wider scope functor than ^fingernail/pink^'s direct manual emplacements. We can't move the moon into /moon/, nor the whole Pacific Ocean into /Pacific Ocean/; we can't get sightings of the dead (A. Lincoln), nor smell last year's skunk spray. Emplacing future wounds while cooking will have to wait.

To remedy emplacement's limitations, I add the functor|operation of
$$^[\textbf{Assign}, \textbf{A}] \textbf{A}\ldots\textbf{A} \ @\ /\ldots/^,$$
keeping [Emplace, **E**…**E**] as a ground zero, Gold Standard subspecies of [Assign]:
$$^[\text{Subsume}, /] [\textbf{Assign}, \textbf{A}]\ [\text{Emplace}, \textbf{E}]^.$$
Some assignments are emplacements by this subsumption, but any [**E**…**E**] is an [**A**…**A**].[12]

For Critical Realists, our perceptions are mediated events. Substantives and tropes exist but aren't identical to the sensations they cause. The energy emitted by substantives and their tropes cause our sensations by transduction from electro-magnetic to sensory creatures' electrochemical energy. This is the first mediation.

The second mediation occurs when we transform sensations into percept-tions. This occurs when we emplace sensations and their causal substantives and

---

[12] In the new list of functors, [Assign] takes primacy over [Emplace]. I retain the latter as a sub-functor, the most basic, ground zero assignment that we use to verify manually the coherence value of propositions and the truth value of statements: ^[Subsume, /] [Assign] [Emplace]^. [Assign] provides wider scope and greater flexibility than [Emplace] and is more readily adapted to the augmented perceptions of substances and their tropes provided by the use of improved instruments for observation. I expand on technologically augmented perceptions below. To appre-ciate the breadth of assignment tasks, consider Mark Lilla's comments on Primo Levi's remarks about the histor-ian's tasks (from *The Drowned and the Saved*). Lilla wrote, "The historian is pulled in two directions. He is obli-ged to gather and take into account all relevant material and perspectives; but he is also obliged to render the mass of material into a coherent object of thought and judgment". Levi's summation is, "We are compelled to reduce the knowable to a schema". (*The New York Review of Books*, p. 35, November 21, 2013)

tropes *in tandem* into structured lexical space where sensations are transformed into percepts and concepts. This is why we may speak coherently of '^perceptual knowledge^'. We do this by manually emplacing substantives and their tropes into a sentence's subject and predicate's token places. We know we're emplacing the substances and tropes into tokens, because they move *in tandem* with their caused sensations. No physical causes, no sensations, just dreams and hallucinations. The existence of sensations guarantees the co-existence of their physical causes, of substantives and their cloaking tropes.

In outline, the physics and physiology of the *emplacement process* is this:

	First Mediation	Second Mediation
Substantive emits electro-magnetic energy	→ Sensory apparatus alters that energy to electrochemical energy manifest as sensations	→ Emplacements of caused sensations, tactile, visual ..., into lexical spaces generates percepts and concepts

But if we can't manually move objects (the moon) and their collocated tropes that cause our sensations nor our conceptually massaged perceptions of them, our next choice is to assign them. Galileo assigned his augmented perceptions of the moon's surface to /moon/; Leibniz would assign my photo of Lubeck's entry gate to /Lubeck's entry gate/; at a soiree, Kant could assign his imagined study chair into /my study chair/; all were assigned respectively to grammatical subject and predicates' tokens that have unique places in lexical space. This gives assigned perceptions semantical/conceptual status. Kant relied on imagined perceptions to connect our discursive concepts with the world's substantives and tropes to explain our discursive cognition of the world. I heed Kant's reliance on ^imagination^'s role in epistemology. See my quote from Kant on this essay's first page.

As to a peach's ripe odor, its emplacement differs from that of our fingernail's pink color; we don't see the odor, which is subject to emplacement. First, I coherently emplace the peach, holding it in my hand as I utter the token /peach/ (**^E**peach**E** @ /peach/); then I carry the peach to your nose, Tom, for you to sniff and ask /Ripe?/ (**^E**(peach)ripe**E** @ /ripe/^)? /Very ripe/, says you, which indicates you're emplacing the odor as I did. Good, we're both travelling on the A-Train in lexical space, which is all we need for successful communication.[13]

---

[13] There's the commonplace, <Look in a dictionary to get the meaning of a word>, which, of course, you never get. What you get are written tokens. If you need to know the 'meaning' of token words used in the definition, you get more tokens, um so weiter. You will never get the 'meaning', because you'll only get more tokens, spoken, written, ... Then, what do you get from definitions if you don't get 'meanings'? We clearly know they're helpful. I know this first hand, Tom, from working in four languages. The answer is: *Definitions give you functorial directions for travelling coherently in lexical space*. You can verify this by examining dictionary definitions with conceptual logic's functorial interpretations of the copula in mind, attending to such functors as [Subsume], [Bond], [Link], ... and the coherency conditions for relational propositions; [Taller than] in ^[Taller than] Jack Jill^ is asymmetrical, so, ^[Taller than] Jill Jack^ is an incoherent stroll in lexical space. This is a useful assignment for a linguist or semanticist undertake. ^Fir^ in one dictionary gives us two [Subsme]s, "any of a genus (*Abies*) of

It's important to keep in mind that tokens may be written as /ripe/, may be spoken, deaf-signed, Morse coded, or brailed, et cetera, into any of which tokens we may coherently emplace our sensations and their causal fountainheads in tandem.

* * * *

There are three kinds of assignments: **Sensed, unsensed**, and **partially sensed**. With any of them we can satisfy a necessary condition for coherent as-signnments and emplacements, namely, to provide publically shareable means for determining substantives' numerical identities, whether conceived as mass or sor-tals. Both lay and scientific experts tend in the direction of preferring sensed em-placements for identifying. When keepers of the telescopes saw light bending around a celestial body, it solidified acceptance of Einstein's relativity theories, which predicted the bending. Physicists and astrologists wanted to *see* augmented light bent before assenting to new concepts of space, time and gravity.

Later, I address the extended use of a *sensed ^see^* concept when we rely on instruments to augment our unaided senses' as a means of numerically identifying substantives and tropes. Television viewers say they *saw* Mohammed Ali knock out Sonny Liston. They don't say they 'inferred' it. Galileo asked the church dig-nitaries to "Look" through his telescope. The "Look", in time defeated his adver-saries. We need means to numerically identify substantives and tropes to assure (i) we're emplacing them coherently, and (ii) to recognize we're sharing them. The list for how we do this is quite long; speakers have invented and relied on many resources. I elaborate later, to remind philosophically and linguistically trained people of some resources on the list.

Among the sensed: Looking down at Walden Pond while flying over it; pathologists looking through microscopes in search of squamous cancer cells (so did I). Augmented viewing with the aid of crystals revealed the double helix of our DNA. Palming a slat presents its rough/smooth trope. Odors and tastes shared with others are semi-reliable; our concepts of chemical analyses are more reliable identifiers. Images of fingerprints and magnified DNA orderings do the job of identifying persons in forensic law.

Among the unsensed: Seeing a map of Walden Pond is a sensation caused by the map, which differs from our sensations of a fly-over view of it, or a photo of the whole of it from a sufficient height. Nor is the Latitude/Longitude extent of it sensed, but they're reliable ways of identifying it. A report on the chemical comp-osition of maple syrup isn't a sensed mode of identifying its tropes; it's a report on their causal fountainhead; yet the composition report suffices for numerical iden-

---

cone-bearing evergreen trees of the pine family", and then a partial [Congery], "having flattened single needles and erect cones whose scales drop at maturity". ^Colon^ has a ground zero emplace in one dictionary. "**1.** a mark of punctuation (**:**) used before an extended quotation , ..." Try to do it for yourself for fun and to test your comprehension of conceptual logic's functors.

tification of a Maine versus a Canadian or of another Maine maple syrup and our ability to assign the entities coherently into sentence tokens.

Among the partially sensed: An assignment may be a synthesized series of sensations; I used it in dealing with the puzzle about emplacing unseen parts of Lake Woebegone in its token. I funded the synthesis with an alert, guided trek around the lake and laborious row-boat excursions on and about the lake after which we can [Assign] these partially synthesized sensations and, consequently, the lake and its congery of tropes to /Lake Woebegone/: ^[Conger, **:+**] Lake Woebegone [location shape outlines fauna flora surface-size …]^.

This laborious, partially sensed assignment has just been replaced with a new technology. "Government scientists this month used new high-tech cameras to shoot a 360-degree view of the ocean in the Florida Keys. The goal: to map and then track coral reefs to see if restoration efforts are working".[14] New instruments that augment our visual powers, as in this report, haven't changed our concept ^see^. We still say we ^see^ a liver cell, augmented as we look through a microscope, as when, unaided by technology, we say we ^see^ a watermelon seed.

What has changed is the length of seeing, smelling, ..., *processes*. Instruments' causality has been inserted into unaided processes of observation (p. 11). Augmented processes of observation are inserted between the First and Second Mediations; it's an additional causal link between energy emitting substantives/ tropes and our sensations. For example, microscopes project images of substantives/tropes emissions that, in turn, cause sensations in our visual field. Eye glasses serve more modestly as intermediary causal aids for the near- and farsighted amongst us.

We may *emplace* synthesized heard sounds into /"Cheese-cake"/ in /Dexter Gordon is playing "Cheese-cake"/ at a club; we may do the same thing with the heard sounds of a technologically inserted *recording* of /"Cheese-cake"/. Sensations of observed substantives (saxophone) and tropes (baritone) accompany each other; they're emplaced in tandem. Look at 3. and 4. in the sketch of emplacement on p. 3.; the substantive, (**.**), *carries* the trope **E**black**E** being emplaced: **E**(**.**)**.E** @ /black/^. So where we assign our sensations, imaginings, and, *a la* Leibniz, pictures of substantives and tropes, so do we assign the substantives and tropes that cause our sensations; assignment transforms all of them into cognitive perceptions of the world. Assignments are epistemologically more complicated than manual emplacements of sensations; they require inferences from causal theories and synthesized sensations; that's why [Emplace] is the Gold and [Assign] the Silver Standard.

Tom, you and Bertrand Russell, are standing side-by-side; Mont Blanc rises majestically above you. Russell points to it and says, <Mont Blanc is more than

---

[14] *San Francisco Chronicle* , August 29, 2014.

4000 metres high>. We can't manually emplace the mountain into /Mont Blanc/, but we can coherently assign our synthesized sensations of it to /Mont Blanc/.

* * * *

*The energy emitted by substantives and tropes cause our sensations that our cognitive resources transform into perceptions by emplacing these sensations into a sentence's lexical tokens, /Mont Blanc/ and /more than 4000 metres/, that have unique places in lexical space. All three units, (i) substantives and tropes, (ii) our sensations, and (iii) our perceptions, move **in tandem** when we assign our perceptions to their respective grammatical lexical tokens:*

$$^{[Assign, A]} \; E\text{mont-blanc-perceptions}E \;\; @ \;\; /Mont \; Blanc/^{\wedge} \; \&$$
$$^{[Assign, A]} \; E\text{4000-metre-perceptions}E) \;\; @ \;\; /(mont\text{-}blanc)4000 \; metres/.^{15}$$

With these assignments, we've ordained Mont Blanc, causally responsible for our sensations, as the semantic subject and 4000 metres as the semantic trope of Russell's statement,<Mont Blanc is more than 4000 metres high>.[16]

How assigning and emplacing differ from referring

Using the functor [Refer] misdescribes how we connect world and language; [Assign] and [Emplace] functors replace [Refer] in descriptions of what we actually do when we connect them. They have advantageous features mentally referring lacks, making them superior for communication theory and conceptual logic. Abandoning [Refer] revolutionizes the way to describe how we connect world and language. We do it by transforming the world's substantives and tropes into discursive concepts via emplacement into lexical space. This gives us a conceived world in which it and language are made one. You can't do that with [Refer], because it disrupts them. World-language dualism is inherent in [Refer]: We 'apply' one thing, language, to a second thing, the world. With [Refer], we can't construct a coherent theory of language-world connection; we get only mentally connected: "I know what **I'm** talking/writing about", "picking out", doesn't satisfy truth conditions, because the world's substantives and tropes aren't brought into our propositions. Without importing this world content into our logically related propositions, we can't determine statements' truth value.

1. Emplacement/assignment functors are alien to philosophers steeped in decades of 'referring to', 'modeling of', 'representing' the world from their language-first point of view. Kant speaks of concepts being "applied to

---

[15] This is over-simple, because ^4000 metres^ isn't a trope but an ordering relation. I discuss this in another place.

[16] The spraying particles released in proton collisions in atomic accelerators viewed on screens in the control room and remote locations, after months of calculation based on the particles' measured energy tropes, may be coherently assigned to any of the subsumed ^particle^ concepts, such as ^muon^, ^hadron^, ^quark^, … . Physicists may have seen and measured Higgs boson in 2010.

objects of experience", B146, First Critique. Jeremy Heis, in his review of Michael Friedman's *Kant's Construction of Nature*, quotes him: "Kant's overall aim in the *Metaphysical Foundations [of Natural Science]* ...is to ex-plain how the application of pure mathematics to empirical concepts of mathematical physics becomes possible".[17] My target is ^application^ in all its variants; Heis uses sixteen of its variants in the first five pages of his re-view. To /apply/, /tag/, /name/, /label/ the world's substantives and tropes in order to explain the relation between the world and language, is one of the most dismal mistakes in the history of philosophy. Wittgenstein lampooned this move in his exposure of Saint Augustine's seminal 'naming' account in the opening remarks of his *Philosophical Investigations*.

Philosophers are accustomed to conceiving discursive cognition as a relation *from* language *to* the world. I advocate the reverse direction. I say we cognize *from* the world *to* language by coherently emplacing/assigning substances and tropes *into* language, as Russell and David Kaplan suggest.[18] My elaboration of that view is the **Second Copernican Revolution** for logic and epistemology. Kant's **First** one is superseded. Emplacing has revolu-tion changing consequences.[19] Referring/applying-language-to-the-world fosters a language/world dualism of statements and facts. This prompts a dualistic correspondence account of truth: A statement is true just in case it corresponds to a fact. Problem: Alethic statements feature the logical func-tor [Not] among others; facts do not; so, to claim there can be a correspond-ence between facts and statements is incoherent.

Reversing the direction of how we connect world and language easily ablates Kant's, and hosts of others down the ages, astonishment that our languages and mathematics 'fit' the world. True, it's a problem for refer-ence champions but not for those who understand we're emplacing the

---

[17] *The Philosophical Review*, Vol. 123, No. 3, p. 343; Friedman's remark is from p. 88 of his book.

18 I believe that in spite of all its snowfields Mont Blanc is a component part of what is actually asserted in the proposition "Mont Blanc is more than 4000 metres high.
                 --Bertrand Russell (Letter to Gottlob Frege)

 Russell's analysis of the proposition expressed by "John is tall" provides us with two components: the property expressed by the predicate is tall, and the individual John. That's right, John himself right there, trapped in a proposition. [I prefer the more temperate "lodged in".]
            --David Kaplan, "Dthat"

[19] See my website, "sfsu arthur bierman" for some instances, beginning at p. 6, of "A Preface to the Logic of Concepts".

world's substantives and tropes *into* the conceptual structure of language. When a language isn't up to radically new emplacements, the language has to be de jure altered; it needs a needs a new conceptual structure, as Einstein did, to give us new concepts of ^time^, ^simultaneity^, the ^structure^ of ^space-time^, and ^gravity^. Einstein's achievement was conceptual.

2. Bach & Harnish (B&H) got it right: Referring is a via attiva act, albeit only a mental act, which they classify as illocutionary. Thus, the correct classification of /refer/ is that it's a functor, [Refer], not a concept, not ^refer^. They, and J. Austin, correct countless philosophers, linguists, lexicographers, and honest, loquacious citizens who are addicted to the via passive voice--/Fido is the referent of "Fido"/--rather than to the via attiva--/I'm referring to Fido/--in their thinking and writing about referring. Introductory logic texts and countless philosophy journal articles offend by using the via passive that John Dewey scorned as the "spectator" point of view,

   </**Fido/ refers** to **E**fido**E**>,

as iff words could do this. They should say someone refers to Fido, as in,

   <**Tom** says /Fido/ to **[Refer**] to his dog>.

If Jack misrefers, it's not /refer/'s fault; it's Jack's fault.

   In *The Cambridge Dictionary of Philosophy* (General Editor, Robert Audi, 1995), the entry for /deduction/ shows the usual via passive preference. The author writes, "In a secondary sense, *'deduction' refers* to an inference in which a speaker claims the conclusion follows necessarily from the premises". (My italics). What started as welcome shorthand for pencil-weildng writers, (</Fido/ refers to **E**fido**E**>), became an incoherent habit. B&H correctly, following J. Austin, favor the via attiva.

   Many contemporary analytic philosophers habitually make this error, sanctioned by Frege's mega-error. He confused predicate concepts, ^red^, ^melancholy^, ^pantless^ with copula [Functors/operations/functions]. His revisions of logic included treating predicates as 'functions', taken over from his theory of mathematical functions. He claimed objects "fall under" the predicate, a via passive orientation. The red of Jill's lower lip passively

"falls under" ^red^, and makes true <Jill's lower lip is red>, if it is. Who's hiding behind the "fall under" metaphor? Probably a shy subsumer.

Frege applied his functional frenzy to the wrong part of natural language. He treated sentences' *semantic predicates* as functions/functors, whereas functors are our *copula operations/acts*, or their equivalents in other languages, just as [+], [-], and [=] are functors/acts/functions in arithmetic.

/[+] 3 2/'s

[+] functor invites us to move two places right from /3 /on the numeral line. The propositional equation

^[+] /3 2/ [=] /5/^

indicates the coherent 'value' of that via attiva move is, /5/. Here [=] is not identity. It would be incoherent to think or say /[+] 3 2/, which is an invitation to a via attiva move, is identical to /5/, a numeral. That's incoherent, a category mistake. Equation signs in this context are, instead, claims to having coherently ordered numerals under functor advisements, such as [+]. **Ordering functors** are often misleadingly called /relations/; orderings are via attiva **acts** in contrast to via passiva **reports**. The ordering functor for the numeral series, per Peano, is the via passiva [Successor] for which we can substitute the via attiva [**Count**] as in,

^[**Move to next digit on the right** →] 0 1^, ^[Move ... →] 1 2^, ^....^.

This counting activity is the basis for adding and subtracting. Via attiva addition becomes [**Count/Move ...**] from a specified numeral, /3/, two places to the right. This enables us to change the via passive report

(a) <[+] /3/ /2/ [**is**|=] /5/>,

into the coherent proposition,

(b) ^[Count/Move two digits to the right →] (/3/ /2/) → /5/^.

This tells us to move two digits to the right → of /3/, which lands us at /5/ on the numeral series.

The (a) [=] equation isn't a true, a priori identity statement; there are no extra-linguistic numbers to make it true. In the proposition, (b), the statement's [+] is replaced by [Count/Move ...]; its [=] is replaced by [→]; landing on /5/ is the result of the adding act, moving two digits right on the numerical series, from /3/ so that we arrive at /5/. We get the same result when we use an abacus's beads.

We go in the opposite direction when we subtract:

^[**Count/Move two digits to the left** ←] (/2/ /3/) ← /1/^.

Some additions and subtractions are coherent, others are incoherent; we make mistakes. That's why we favor using token-gobbling calculators to our penciled calculations for 'important' arithmetic results, as in determining our income taxes versus restaurant tips. Tom, don't declare on pain of incoherence that <Calculators are a priori machines>. They're just mechanisms that can't deviate from

the modal restraints, [Enjoined to] and [Enjoined not to] of [+] and [-] inputs, un-like you and I, all our cousins, who often deviate; we're not machines after all.

* * * *

Numerals *and* numbers? Who needs numbers? They who quest for 'cert-ainty', 'objectivity', of pure mathematics against 'subjective' caprice. It's faulty, however, to rely on non-existent 'numbers' to supply objectivity. All we need is verifiable intersubjectivity for communication between humans found in prop-ositions' modalized functors, [Enjoined] and [Enjoined not]; they bar caprice in performing arithmetical functor operations. Plato, Frege, Goedel didn't rely on the shared intersubjectivity of leutic modal enjoinments to block the subjectivity of unregulated personal calculations. But that was long ago. Philosophers advance by altering our conceptual structures; they make distinctions, such as intersubject-ivity versus capricious subjectivity, the one I've just noted.

* * * *

Interpreting [=] as the result of via attiva movements on a numerical series--[→] and [←] moves within a right/left ordering series--rids us of via passiva a priori truths. The location of numerals on isomorphic series--^[Successor] zero one ...^ are modally [Enjoined]; so, ^[Successor] zero two^ is incoherent. Our mathematical via attiva calculations in real time that end with numerical values may be coherent or incoherent, depending on whether they do or don't conform to the enjoined series. It's possible to make errors in single, short or long chains of calculations. If you've ever made a mistake adding your restaurant bill and divid-ing it among your fellow diners, you must appreciate the difference between the stern guiding logic of arithmetical functors and your tipsy miscalculations. We can correct our errors by using calculators—providing we don't err punching in the numerals. Calculators need neither Plato nor Goedel's numbers; nor do we. John von Neumann developed an axiom system for ordinal numerals, which fits via at-tiva coherence arithmetic hand in glove. Who ever thought ordinals are 'numbers'? /6th/ is a place in a numeral series, not a number. Isn't /numeral/ in

^/5/ is the sixth numeral in the Arabic series^

more coherent than using /number/? Using /number/ as the referent for ordinals is like carrying coals to Newcastle, UK. Enough already!

If you use the [Subtract] functor with the same numerals, you perform a dif-ferent act and get a different coherent value: ^[-] (/2/ /3/) [←] /1/^. [+] and [-] are distinct functors, just as lexical functors--[Bond], [Subsume], and [Sooth], [...]--in natural language systems are. They advise us how to move coherently between tokens in lexical space.

Pure arithmetical 'equations' have coherence, but no truth value. There are no numbers to assign or emplace into numerals as we emplace a dot and black into /dot/ and /black/ of /The dot is black/; numerals are all we've got. Make do with

them; besides, they're all we need. ^[+] (/3/ /2/) [[→] /5/^ is coherent^; ^[-] (/2/ /3/) [[←] /5/^ is incoherent. Peano's axioms interpreted as via attiva invitations provide coherence value conditions for arithmetic. Nothing's lost by this shift except Platonic ontology, a painless loss, because coherent 'intersubjective' arithmetical evaluations are well in place. Computing with your fingers, abacus, calculator, or pencil/chalk gets you coherent results; you needn't invoke Platonic/ Fregean/Goedelian 'numbers' to explain or justify such humble, arithmetical tasks. Mathematics is the province of conceptual, not alethic, logic. If everyone gives up belief in the existence of numbers over and above numerals, all of us will get blessed relief from repetitively contested 'truth' theories in the philosophy of mathematics—providing my targeted audience is reading or listening in good faith outside their schooled habits.

Frege's mega-error of not distinguishing copula functors from predicates prevented him from constructing a genuine conceptual logic. As I remarked in another place, his *Begriffsshrift* is a misnomer; it's not a *Shrift* for conceptual logic, but an idiosyncratic symbolism for alethic logic. He's after truth, not coherence.

3. Friends of [Refer] misdescribe the act of ostensive definition. They think we're learning to use /iron/ to refer (name, label, apply to) iron. That's wrong. A classical ostensive definition is gesturing--pointing, dangling, hitting Middle C on a piano's keyboard, and so forth—while uttering a token. The gesture indicates a world substantive or trope that we may coherently assign or emplace into the uttered token. Ostensive 'definition' 'shows', in the Wittgensteinian sense, that it's coherent to ^[**A**ssign] **A**iron**A** @ /iron/]^ or ^[**E**mplace**E**] **E**iron**E** @ /iron/^. These gestures call our attention to items in *the world*, to propositions' semantic 'content' without which there is no truth value. At the same time, the contents are put in unique places, into /iron/'s and /hard/'s places, in lexical/conceptual space. That's how we conceptualize iron and all other assignments/emplacements. I call this *reverse assignment* later on to distinguish it from [Refer]'s direction. "Think alien to the box, if we be friends", quoth Puck. See p. 51ff in this essay.

With [Refer] we go from word → world; with [Assign] and [Emplace], we go from world → word. The latter direction is necessary for shared verifiability of truth value statements. The stellar, but overblown, principle of early logical positivism:

A statement is 'meaningful' (coherent) if and only if it has 'truth conditions' that can be satisfied.

In conceptual logic, the principle is reversed:

A statement is 'true' if and only if it has 'coherence conditions' that can be satisfied.

These 'coherence condtions' are Basement logic's conditions.

If a statement is true or false, its underwriting proposition has satisfied the coherence conditions.

<<The iron is hot> is true or false> **{--}** ^the iron is hot^ and ^the iron ~hot^ are coherent>.[20]

That we can coherently say of contradictory propositions that they're both coherent is the deep, basement source of why we can say coherently, for example, that either <Frege was nasty> or <Frege was not nasty> is '*possibly*' true or 'possibly' false. The source of the alethic modal [Possible] and the *contingent* truth or falsity of contradictory statements is the coherence of their underwriting propositions.

A true predication (Sooth) statement is coherent/'meaningful', because its truth value rests on coherent assignments/emplacements in its sentence's subject and predicate, which I symbolize as **S+P+**. These assignments/emplacements inherit all the lexical relations of the tokens to which they're assigned/emplaced.

[Refer] can never be adequate for semantic theory as conceptual logic's [Assign/Emplace] are; it doesn't give us coherence conditions for propositions nor, therefore, truth conditions for statements.

4. B&H tell us an illocutionary act of referring succeeds if it "picks out" one thing as its referent, say, Mont Blanc from neighboring mountains. That's correct; the illocutionary acts of assigning/emplacing also 'pick out'.[21] But the assignee of ^[Assign, **A**] **@** /**…**/^ specifies a *cognized* substantive and trope. We discursively **cognize** the world's substantives and tropes when we coherently assign or emplace them into tokens' places in a lexical/conceptual space, moving from world → language. We can't cognize the world with [Refer], because it goes in the wrong direction—language → world. [Refer] doesn't put the world into a conceptual structure; it only supplies labels.

*We cognize Mont Blanc because it's assigned to the grammatical subject of /Mont Blanc is more than 4,000 metres high/, which makes that mountain the **semantic subject** of Russell's sentence rather than, say, the Matterhorn.*

*We cognize the trope, more-than-4,000-metres-high, when it's assigned to the sentence's predicate, /more-than-4,000-metres-high/, which makes the mountain's height the **semantic predicate** of that sentence.*

---

[20] I've given the reasoning for this in several places. See "On Emplacing", p. 72, Fn. 63. It's the argument Plato used to refute Parmenides's claim (if he did claim it) that we can't say what is false. <The iron is hot> is false, if <the iron is cold> is true, because ^hot^ and ^cold^ are contrary concepts. Either trope is Plato's "other". Parmenides apparently didn't understand conceptual negation. The obsession with truth put Western logic on a limited course from the ancients to our contemporaries despite Plato's conceptual logical functor, [Other, ~].

[21] I'll mainly use "assign" or "assignment", dropping "assign" or "emplacement", because emplacement is a ground zero assignment--when I remember to do so.

[Refer] doesn't do this for tropes, probably because substantives dominate 'referents' in the literature. Tropes get short shrift in modern reference talk, maybe due to Frege's mistake of identifying predicates with functors rather than tropes.

This failing generates another one. Friends of [Refer] don't couple coherence and truth values. Coherent semantic assignments of substantives and tropes engender alethic *epistemic* values (True, False, Unknown). (See the Emplacement Chart in "On Emplacing", p. 43, sfsu arthur bierman.) Coherent assignments to the subject and predicate of a predication (Sooth) sentence, S+P+, entails the statement made with its underwriting proposition is true. Without coherent assignments to both /S/ and /P/, the statement is either false or its truth value is unknown. Coherent assignments and emplacements incorporate parts and aspects of the world into linguistic parts of the world. Language is often assumed or sometimes explicitly claimed to be apart from, outside, the material world instead of being tokens orgized within, immanent in, that world. I reject fake, useless ontological dualisms (words versus world things) in honor of William of Ockam, John Buridan, and John Dewey.

Tom, I know you want to know how we know how you and I have assigned similar substantives and tropes to sentences' subject/predicate tokens. The answer is the same one that we could give to a similar question about *emplaced* substantives and their tropes, over and beyond observed ground zero emplacements: We agree in our judgments of propositions' coherence. Such agreements are evidence we've made identical assignments to the same places in lexical space; we need no more to claim we have the same concepts. If we can "go on" agreeing, as Wittgenstein noted in his remarks on mathematics, we understand each other. It's evidence we have isomorphic lexical spaces.

We can't match others' private qualia with ours; so, that ground's not available for verifying we share assignments. But there's no need to do so. Sharing structural, conceptual isomorphism is all we need to know we share coherent assignments of our cognitions and truth-making substantives and tropes. We know that because we both may see, hear, feel physical lexical tokens' rewrite/propositions whose assignments we can trace back to the same sensory sources that transform token sentences into shareable proposition tokens.[22]

Hilary Putnam's jolly tag line, "Meaning ain't in the head" puts 'meaning'

---

[22] The best initiatory account of this is in C. I. Lewis's *Mind and the World Order*; New York, Charles Scribner's Sons, 1929. Idiosyncratic qualia/sensations don't thwart sharing concepts. It was one of the major philosophical discoveries in the 20th Century. My account here is a freely formed recap of his Chapter IV, "Common Concepts and our Common World" with the addition of my conceptual logic's structure. Lewis writes, p.82, "*Logical analysis is not dissection but relation*; the analysis of *A* into *B* and *C* does not divide *A* into constituents *B* and *C* but merely traces a pattern of relations connecting *A* with *B* and *C*." On p. 107, Lewis writes "*All* meaning is relational". Conceptual logic unveils these relations; they're probably more complicated than Lewis foresaw.

outside the head. By this time, you should know where outside is, Tom: It's where the world's substantives and tropes are. But, how do those outside's get inside a cognizer's mind? The answer is pretty well known. In outline: Outside our head entities radiate electromagnetic energy that stimulate our in-head sensory apparatus that turns it into electrochemical energy; this produces our conscious sensations. In our 'head' we have a conceptual system; we know that because we mostly talk coherently--with occasional gibberish.

We generate such systems out of two modes of coherence:
> (a) propositional functor routes between tokens in lexical space, and
> (b) the shared assignments *to* and emplacements *in* tokens' unique places in lexical/conceptual space.

Sure, there are similar tokens occuping different places in lexical space--multi-vocality. But, since each differently located token of the same type has different coherent functor relations to other tokens, each occupies a unique conceptual place. Given this, we can determine the logical equivalence of our assigned perceptions, because we can determine via conceptual logic's inferences whether or not similar tokens' functor guided travel to other tokens are or are not isomorphic. If they are, assignments are logically equivalent; if not, they aren't. Here's an example.

A conceptual feature of subsuming is that each concept on any level of a subsumption pathway inherits all the coherent functor relations of any concept higher on the pathway. This entails we can determine with the help of other functors whether or not our assignments are logically equivalent.

(i) ^[Subsume] financial-institution bank^ and ^[Sooth] bank bankrupt^ are coherent. So are

(ii) ^[Subsume] landscape bank]^ and ^[Sooth] bank muddy^.

By conceptual logic, (i) and (ii)'s ^bank^s are not equivalent, since (i)'s ^bank^ is not linked to (ii)'s range of concepts and vice versa. (i)'s /bank/s are coherently linked to the predicate range ^{lend bankrupt checking …}^; (ii)'s /bank/s are coherently linked to ^{steep clay muddy …}^. These ranges of tropes are incompatible. Hence, because financial ^bank^ and landscape ^bank^ aren't equivalent; neither could their coherent assignments be logically equivalent, as (iiia/b) are not.

(iiia) ^[Sooth] bank bankrupt^.

(iiib) ^[Sooth] bank muddy.

Even if our qualia' responses to substantives and tropes differ, unknown to us, it doesn't affect the logical equivalence of our assignments or emplacements as Lewis pointed out. Classical empiricists' skeptical boogeyman, experiential privacy, has no passport to travel in lexical/conceptual space. Shed no sympathetic tears for these epistemological terrorists who are denied entry at the border, please.

VARIETIES OF GROUND ZERO EMPLACMENTS
DRAWN FROM OUR VARIOUS SENSES

After explaining that [Assign, **A**…**A**] is more inclusive than [Emplace, **E**…**E**], and how its logic differs from 'refer's, I expand first on the many kinds of ground zero, physical emplacements we have available via our different senses that crowd our daily discourse and thinking. Don't undervalue [Emplace]'s reach to take comfort prematurely in [Assign].

Most reference theorists do not include the referent as "a component part of what is actually asserted" as Russell, D. Kaplan, and I would have it. How then do they relate the world to language? Unfortunately, they do it with variations of correspondence explanations of truth value; they rely on a structural isomorphism between sentences and facts. Even Wittgenstein adopted this resort in his *Tractatus*. My account of truth value owes nothing to correspondence. It owes everything to (a) conceptual coherence of propositions and (b) coherent assignments and emplacements. Languages have sentence structures; they alone supply the forms for coherence and truth. 'Facts' do not have sentence structures; so, it's not possible for statement structures to 'correspond' to factual structures. 'Facts" themselves do not supply a structural correspondence that such theories need if we're to alethically appraise the world. Nature is structured by causality, not by facts. I'm proposing coherently putting substantives and tropes into linguistically structured sentences tokens'; it's been happening as long as there have been languages with enough grammar for us to make statements. We use languages' functors to forge facts. There's more on this down the line.

As we proceed, don't forget: Ground zero [**E**…**E**] is a species of [**A**…**A**].

Varieties of emplacement into tokens

In seeking logical game to replace the alogical 'refer', I made a tactical mistake in my expositions of [Emplace] by confining my explanation of it mostly to visual emplacements into written tokens as if they were the only exemplars of the Gold Standard.[23] I granted our customary dominance of visual over aural tokens in the epistemological literature. Babies can't read but do emplace with astonishing speed and facility into aural tokens while learning a language. John McWhorter reports that of the present ~6,000 languages, only 200 are "truly written". The spoken-only are soon to die out.[24]

---

[23] That's not entirely correct. I mention other varieties of emplacement in the last footnote, 64, of my "Stipulating and Conceiving Natural Kind Concepts" on my web site, http://philosophy.sfsu.edu/ philosophy/page/arthur-Bierman. Quick access: sfsu arthur bierman.

[24] John McWhorter, *World Affairs*, Fall, 2009. He expects English may be the sole survivor. Others expect it will be Spanish, presently spoken by more people than speak English; however, Spanish speaking nations' political powers, at least, presently, are lesser.

Gesture is the major visual/aural equivalent of ground zero emplacement in written and spoken tokens. With "Don't touch the stove" children learn to emplace the stove into the aural /stove/ by our pointing to or tapping the stove with feigned pain. Pointing at the moon answers the size-disparity critique of spatial tokens and their emplacements (the moon doesn't fit into /moon/). In fact, each of our senses provides Gold Standard emplacements along with their allied kinds of instrumental aids (glasses, hearing aids, spectrometers, scratching devices to measure tactile resistance); they augment our unaided senses' bounty.

Consider the following diverse modes of sensing/perceiving substantives and tropes and their suitable emplacement modes that satisfy the Gold Standard.

Aural: A piano note is sounded. A perfect pitch auditor says /That's an F flat/. So will a relative-pitch person if the note sounded is presented within an array of other sounded notes. Both are emplacing a sound into tokens of the same type, "F flat". Unlike either kind of auditor, I'll never be able to satisfy their Gold Standard emplacement. Even if I can't, the emplacement ^**E**piano-note**E** @ /piano note/^ and its trope emplacement, ^**E**(piano-note)f flat**E** @ /F flat/^, indicate an ordered position on an octave piano scale, that does satisfy the Gold Standard for emplacement in audible tokens. /Piano note/ is the *grammatical* subject; the sounded note emplacement, **E**piano-note**E**, is the *semantic* subject; /F flat/ is the *grammatical* predicate, **E**f flat**E** in the octave scale is the *semantic* predicate,

Tactile: August, a master cabinet maker, says to his apprentice, Feral, "Feel the surface texture of this planed oak slat". Feral does so very attentively. He says "It's #7 glatt". August doesn't say "You've coherently emplaced the oak slat's surface trope", but he thought it well enough. August and Feral successfully plied their trade together from 1567 to the year August died, 1585; Feral's tactile emplacements satisfied the Gold Standard so often that August made him a partner and blessed Feral's marriage to his daughter, Freude.

/Slat/ is the grammatical subject, **E**slat**E** is the semantic subject; /(surface) texture/ is the grammatical predicate, **E**7glatt**E** is the semantic predicate.

Odor: Francois, a trapper in upper Michigan before it was called Michigan, said "I smell skunk hereabouts" (Thelma's translation.) Actually, what Francois should have said, more suited to this emplaceable trope, is "I smell a skunk's acrid spray hereabouts". No harm, because Francois's truncated sentence satisfies the Gold Standard. It's pretty hard to be unaware of a skunk's first line of defense: Predator near; acrid spray.

/Odor/ is the grammatical subject, **E**odor**E** is the semantic subject; /acrid spray/ is the grammatical predicate, **E**acrid-spray**E** is the semantic predicate.

* * * *

The functor/copula relation between the grammatical/semantic parts in the above examples is [Subsume, /], a classification functor. It's not [Sooth, .], not predication. In English, we signal the [Subsume] functor by /**a**/ and /**an**/, as in /That's **an** F Flat note/ or /**A** monkey is **a** primate/, /Blue is **a** color/. Thus,

> ^[Subsume, /] note F flat^(note),
> ^[/] slat-surface #7 glatt^(slat),
> ^[/] odor acrid skunk(odor)^.

Determinable heard ^notes^, felt ^surfaces^, and smelt ^odors^ are cognized substantives we use to subsume determinates, such as, ^F flat(*note*)^, ^#7 glatt(sur-*face*)^, and ^*acrid-skun*k(*odor*)^. Determinates are distinguished by their trope differences --^F flat^ versus ^G sharp^, ^#7 glatt^ versus ^#9 glatt^ and so forth. Most philosophers mistakenly treat the classifying [Subsume] functor as [Sooth, .]. Hence, they think sooth/predication is the reigning functor to exploit for categorizing the world's substantives instead of being but an auxiliary to other functors. This likely explains why so many of them have been misled into crowning the alethic [Sooth, .] substantive/trope as the single model for positivist semantics, which leaves them with a logic diet as spare as an anchorite's fallen figs and puny assortments of dried seeds scavenged at oases and from desert sands.

Suppose I'm on the phone with you, Tom, and tell you I have a lemon in my hand. You ask, "What color is your lemon, Thelma, green or ripened yellow?" Wasn't it easy, Tom, to cleave the color from the lemon? And isn't it just as easy to identify the lemon as a semantic substantive and its color as a semantic trope. We believe we share coherent emplacements for both even though we can't watch each other's emplacements at the moment, because we've had enough successful coherent emplacement commerce—Martini up with a lemon twist—to imagine and trust each other's emplacements.

"Does the lemon have a yellow property as it is in itself?" is asked. Yellow and green lemons have diverse surfaces; one absorbs green and reflects yellow, the other reverses them. That explains why lemons cause different color sensations. First, there's the physics--light reflected from the 'lemon' to our eyes; second, there's the reflected light's effects on us—riding athwart our physiology—namely, our eye/brain responses to reflected light. This is all elementary and well known, but perhaps it's useful to remind ourselves of it. Conceptual epistemologists honor what physicists and physiologists report.

Sensation responses differ from perceptions. Sensations become **cognized** percepts when they're substantives and tropes are assigned, respectively, to places in grammatical subject and predicates in conceptual/lexical space. We're wont to say in thoughtless moments with the hoi poloi that we directly perceive substantives and tropes. Instead, we infer backwards on the physics/physiological causal

series to the substantive/trope origins of our sensations and percepts, which ain't in our heads as the emplaced substantive/trope contents of our propositions. Normally, veridically[25] identified origins are the substantives and tropes realists hold responsible for the sensations we assign to or emplace into sentences' subject and predicate tokens, whatever they may be "in themselves" apart from observers' responses to them. Without such entities that exist independently of us, realists think we have no grounds for sooth/predications' truth value judgments, unless we lean on some 'deity's' kindness to strangers or favor idealists' conceptual whimsies. I intend no disrespect for Berkeley; his arguments are clever and formidable, yet finally rely on a Deity; God's about in the quad.

So, Tom, we have to modify the over-simple "as it is in itself" and substitute for it "as it is in ourself". It takes two, the observed and the observer, to sense, cognize, perceive. We do, however, owe an answer to W. B.Yeats's question:

> O body swayed to music, O brightening glance,
> How can we know the dancer from the dance?[26]

How can we know the lemon from the yellow? Is the lemon "out there" and the yellow "in here"? Is Yeats' question answered any easier or reliably if we replace an observing subject with a spectrometer? Do the ghosts of primary and secondary properties still trouble your sleep? And does this challenged, habitual, vision-oriented substantive/trope structure play out as well as the auditory for learning how to assign and emplace tactile, odiferous, and other kinds of tropes? For the greater mass of humans, the audible language structure must be 90% against the lesser-used visual structure.

These questions oblige me to be as clear as I can about the ontological status of assigned and emplaced entities. 'Refer' trundles this onus less aggressively, but it's subject to the same queries. It, too, has to pay the taxi driver.

A piano's hammered string is the cause of a sounded note; a skunk sprays its acrid odor when threatened; the slat engages the receptor nerves in Feral's stroking hand, just as a ripe lemon causes the appearance of yellow when it's struck by light reflected into our eyes. In these energy exchanges there are substantives, observed and observer: The piano's string and hammer and our ear, the skunk's spray and our nose, the slat's surface and our palm. We use these subsumed concepts of the moment's tropes, respectively, ^F flat^, ^acrid^, and ^#7 glatt^, to distinguish substantives' notes, odors, and surfaces, and to subsume specific substantives under generic ones? I've used the visual model up to now, /**E.E**/ & /(**.**)/dot/. But is it the best one to rely on to explain how we learn to cognize sensations, alter them into perceived assignments and emplacements? Does visual emplacement explain this

---

[25] ^Veridical^ stands in for centuries's of epistemological controversy about perceptual reliability. You're on your own about ^veridical^, Tom. My game here is conceptual; I've shifted to coherent [Assign/Emplace].

[26] The ending lines of William Butler Yeats' "Among School Children".

transition from sensation → perception for all kinds of sensations? In addition to seeing a cup, we also feel it, hear the struck bell, sniffed the burnted steak. Our conviction that there are objects emitting various forms of energy are strengthened by such combinations of sensed effects.

The aural model may explain better than the visual how we learn to coherently assign and emplace odors and surfaces, and visual sensations as well. I suggest we explore the aural model as a way to understand how we cognize all our kinds of sensations and the wide world's variety produced by our varuous physical apparatuses—ears, eyes, affective nerves, noses.

I'm in the habit of saying /This lemon *is* yellow/, which philosophers easily rewrite into /This lemon *has* the property yellow/. However, I don't have the habit of saying /This hammered piano string *is* F-flat/--rather, I say /It's the F flat string/ -- nor do I say /It *has* the property F-flat/. Yet, both the lit lemon and the hammered string are the causal origins of the respective percepts yellow and F-flat. We've all used the escape-concepts, ^potential^, ^disposition^, ^propensity^, to say of a tuned string that it has the potential of vibrating to produce an F flat sound—*if and when struck*--in place of saying it *is* F-flat or *has* the property of F-flat. The 'sleeping' piano string makes no F flat sound *until struck*. The string itself has tensions other strings don't have, which is why it can produce F flat when properly tuned, but it does not have an F-flat property. It needs an act or an event to awaken the string, a more dynamic model. This is, in effect, a rejection of the passive visual model of predicating/soothing a property (yellow) of an object (lemon). Tom, a string's F-flat's propensity is a long way from a lemon *having* a property, yellow, or sour, here-and-now-night-and-day-with-or-without-an-observer's aid. Does a tree's fall make a sound if no auditor is within earshot? Sure, it makes waves in the air, but without cooperating auditors, there're no F-flat assignable/emplaceable tropes, only F-flat vibrations for birds and squirrels' listening pleasure.

This apparent discord between a traditional visual and an aural model for assigning and emplacing substantives and tropes in tokens presents us with an ontological fracture: Visual and aural substantives/tropes reside in diverse models. We can easily avoid this discord if we absorb traditional empiricism's visual model into an aural one, which has the additional virtue of providing a unified, dynamic model for all our senses' substantives and tropes. Using escape-concepts, potential, etc., is a winning way to frame the [Sooth]-substantive-trope conceptual structure as well as to identify what kind of entities we're assigning to and emplacing in 'substantive' and 'trope' tokens.

I've come down in favor of making 'ontological' decisions about substantives and tropes[27] based on the judged utility of conceptual constructions and current sciences' accounts of energy exchanges between energy hubs. Think of lemons, piano strings, volatile molecules, and resistant surfaces as substantive hubs of energy that emit energy captured by sensitive hubs that receive and transform the energy into trope events. These events vary in duration; if you hold a piano's sustaining pedal down, F-flat lasts longer. Stare at your lemon for two minutes and you get a two minute lemon-color event unless you're eyeballs are fatigued. I know you want a really short duration of that skunk smell.[28]

Discursive, factual communication has two basic requirements, two polar stars, (i) a semantic subject for a grammatical subject and (ii) a semantic trope for a grammatical predicate of our subject/predicate English sentence.

> Tom, you say, /She's gorgeous/. I ask, /Who's gorgeous? Who's the polar subject?/ You say, /You, Thelma, you're gorgeous./ I say, /No, I'm just exquisite. That's my polar predicate/.

Pretty banal, actually. Yet, identifying these polar semantic stars sets the minimum requirements for successful communication in most languages.

Here are some conceptual requirements for being a coherently assignable/ emplaceable substantive into a sentence's subject. We want it to be a relatively ^stable^ **hub** of energy that allows for ^replacements^ of some tropes by others (5'7''replaces 5'; you grew) without loss of identity; stable hubs provide the actors in story lines we tell ourselves and others. David Hume famously couldn't find a 'self'. He was looking in the wrong place; he was introspecting instead of extra-specting.

We hubs borrow our own cognized continuum from our concepts of other hubs' stability. Our self-identity doesn't depend on our connected memories alone; they would have no identity authority were we not stable, persisting energy hubs like our gals, pals, and pets. We construct our selves by cognizing the manifold of our sensations within a shared, relatively stable, conceptual structure. It's the stability of lexical space that ferries coherent, repeated emplacements of your name, ^**E**tom**E** @ /I/me/^, through time and space and *by contrast* with others.

> ^I, **E**tom**E,** am not any other^ **--}** ^I /Tom/ am I, my self^.

---

[27] I do use "property", but not in the traditional sense of substances having properties. Here a property is any trope that is coherently assignable/emplaceable to/ in a token that has a unique place in lexical/conceptual space. This is similar to my nominalistic way of distinguishing types from tokens: any token that' resembles' another (very hard to specify) is a type. [Any] versus [All] is the determiner for conceptual logic; by cashiering [All], we avoid granting types separate existence. [Any] is conceptual logic's only determiner. I explain the outcome of this and the primacy of propositions coherence values over alethic statement values in my discussion of the square of opposition in "On Emplacing".

[28] Some philosophers gave primacy to tropes with which they constructed substantives. George Berkeley is a classic player. R. Carnap made a rigorous effort to do the same in his *The Logical Structure of the World*. DeWitt Parker heroically tried to construct space from experiences of time. "Time is the measure of motion" whose velocity = distance/time, as in twenty mile/hour.

```
                Self
              /     \
            I     Other
```
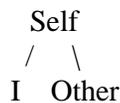
Since ^I^ and ^Other^ are incompatible concepts subsumed under ^Self^, we can
say coherently, ^I am not any other^. We have no choice. We have a concept of
^our self^, because we cannot logically be anyone else. We cannot *logically* have
their experiences--their sorrows, joys, loves, bright moments, or savored indec-
encies. ^[Incompatible, **!**] I Other^ reigns here; it's a conceptual logic, not a
factual, issue.

   Your self is over and done when you're dead and your mouth is stopped
forever from uttering ^**E**tom**E**^ @ /I/me/^. Of course, others' memories of
^**E**tom**E**^ persist; they may assign you per ^**E**tom**E** @ /he/him/^ via their images,
definite descriptions, or home movies of you.

   I distinguished between ^congeries^ and ^ranges^ of substantives' tropes.
Congered tropes are *bonded to substantives*; any change of tropes in a congered
trope changes a ^sort^ concept; we sort birds from other dinosaurs by their feathers
and wish-bones to which their wings' muscles attach. But tropes in ranges are
linked to substantives. Linked concepts *allow* trope replacements in our concepts
of hubs without changing a hub's sort and without altering its identity. Chester's
hair was once black, and, yes, he's still Chester, now gracefully graying away.

   We can track substantives, because we allow them to be at but one place at a
time. Tropes are allowed to be in many places at one time. This freedom we grant
tropes makes sorting our feathered friends possible, wherever and whenever they
exist. Tropes, unlike substantives, are ephemeral, which complements hubs' per-
sistence. Because we allow them to proliferate when- and wherever, and give them
only fleeting existence, we needn't bother with their individual identities.

   There are no secondary tropes. ^Pale^ of ^pale yellow^ is not a trope con-
cept of ^yellow^; it's a concept subsumed by ^yellow^, the trope of a substantive
lemon or squash; ^Cadmium^ and ^Chinese^, too, are subsumed by ^Yellow^.

```
                Yellow
              /    |    \
        Chinese  Pale  Cadmium
```
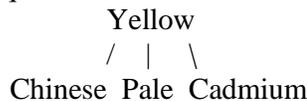
'Secondary' tropes give way to *subsumed* concepts of ranges of tropes.

   It took a long time to get to the differences between ^trope^ and ^substan-
tive^. The concepts began to be hammered out by the ancient Greeks centered
around the controversies about ^change^. Wilhelm Windleband wrote a history of
philosophy that concentrated on the history of concepts rather than on summarizing
individual authors' contributions to philosophy. He employed Hegel's dialectical
method of ridding ourselves of contradictions to reveal the history of Greeks' prog-
ress in understanding ^change^: When you meet a contradiction, make a concept-

ual distinction. Such distinctions reward you; you will earn your more mature concepts such as conceptual ^change^ in which, ideally, all contradictions will be 'dissolved'. Windleband explained this without Hegel's tortured *Phenomenology* style. Plus, he supplied convincing details from the ancient texts. That story ends with the ^substance^/^property^ division afloat on a dying sea. The physical sciences have moved on.

In his *Substance and Function,* Ernst Cassirer moved beyond Windleband's Greek substance/property solution; he counsels jettisoning a static substance that *has* properties for a dynamic metaphysics of events' relations. This was his neo-kantian move to keep Kant's *Critique of Pure Reason* scientifically up to date. I'm going to simplify here, but it doesn't detract from my point, which is to remind you that there's lots of forgotten history and elaboration beyond what I've been saying about the contested status of assignments/emplacements into the subject and predicate tokens of token sentences. I've used the fairly neutral terms, /substantive/ in place of /substance/ and /trope/ in place of /property/, to keep our ontological choices open. I've proposed ^hub of energy^ for ^substantive^ and ^trope event^ for ^property^ as possible ontological choices of what to assign/em-place in sentences to explain how we may profess honestly in [Sooth] functor sentences--predication sentences in philosophers' pop terminology--and why my logical option offers a superior means for achieving coherence and alethic success.

Inferences Meet Their Gold Standard Emplacements

Without Gold Standard assignments or emplacements, evidence for the coherence of propositions and the truth of their corresponding statements is missing. Many emplacements come at the end of inference chains; think of the mathematical complex of inferences used in particle physics. Yet these impressive inferential chains finally have to face reality; conclusions await our coherence and truth value verifications. We must reach at least one Gold Standard assignment or ground zero emplacement, such as observing the spray of electrons on a computer controlled screen after a collider's smashing events; we have to put our inferences' conclusions into 'touch' with reality to confirm their validity and their coherence and truth. Inferential chains abound, also, when we take advantage of technological instruments, such as telescopes, reading glasses, and bioengineering feats that augment our inherited bodily sensing capacities, which I discuss below. Still, epistemologists have been frustrated. Skeptics unrelentingly point out that satisying the Gold Standard is uninsured.

The parallel history of advances in technology and verified physical discoveries records an awesome collective effort to reject the demands of skeptics with appeals to the Gold Standard's ground zero emplacements and to the Silver Standards 's Zero + One assignments . My [Emplace] isn't intended to pacify historical

frustration with skeptics' challenges, Tom, but to incite it. I don't want you to bewail the size disparity of the Pacific Ocean and /Pacific Ocean/. Instead, I urge you, rejoice in and praise humans' ingenuity in their countless apt ways to draw nigher to and extend our capacities to satisfy the Gold Standard ideal, particularly with the invention of apparati to enlarge the miniature and diminish the immense.

I'll give you some examples that extend the reach of [Emplace] beyond my narrow ^dot/black^ illustration. They will remind you of clever inventors and scientists who've brought more and more of the world to the altar of the Gold Standard. They are countless, mostly unheralded by the wide public outside their knowledgeable colleagues' circles, except for news stories of recent, exceptional research updated to the latest Nobel prize winners.

Coherent physical assignments and emplacements are the truth-making contents of our statements. As the old saw has it, "Seeing is believing". Seeing the ball coherently emplaced in the subject place and its dirtiness in the predicate place of /The ball is dirty/ gives credence to believing ^[Sooth] ball dirty^ is coherent as well as believing the <The ball is dirty > is true. [Refer] stops at the "pick out" step; it doesn't go on to the next one in our cognitive pursuit, which is to get substantives and tropes into sentences to verify coherence and truth values.

What holds for seeing holds also for our other senses, as noted above.

For the truth value of <That skunk is stinking up the place>, try "Smelling is believing". You literally smell the acrid odor you assign to /acrid/ of /This odor is really acrid/. From ancient times, philosophers have noted that our senses' unreliability is an ever-present threat to cognitive success. No news there. Apart from that, inferring to private intentions utilized by aR&R theorists in order to supply 'content', 'coherence', and 'truth' for interlocutors' sentence tokens contributes far less than physical emplacement or assignments do. aR&R theories lack the "robustness" Russell demanded for dealing with roust-about reality. Mont Blanc was a wise choice. What could be as reassuringly robust as a big mountain?

Instrument Augmented Assignments and Emplacements

Sure, it's easy to lampoon the simplicity of ^Edot/blackE^, and ^Efingernail /pink^ emplacements in 2.* (p. 3). You may justly ask how these paradigms accommodate the emplacement of immense substantives into tiny tokens?[29] How can we accommodate the Pacific Ocean in the space occupied by /Pacific Ocean/, plant a boson in /boson/'s ample quarters, fit the grand swirl of the Milky Way into the comparatively tiny /Milky Way/?

As Johnny Mercer said, "Somethin's gotta give …" Or, in a more academic vein, "We gotta extend in tandem the reach of [Emplace] and ^perceive^ to give superior credence to the [Emplace] functor over the aR&R accounts of ^refer^.[30] To this purpose, I've introduced the [Assign] functor to supplement [Emplace], while maintaining [Emplace] at ground zero for hands-on emplacements. Let's say [Assign] is the **Silver Standard, Zero + On**e.

To aver propositions' coherence and statements' truth that have no support from the Gold or Silver Standards must be rejected; those that have little support from them should be doubted; the less support they have, the more doubtful are propositions' coherence and statements' truth. Fretting about claims that fall short of these Standards has and still troubles serious cognitive players. I remind you of the fierce free-for-all about the existence of 'theoretical entities' in the 50s and 60s. Enter center-stage disputes about the existence of 'theoretical objects', such as Freud's ego, sub-atomic particles, and genetic structures. There is a long history of working scientists' efforts to extend the Silver/Gold Standards by clever inventions and constructions of instruments—microscopes for the small, telescopes and satellite cameras for the large, cyclotrons and computers to visualize and print images of atomic events—to bridge the evidential gap between immediately sensed macro-sized substantives and their tropes versus instrument-mediated under- and over-sized ones.

Instrument-aided observations of **augmented substantive hubs** and **trope events** should be acknowledged as coherent assignments/emplacements just as those revealed to our unaided perceptions are. To deny this wipes out all late medieval, renaissance, modern, and contemporary scientific knowledge acquired

via technologically im-proved instruments of observation. Without them, we would strip ourselves of practically all confirmed scientific truths. It would strip us of Galileo's truths about the moon's surface. Take this to more sophisticated levels of technology aided assignments, Tom. How else would we able to assign

---

[29] Ingrid D. Rowland writes, "The invention of the microscope [Antonie van Leeuwenhoek] in the seventeenth century revealed a miniature world no less vast and complicated than the depths of the starry heavens, themselves gloriously unveiled not long before by the telescope". Review of the exhibition at the Rembrandt House Museum, Amsterdam, Feb. 23 – May 18, 2008; *The New York Review of Books*, April 9, 2009.

[30] [Refer] only "picks out" a substantive or trope. [Assign/Emplace] also brings the 'referent' into language.

vast detected, inferred supernova explosions to astronomers' sentence tokens? Or detect miniscule plant sperm and their tropes that botanists assign to the subject/-predicate tokens of their sentences? Scientists often project the existences of entities or events to explain observed or inferred events. The explanation can be verified only by observing the entities or events projected, usually by augmented instrumental means. Wind did not turn out to be a good explanation of impregnation. Observing sperm via microscopes is a better alternative.

^Augmented reality^ is the current (2012) nomenclature for the extension of ^perceives^. Instruments that augment our perceptions boost the causal process of sensing to take us from unaided to aided sensings; that's how we acquired new assignable substantives & tropes. Formerly undetectable theoretical objects became coherent assignables that satisfy the Silver Standard. New instruments augmented the reach of [Assign] and ^observe|perceive^ in tandem. Scientists have been doing thusly for centuries. Assignment/emplacement doubters are our current skeptics. Instead of doubting, they should expand their understanding of [Assign/Emplace] and ^perceive^ in order to update themselves on the vast verifying activities of our practicing scientific intelligentsia. Think of the charting, imaging, and manipulation of DNA and RNA alone, and of electron microscope-aided photos of plants' sexual organs and their plant sperm, 1/millionth of a meter in size, that often father allergies.

A recent example is Arlen and Diane Chase's reported use of "airborne laser signals [that] yielded 3-D images of the site of ancient Caracol, in Belize, one of the great cities of the Maya lowlands. In only four days, a twin-engine aircraft equipped with an advanced version of lidar, or light detection and ranging, flew over the jungle and collected data surpassing the results of two and half decades of mapping on the ground…Now we have a totality of data and see the entire landscape', said Arlen Chase of the laser findings."[31] In my terminology, he's telling us we have a "totality" of assignment candidates.

Note /see/, in Chase's sentence; he thinks the laser-augmented data just as assignable as if he, himself, had lidar-sight capacity. He obviously doesn't think of the lidar data as *representations* of high or low humps, of terraces, of straight or crooked streets, of central or peripheral sites any more than he thinks of unaided perceptions as representations. [32] He's seeing present Caracol with its ancient remaining constituent hubs and tropes. He uses ^see^ as an updated concept adapted to the use of augmenting instruments. He allows that tropes supplied by instruments' are intermediary trope events (data) between originating hubs, say present-

---

[31] John Noble Wilford, "An Imaging Breakthrough…", *International Herald-Tribune*, May 13, 2010.
[32] Hermann Goering, head of the Nazi airforce said, "Whenever I hear the word "Kultur", I reach for my revolver". Maybe I'm oversensitive, Tom, but I have started to feel the same when epistemologists use "representations".

day Caracol, and the trope events occurring in human observers in the energy tran-smittal chain. Seeing the data bequeathed us by the lidar trope events *is seeing* present day Caracol. Recourse to 'seeing representations' is just a redundant way of rejecting 'direct' realism. Talk of TV images of live broadcasts, talk shows, and lidar mappings as 'representations' needs discarding. Viewers say <I saw David Letterman on TV last night>; they don't say <I saw TV representations/images of David Letterman last night>. This shows they haven't given up distinguishing between seeing him in person and seeing him "on TV"; however, they may indeed say they *see* him in either of two ways—with/without augmenting instruments--by two different processes I label (SR) and (SIR), which I explain on the next page.

> *The point is: Either mode of seeing Letterman functions equally well for assigning hubs and trope events into sentences' token terms; both serve as evidence of coherence and alethic value.*

Think of politicians recorded saying something they regret later; they deny they said it; but playbacks of TV interviews are *heard* evidence they did say it. Sur-veillance camera images are used as *seen* evidence in US courts, and as invasions of our privacy because others *see* what we've done without our permission. Arlen Chase's way of conceiving seeing takes the tang out of ^represent^, because ^to see^ and ^to hear^ is now extended beyond our former unaided observational lim-its; in these contexts ^represent^ need not apply. These cases differ from genuine inferring: <Q. stole M.'s ring; his fingerprints were all over the place and he didn't live with her, didn't know M. So, Q.'s probably the thief.>

Once we acknowledge the epistemological contribution instrument-aided presentations (not **re**presentations) of substantive hubs and trope events increase our smarts about nature, we're on our way to extending our reach of [Assign/Em-place] and ^see/perceive^:

Instruments supply us with formerly unseen, unheard, … energy hubs and trope events to satisfy appetitive subject and predicate tokens. If you're uneasy with this, Tom, it may be due to a residual direct realist habit of thinking your un-aided sensed events are directly cognizant of a material object and its properties, forgetting that your unaided sensed events come at the end of a series of energy transmittals just as your aided sensed events do. The only difference between them is that the aided process has more energy transformations and transmittals than the unaided one. And I remind you that usually aided observations of trope events are more accurate and/or precise than our unaided ones. This is why we like to have trained pathologists peering through their microscopes to determine if some of our cells' anomalies are evidence of cancer.

In short, augmented images of substantives carry their tropes into predicate tokens as Galileo's telescope-aided images of the moon carried its cratering. This

is the basic verification technique for [Sooth] predication statements. The Brown-ian instrument tracing a molecule's bright trajectory in a surrounding fluid was an early shot in the 20th Century's sophisticated means for augmenting our perception of molecular hubs and their event tropes.[33]

<div align="center">* * * *</div>

Unagumented bodily sensing is a causal process, a series of events, in which energy travels from an excited substantive to our body, which turns on our receptor apparatus.

> (**SR**) **S**ubstantive hub emits energy $\rightarrow$ transmitted to our body and $\rightarrow$
> excites our sensory **R**eceptors that produce sensation-events.

We use instruments to augment other energy transmittals from hubs that turn on our sensory Receptors that cause sensations, which enables us to reach beyond the limits of our (SR), unaided sensing process.[34] The **I**nstruments' registered events are inserted into the (SR) process between the exciting substantive, **S**, and our unaided sensory system, **R**, giving us (**SIR**):

> (SIR) **S**ubstantive hub emits energy $\rightarrow$ transmitted to **I**nstrument $\rightarrow$ that
> transforms and transmits this augmented energy $\rightarrow$ to our body and
> $\rightarrow$ excites our sensory **R**eceptors that produce sensation-events.

(SIR) has three hubs—originating, *instrument*, human senstive substantives—in-stead of two, and one more energy transmittal than (SR). We usually take, inno-cently or not, sensation-events as data about the originating substantive hubs.[35] The instrument may also measure this energy as spectrometers measure the length of color/spectral rays. Familiar examples of intermediate apparati are eyeglasses that sharpen our vision and hearing aids that elevate the faint to our hearing range. Other tools can make the tiny large enough to be seen and the large small enough to know what we're assigning to tokens, and to transmit events that appear on electronic screens we can print out, making them publicly visible for shared assign-ments. Think of such substantives/tropes as augmented substantives and tropes. If

---

[33] An especially interestingly complex augmentation is described by Peter Fimrite in his 1/13/11 article in *The San Francisco Chronicle*. He reports on newly discovered species of worms that eat whale bones by sinking roots in them. Robert Vrijenhoek, an evolutionary biologist, discovered them as he was searching in the Monterey Canyon (CA) at two mile depths for the Monterey Bay Aquarium Research Institute. They discovered the worms feeding on whales, including their bones, by "using video images from a remote-controlled submarine…"

[34] Sensing differs from perception. The latter includes the engagement of our cognitive capacities, concepts and information, that transform sensations into perceptions, that make them available for coherent assignments in sentences and, thus, to alethic evaluations of statements. You know, Tom, roughly, an updated Kantian program.

[35] Don't rewrite /sensation-events/ as /sensations of events/. The rewrite has two factors, the rewritten has but one. The sensation *is* the event. Confusing these two may create the 'mystery' shrouding "the 'problem of conscious-ness'", whatever that's supposed to be. After all, events are physical. The more interesting question is: How do we pass from sensation-events in a sensitive body to the sensation-events "are *mine*"? How did we ever get to '*mine*', to possession? But who else's sensations but *mine*? Who else's body enjoys or suffers 'my' body's sensations?

augmented data were good enough for Galileo, they're good enough for the rest of us, unless you side with Cardinal Saint Robert Bellarmine for ordering Galileo's heresy trial.

Working scientists prize instrument-aided images of substantive hubs' transmitted tropes. Galileo was excited to see craters on the moon via his telescope, less so the Church divines whose defenses of Aristotelian astronomy were swept into *A History of Errors*. They knew and feared the power of Galileo's telescopic data; hence, they commenced his heresy trials to salvage their Aristotelian-based creeds, which the late Pope Paul II acknowledged were in error. Contemporary researchers continue to invent new tools to honor the Silver Standard's demand for augmented data to assign as confirmations of propositions' coherence and statements' truth. If they didn't have this honest aim, physicists would be among the best con men of all time, given that they've extracted billions from the U. S. and the European Community's treasuries to build and maintain increasingly large atom colliders and their auxiliary apparatus. The Large Hadron Collider at Geneva is a cardinal example. That's a long, long way from Galileo's telescope.

Unaided seeing, smelling, hearing, and feeling of hubs and their tropes is believing. And so is seeing, smelling, hearing, feeling the deliverances of our mediating instruments, including eye glasses to vanquish blurred vision. Seeing, hearing, smelling, and feeling trope events better is believing better, Tom. The Gold and Silver Standards' rule, even unto corporeal, augmented bionic enrichments.[36]

Yes, I hear your objection, ultra-clearly: "But, Thelma, an augmented image of the moon and its craters isn't the moon nor its craters. So, the assignment of the images isn't identical to the physical emplacement of the moon itself nor of its very cratering you promoted, praised, and plied with Edot/blackE. The same goes for plant sperm and supernovas; the first is too small, the second too big."

That seems obvious if you're still thinking as an Eleatic apparatus-deprived Greek did circa 500 BC, or as 1930's New Realists did about macro-sized objects. But augmented sensed manifolds brought to you via the mediating factor in the (SIR) sensing process are no less assignable substantives/tropes than those of our unaided sensed manifolds are. Resistance to this claim stems from naive street talk and direct, New Realists' English parlance that confused the transmitted energy effects on our visual/tactile, odiferous. ... sensorium that are assignable|emplaceable substantives and their tropes with a 'directly sensed' three-dimensional 'substance/thing' and an assignable trope with their directly sensed 'properties'. That historical contest between directly and indirectly sensed substantives and their properties is over.

---

[36] Tom, when you have a lens replacement to be rid of your cataracts, ask your surgeon for electronically controlled telescopic + microscopic lens, because you want to bionically augment your perceptions. Accept no substitutes.

This confusion of direct with mediated perception, despite Kant and his apt ally, Wilfrid Sellars', whose heroic efforts to keep them distinct, persists in every-day talk and thinking and even among notably wary analytic philosophers in lapsed moments. New realists, such as Durant Drake, thought we experienced objects and their properties directly; an unaided seen or felt thing doesn't 'refer' to nor 'represent' the thing and its properties; it is the thing and its properties. They were the front line shock troops attacking idealists such as Brand Blandshard and Josiah Royce. The Critical Realist, Roy Wood Sellars, disagreed with the **N**ew **R**ealists. He acknowledged a perceiver's mediating mental state intervened in the causal, sensing process occurring between a perceiver and the perceived. Without that, there could be no explanation of perceptual error or illusions.

Keep in mind the important difference between [Assign] and [Emplace]. Emplacing engages our tactile as well as our visual capacities. To emplace a lemon, I pick it up and emplace it in the position occupied by /lemon/ and /yellow/ in /The lemon is yellow/. However, we don't pick up the moon, or the pacific ocean and emplace them in /moon/ or /Pacific Ocean/. However, assignments do their duty well enough. When we assign the moon or the pacific ocean, we're clearly making them, respectively, the coherent semantic contents of /moon/ and /Pacific Ocean/, and the coherent semantic contents of /cratered/ and /tempest-uous/. They, qua assigned, are the semantic subject and predicate of /The moon is cratered/ and of /The Pacific Ocean is tempestuous/ to verify the coherence of ^the moon is cratered^ and of ^the Pacific Ocean is tempestuous^. Assigned substan-tives carry assigned tropes into predicate places just as well as tactilely emplaced substantives do, which, if coherent, entail, for example, the truth of <The moon is cratered> and <The Pacific Ocean is tempestuous>.

Early 20th Century history of philosophy is riddled with uncompromising, but respectful, epistemological/ontological challenges about the nature of the world's 'furniture'and our knowledge of it. This is exemplified by the lively local disagreements between the U. of Michigan realist, R.W. Sellars, its Sancho Panza, and his idealist colleague, Dewitt Parker, its Don Quixote. The ontological chal-lenges between realists and idealists went hand in hand with epistemological con-frontations that John Dewey thought an irreconcilable stand-off because both schools had a spectator's versus an active agents' stance about knowing. He sav-aged the spectator choice that traditional rationalists and empiricists made; he sided with Kant's agents' "spontaneity", conceptually massaging 'given' manifolds, plus interventions in nature and/or society in the pursuit of knowledge, which Dewey called "experimental knowing". Is the soup too hot to sip? Well, you can stick your pinkie or your digital thermometer in it to find out. Is there water on Mars?

Hey, direct your resident rover there to dig in its soil or sling a missile into a crater, all the while recording the images sent back, with your spectrum analyzers at the ready. Or get your Hadron collider up and running to crash protons against protons. These are active interventions in the world's flow. Knowledge resides in the observed and augmented "consequences of directed action" of intervening agents. Physicists' subject matter is energy and the events it spawns.

"…From the standpoint of experimental knowing, all of the rivalries and connected problems grow from a single root. They spring from the assumption that the true and valid object of knowledge is that which has being prior to and independent of the operations of knowing…If we see that knowing is not the act of an outside spectator but of a participator inside the natural and social scene, then the true object of knowledge resides in the consequences of directed action".[37]

Dewey continues his account of the augmented consequences of an active 'knowing' life thusly: "Knowing is seen to be (have) a participant [an agent] in what is finally known. Moreover, the metaphysics of existence as something fixed and therefore capable of literally exact mathematical description and prediction is undermined …The principle of indeterminancy thus presents itself as the final step in the dislodgment of the old spectator theory of knowledge. It marks the acknowledgement, within scientific procedure itself, of the fact that knowing is one of interaction which goes on within the world…This change involves a reversal of the theory which has dominated thought since the Newtonian system obtained full sway."[38]

The foregoing explains why I distinguish between New Realists' directly perceived things/properties and assignable substantives/tropes from RW Sellars' and Kant's view that our propositional contents are the fruit of the causal process of sensing, plus the logical surround our conceptual activities offer our given intuitions, plus Dewey's "consequences" of participatory, active interventions. [Assign] and conceptual logic give body and method to W. Sellars' inferentialism", a term R. Brandom used to label Frege's *Begriffsscrift* work and W. Sellars' "material inference". Central to these accounts of concepts and conceptual 'knowledge' is that 'judgments' rendered by complete sentences, as in Kant, take priority over their subject/predicate parts, which rebuffs the compositional theory of meaning according to which the meaning of propositions is a composite of prior word 'meanings'. It's the other way around: *Words get their 'meanings' from proposions' coherence*. W Sellars' "material logical relations" between propositions is the matin tolling the arrival of coherence meaning. So far, so good, but all earlier accounts of inferentialism have lacked specificity. They remain embryonic, con-

[37] *The Quest for Certainty: A Study of the Relation of Knowledge and Action*, p. 196; Gifford Lectures, John Dewey; New York; Minton, Balch & Company (1929).
[38] Dewey, ibid., p. 204f.

sisting of a few examples; they've not been developed into a detailed conceptual logic with valid inferences, which I've endeavored to do-- three times, so far.

Frege's *Begriffsscrift* is not an as-advertised conceptual logic. It's a symbolically alternative way of serving alethic logic's inferential system. He never got beyond a plantonically banal account of concepts. His mathematical model with its functions is egregiously unsuited to disclose the nature of concepts as we find them in natural languages. At every turn he favored truth over coherence; he even held that incoherent statements are false. He denounced contemporary logicians he accused of psychologism, while his own account of concepts relied on a naïve Platonism masking an oxymoronal reliance on ^un-thought 'thoughts'^ as the conceptual content of judgments. Naïve me! I thought humans conceive concepts, think thoughts, disagree about them, do logic, supply premises, and make inferences. Frege's notion of conceptual purity required eliding warm-bodied conceptualizers, which does nothing to serve W Sellars' "inferential approach to concepts", which I take the following to be Brandom's basal notion of it. He writes,

> "It is essential to this inferential approach to concepts that the inferences in question are what Sellars calls material inferences. This is to say that their correctness involves the particular contents of the concepts invoked by their premises and conclusions; it is not underwritten purely by the form of these premises and conclusions. A paradigm is the inference from "A is to the East of B" to "B is to the West of A," whose correctness expresses part of the content of the concepts East and West."[39]

If you've read either of my essays, "On Emplacing" or "Conceptual Logic 3.0", you probably know that I think 'content' per Brandom's notion of it is a philosophical cadaver that needs burying. Yet he explicitly relies on it to explain W Sellars' "material inferences", of which Sellars, too, may be guilty. Brandom may well be right about W Sellsars' view. While celebrating the virtue of grown-up inferentialism, thanks to conceptual logic, it's a fitting occasion to retire conceputal ^content^ to its curbside fate, even though formidably able Prof. Brandom still touts it in *Explicit* as if it were a qualified entry at the track.

Also, you may have learned from my essays, particularly "Conceptual Logic 3.0", that it provides valid *forms* for ^material^ "premises and conclusions" just as alethic logic does.[40] I've given many examples of them in the above essays; you

---

[39] *Making It Explicit*, Robert B. Brandom, p. 618; Cambridge, MA; Harvard University Press (1994). See p. 94ff for Brandom's reasoning of why Frege may be classified as a conceptual content inferentialist. Brandom still wrestles with nugatory /content/. Who needs 'content' of concepts when emplacements, assignments, and inferences are at hand? He's still carrying 'conceptual content' water for the pre-inferential theorists of concepts, the very notion to be tossed away as rubbish if we're serious about "inferentialism". Contrary to Brandom, concepts are underwritten "by form" alone. They have their being in the structural form of lexical space; inferences provide the means to identify concepts' unique places in that space. Sellars fell short of a structuralist theory of concepts/lexical tokens in lexical spaces.

[40] For a summary of them, see my "Precise of Conceptual Logic" on my website.

cannot strip 'pure form' from my conceptual logic. Concepts' existence, identities, and coherent combinations rely on form alone; the very structure of lexical space constructed under the advisement of conceptual logic functors needs no 'material' help. We may all rejoice in the rewards of conceptual logic, especially if you cede my nominalistic account of lexical concepts that doesn't rely on 'conceptual contents'; it relies only on functors' coherence conditions on combinations of lexical tokens in grammatical sentence structure, including those of assignments and emplacements whether perceived aided or unaided.

Think of assignable substantives/tropes as RW Sellars did, but more richly mediated by a conceptual logic that he didn't have. Conceptual|lexical logic permutes our sensory intuitions to suit W Sellars' suggestive "material inference".

In summary, conceptual logic strengthens Kant's faculty of ^spontaneity^ agents exercise to transform their manifold of sensations into conceptualized judgments. It enriches RW Sellar's critical realism, accepts the priority of propositions over their resident word's meanings versus the account that propositions' meanings are 'composed' of their resident words' pre-established meanings, and it recognizes W Sellars' subsequent advances that boost our scientific/technological image of the world and of persons' cognitive lives.

This way of thinking about substantive/trope assignments sanctions augmented sensations, elevates them to a perceptual and cognitive status that satisfies the Silver Standard. Spectrum analyses sent from the rover on Mars, seen on screen by trained minds and eyes, show there are sulfates in its soil, which yield an assignable substantive and trope for /[Sooth] Mar's-soil is sulfate-rich/. This is evidence there is or was water on the red planet.

An assignable ^substantive^ is not identical to a directly perceived 'thing' nor are its assignable tropes perceived 'properties' of the 'thing'. Kant retired the Ding-an-sich for cognitive purposes. So did the two Sellars. You, too, can do that and not have to say Galileo *inferred* the moon is cratered. In common parlance, he *saw* cratering on the moon through his telescope. He did not see referents nor representatives of it from which to infer, <Yes, I infer there's cratering on the moon> any more than he has to infer, looking at his slice of Emmentaler, <My cheese has holes, big ones, by my unaided eyes, and very, very small ones with the aid of my microscope>. Keep it as direct and colloquial as possible, Tom.

On p. 26, footnote 27, I distinguished sensing from perception; perception is an offspring of the mind's spontaneity, whose conceptual activity turns sensing into perception. Almost every post-Kantian concedes this. My way of saying this is that perception is the outcome of coherently assigning or emplacing sensed substantives and tropes into our grammatical/lexical| conceptual system that includes dewey-approved events that follow upon human interventions. We conceive cognitive propositions, ^[Sooth] moon cratered^, out of our passively received mani-

fold swarm of sensations and thereby verify <[Sooth] moon cratered>.

* * * *

I take the epistemological aspect of [Assign|Emplace] as seriously as Leibniz did when he took a clear stand on a nominalistic account of cognitive activity and logic. Notice, /content/ does not appear in his remark:

"All reasoning is nothing but the joining and substitution of characters whether these characters be words or symbols or pictures."[41]

Don't assume that epistemological hands-on substantive/trope emplacement is the only variety of assigning them, nor that it's prima facie better than emplacement of augmented "pictures" of them. Leibniz was open to variety. I count him a friend of augmented sensing via "pictures" as assignment candidates. It's the epistemological status of augmented substantives/tropes that's at stake here. On this issue, Galileo's disciples then and now--astronomers, physicists, biologists--augment madly, daily, which we reap as the content of new coherences and new truths.

This is the issue: Do our augmented sensations of substantives and tropes via mediating instruments reward us with assignments of perceptions that have as much logical power and evidential status as do such unmediated, hands-on emplacements as ^Edot/blackE^ and ^Efingernail/pinkE^ when they're emplaced? May assignment coherence and truth be as welcome to our body of established knowledge as emplacements are?

Two examples show practicing scientists answer "Yes".

Water on Mars

"The Mars researchers, based at the University of Arizona's Lunar and Planetary Science Laboratory, reported that their high-resolution Context camera aboard the Mars Reconnaissance Orbiter was snapping pictures of interesting dark spots on the planet a year ago when they realized they were looking at small craters newly formed by the impact of meteorites.

"A month later…images of one of the new craters revealed that its edge was filled with bright blue material shining in the sunlight looking exactly like ice." A few days later some other scientists "trained the spectral analyzer on the same blue stuff and discovered that what they'd thought was right; the ice was 99 percent pure water, blasted up around the crater from deeper underground."[42]

Watching Evolution Occur

---

[41] Note /pictures/ in this quotation. Keep in mind how they may be expanded to fit with images provided by technologically enhanced instruments, which we may assign to [Sooth] propositions' tokens employed in our conceptual reasoning.

[42] David Perlman, *San Francisco Chronicle*, September 26, 2009.

"Darwin's greatest idea was that natural selection is largely responsible for the variety of traits one sees among related species. Now, in the beak of the finch and the fur of the mouse, we can actually see the hand of natural selection at work, molding and modifying the DNA of genes and their expression to adapt the organism to its particular circumstances….

"In those same Galapagos finches, modern Darwins can watch evolution occur in real time. In 1973, Peter and Rosemary Grant…soon discovered that the finches in fact evolved from one year to the next, as conditions on the island swung from wet to dry and back again. Today's Darwins see in detail how pressures such as competition and a changing environment can forge new species….

"Evolution works not just by changing genes, but by modifying the way those genes are switched on and off…In other words, a giraffe doesn't have special genes for a long neck. Its neck-growing genes are the same as a mouse's; they may just be switched on for a longer time, so the giraffe ends up with a longer neck."

The discovery of the on-off switching mechanism overturned a long held notion that the acquisition of limbs in fish required a radical evolutionary event. "It turns out that the genetic machinery needed to make limbs was already present in fins. It did not involve the origin of new genes and a developmental process. It involved the redeployment of old genetic recipes in new ways'", according to Neil Shubin.[43]

This report notes that changes of beaks' tropes may be observed and correlated with survival- and flourishing-conditions for finches and their off-spring. The observable changes due to switching control of genes' effects over short time spans yield emplacement coherence and truths about evolution that were unavailable to Darwin. This advance in evolutionary knowledge occurred only because research using crystallographic instruments revealed a perceptible double helix form of genomes' structure. Its augmented images gave biologists new assignment opportunities and changed our life sciences of plants and creatures.

Craig Venter's computerized synthesis of a genome, placed in another bacterium, that's capable of reproducing itself made worldwide headlines in 2010. The popular press raised again the question about which there's much confusion: Where do we 'draw the line' between ^natural^ and ^artificial^?

"But it is quite a stretch to speak at this stage of the production of synthetic life. The synthetic genome was based on the naturally occurring genome of the bacterium *Mycoplasma mycoides* (with certain modifications). Moreover, the genome, in order to function, had to be put into a living cell, not one that was artifici-

---

[43] David Quammen, "The Darwin Bicentennial, Part One and Two"; *National Geographic*, February, 2009. They emphasize our perceptions of physical, evolved tropes (long/short necks/beaks) and of their coherent emplacements in tokens, which satisfy the Gold Standard.

ally created. Dr. Venter "has not created life, only mimicked it," commented Nobel laureate David Baltimore".[44]

Prof. Piergiorgio Strata, a Professor of Neurosciences in the physiological section at the University of Torino, Italy, took up this vexed distinction. He wrote an article with the somewhat misleading title, "Nature is always artificial". "Nature exists independently of humans, but what we mean by nature is the interpretations we make with our brains. A correct notion of the concept of nature of each of us is of fundamental importance for politics and, therefore, for our choices and strategies that have consequences for societies".[45]

Increasing our knowledge via advances in technology that yields enhanced data isn't 'breaking news', but acknowledging that the [Assign] functor figures into that happy process is news.

Shifting Focus: Back to [Emplace]

I now defend two imperiled flanks of my [Emplace] program:

(i) I point out the lesser sufficiency of its rival, aR&R account (p. 5).

(ii) I furnish varieties of ways we emplace substantives and tropes that satisfy the Gold Standard other than those I described earlier as ^Edot/blackE^ and ^Efingernail/pink/E^, and other than those that rely on augmenting instruments to supply us with substantives and tropes we a*ssign* to subject/predicate tokens that don't suffer size dif-Ference in size and other absurdities, such as ^Apacific oceanA @ /Pacific Ocean/^.

(i)

Attacking the First Flank:
aR&R accounts of reference are deficient

Bach & Harnish (B&H) write, "We view linguistic communication as an inferential process. The speaker provides by what he says, a basis for the hearer to infer what the speaker intends to be thereby doing" (p. 4), including his referring intentions. An important basis for such an inference is pragmatic 'mutual contextual beliefs'" (p. 5). Inference, maybe, and contextual beliefs, yes, but not those alone. Sharing the referent of /That pig/, facing a clutch of pigs, is well done by pointing at or stroking the pig intended, as David Kaplan suggested in "Dthat".[46] If B&H think pointing requires an auxiliary inference to 'pick out' the intended refer-ent, that's their business to explain, but my business here, Tom, is to remind you that the pointing/stroking gestures are ancient physical modes of emplacing

---

[44]   *The Hindu*, Editorial, 23 May 2010.

[45]   *La Stampa*, p. 13; 23 May 2010 (Trans. AKB).

[46]   Reprinted in *The Philosophy of Language*, ed. A. P. Martinich; New York, Oxford University Press, 1985.

that pig in the utterance /That pig/. Pointing and stroking obviates the need for infe-ence, unless ^inference^ is dubiously widened.

I'm exploiting aR&R's vagaries in order to put my emplacing in a better light. From 1964 on, the first question, which I consider a bit demeaning, as if I hadn't taken it into consideration and hadn't offered responses to such Phil 101 critiques as "How can you emplace the Pacific Ocean, the moon, bosons into those substantive terms' places in a token sentence?" /Pacific Ocean/ is too small to house that vast ocean's intemperate, watery expanse? Sure, and what about the moon? And how can you tear asunder sub-atomic particles to emplace bosons into /boson/ as easily as you emplace your sturdy left thumb-nail? I suggest you consult a nuclear physicist for the answer to the last question.

I'm not satisfied proponents of aR&R can furnish convincing answers to such questions as:

> Can we ascertain we've connected referring tokens to physical entities by relying solely on our private, mental juxtapositions?
>
> That is, can we know we've successfully referred, sans publicly ob-served acts of coherent emplacement, because we think we have?
>
> And how do we know our interlocutor knows what our intended referent is if all she does is tell us she, too, is aR&Ring it, however she arrived at her conviction?

Relying on aR&R advocates to answer these questions is like relying on a "flight of angels" to sing us to our eternal rest. Mental, internal referring 'events' don't supply the external, physical un- or augmented substantives and tropes we need to show others what we believe are coherent emplacements for propositional coherence and statement truth. These advocates privatize it; such referents are but humean 'ideas in our mind'. Proponents of privatized reference are empirically deprived.   Professor Hilary Putnam urged, and I urge, that we forage outside our skull for meaning (referents). He advocated this 'externalist' view at least once, but he hadn't enough logical apparatus to advance beyond his metaphorical narra-tives to flesh out the trenchant, operational details of this proposal.[47] He was hamp-ered by lack of a conceptual logic.

David Kaplan was more explicit in his "Dthat": "I will speak of a *demons-trative use* of a singular denoting phrase when the speaker intends that the object for which the phrase stands be designated by an associated demonstration…we shall take the component of the proposition which corresponds to the demonstra-

---

[47]   Bierman did this in his "Conceiving and Stipulating Natural Kinds"; http://www.sfsu.edu/~phlsphr/?page=arthur_bierman.

tive [pointing] to be the individual demonstrated". [48]   This is as close as you can get to Russell's Monte Blanc advisement and my [Emplace] as you can get.

> I think the most important question to ask of aR&R proponents is the first: Can you or others ascertain you've connected referring tokens to physical entities by relying solely on private, mental juxtapositions?

And it's second version:

> Can you or others know you've successfully referred, sans publicly observed coherent emplacement, because you or they think you have?

The answer is "No". Confirmed referral needs publicly observed physical evidence that we've done so. Kip says, "Senator, I'm referring to the RIP annual report". The fact that Kip is thinking of the report or saying he's referring to it isn't sufficient to confirm he's referred to it, just as Kip's thinking or saying he's made a bulls-eye strike doesn't confirm he did so; the score-keeper wants to see where the arrow struck. Nor does it confirm the senator is thinking of the same report. Both archery and referring are success/fail enterprises. Both need physical evidence to confirm success: "Kip, wave the report in the senators's face or hand it to him, for heaven's sake". Without that report in hand, thinking you referred to it isn't evidence for you or others that you did so. Without public physical evidence, referring claims fall under ^bravado^ or ^delusion^. Archers and referrers need to have physical evidence, observable connections between their arrow and their target. Without this, we can't judge if an archer succeeded or failed. Is or isn't the arrow in the physical target's physical bulls-eye? We need a similar observable, physical criterion for judging referential success or failure. This account of ^refer^ can't be achieved without a nominalistic, lexical account of concepts nor without a physical emplacement (or an assignment of enhanced data, such as anomalous cells seen on a pathologist's magnified slides). Is the physical arrow coherently emplaced in or assigned to the physical /arrow/ token? The same reasoning supports courts' sequestering labeled physical evidence, which is emplacement material for terms used in trials. "This gun was used by the defendant to kill Myles", says the prosecutor, waving the pistol in the jurors' faces.

The RIP annual report brandished in hand, which emplaces it in /RIP annual report/, satisfies this physical-emplacement success criterion. Nominalists will settle for nothing less than emplacements or assignments in tokens, nor should you, Tom. My emplacement proposal satisfies this criterion, aR&R accounts do not. You can literally see where your emplacement went into a visible token, see the brandished report and hear it emplaced into an aural token, whether or not either is coherently or incoherently emplaced, just as you can see where your arrow struck or missed the target.

---

[48]   David Kaplan, "Dthat", op cite., p. 320, 2nd column. Of course, the /D/ in the title is short for **d**emonstrative.

Since 1946, when I first saw "reference" and "referring" in philosophy texts, chalked on blackboards, and heard them uttered in lectures in Ann Arbor, Michigan, I've been dissatisfied with philosophers' use of them. Kent Bach tells me that he and Robert Harnish, persistent and accomplished analysts of referring and communication, take referring to be a part of an illocutionary act,[49] which, in my terms, is a via attiva assignment/emplacement act. Perhaps it's my want of mental powers, but I find aR&R referring|representing too mind-confined to convince me it's sufficient to verify that my and others' lexical referring acts succeeded or failed, individually or jointly. I need to see, hear, etc., un- and augmented physical substantives and their tropes emplaced in visual and oral places occupied by physical subject and predicate tokens to grant we've failed or succeeded to refer as physical emplacement mode does. Blind-from-birth persons need to feel a feather in conjunction with "This is a feather", whose rewrite is ^[Emplace] this (felt feather) into (spoken) /feather/^ is coherent. Remember Helen Keller's discovery that water could be emplaced into /water/ written onto her hand. She discovered a concept via coherent emplacement. [Emplace] is the conceptual logic functor that publicly connects world to language and vice versa. [Emplace] is a Gold Standard, because that's where we begin to acquire empirical concepts; [Assign] is a Silver Standard, because it's an extension of [Emplace].

Do you know emplacing is a farmer's test for actually having referred to a pig, Tom? I take you to our pig barn, scratch a pig's ears and tell you, <Porky won a blue ribbon at our state fair>. That's ground zero aural/gestural referring in the pigbarn, the Gold Standard, "Dthat". I'm a farm girl, remember? And a nominalist critic of aR&R city-born guys' referring theories. I haven't forgotten my barnyard emplacing roots.

I analogized between judging referring success to seeing an arrow sticking in an animal or somewhere within or outside a target's rings? We judge aural/gestural emplacing success by noting whether or not a substantive or trope is emplaced by some kind of gesture: Pointing, stroking, nodding, deaf-signing, or coding into an aural token. The sound produced by striking a piano's middle C wire is emplaced in an uttered /middle C/ by temporally juxtaposing them. Or being signed by a deaf person fingering a piano's /middle C/ key. Any of them is a Gold Standard emplacement.

---

[49] Is referring an *act*? What do we *do* when we refer? What is an illocutionary 'act' beyond uttering a proper name, a definite description, or a pronoun|indexical with a referent in mind, and then leave it up to the hearer to infer to what the speaker intends to 'refer'? "An illocutionary act is communicatively successful if the speaker's illocutionary intention is recognized by the hearer." (B&H, p. 15) Judging illocutionary success by *inferring* a speaker's intended referent is far less reliable than observing her *actual emplacement*. B&H lay down certain conditions in the "*speech act schema* (SAS)", p. 6, which is elaborated in pp. 4 – 18. (SAS)'s illocutionary act's success seems to owe more (everything?) to the hearer than it owes (nothing?) to the speaker.

 With any of these varieties of emplacement we can confirm that interlocutors have successfully, jointly referred in real time and space. We and they know we've jointly succeeded or failed to refer to one and the same referent if and only if we observe the same or a different substantive or trope put in places established by physical subject/predicate tokens in lexical space and/or in time. I ken nothing overridingly similar in aR&R accounts of referring successes or failures. Coherent emplacements as in 4.'s /The dot is black/,

 4. ^E**.**E @ /dot/^ & ^E(**.**)**.**E @ /black/^,

is closer to archery than aR&R is. That's why, by analogy, my account of ^refer^ is the one on target.

* * * *

 Here's a reprise of my aR&R critique of mind-bound accounts of referring acts, among the best of which is the foundational Bach and Harnish's (B&H) *Linguistic Communication and Speech Acts*.[50] According to them, referring with definite descriptions, pronouns, and proper names is successful if you "pick out" a definite referent with such expressions. (Is this possible if these expressions' 'meanings' are of no use in identifying referents, as they claim, (p. 9)? Meanings are useful within conceptual logic, as I elaborate shortly in **(ii)**). If meanings don't help us to confirm our and others' referential success/failure, there has to be something else we can use. This 'something' is analogous to judging success or failure in archery--physical, publicly observable emplacement of substantives/trope in tokens is analogous to arrows' publicly observable sticking places.

* * * *

 Bach tells me he and Harnish take referring to be a part of an illocutionary act, a via attiva assign/emplace act in my terms. Their account of illocutionary referring acts break down into several acts:

> (1) Speakers (i) utter tokens, and (ii) intend to refer to R;
> (2) hearers (iii) infer that a speaker intends to refer, and (iv) infers that the referent is R.

 But there's a problem: Private mental aspects of referring don't provide us with intersubjective evidence we need to determine that these 'cooperative' referring sub-acts of (1) and (2), succeeded or failed. Doubt about the identity of a referent can be settled by observing seen, heard, felt substantives/tropes emplaced in seen, heard, felt tokens. That's ground level evidence that the referent a speaker intended is the same one the auditor, too, can see, hear, feel; it's what they need to share to verify they've failed or succeeded to refer to the same trope or substantive. Private, mental referring 'acts' don't provide such sensory evidence. We have it in archery; we know we succeeded or failed by viewing seeing where our arrow hit. Observed substantives and tropes, instrumentally aided or unaided, emplaced with

---

[50] (Cambridge, MA), The MIT Press, 1979.

data from a variety of sensory gates open to hub energies and trope events are the best umpires' of our referring successes and failures.

   With emplacement we can inter-subjectively confirm we've successfully referred in real time and space. Experimental scientists inter-subjectively try to confirm referrals by duplicating experiments; duplication of results can be evidence of co-referring. We can jointly know we've succeeded or failed to refer to one and the same referent if and only if we and others can observe the success or failure to coherently emplace the same substantives and tropes in their tokens' places. I ken no analogous physical tests in aR&R's explicit accounts of referring successes or failures. Coming up in (ii), Varieties of Emplacing, I remind you of how we exceed aR&R's shortcomings in countless ways many times each day of our lives.

   Coherent emplacements, as in 4. /The dot is black/,

      4. E**.**E @ /dot/ & E(dot)**.**E @ /black/,

are closer to archery than aR&R mind-bound accounts; so, an emplacement account is the one on target. [51]

   Contrast this account with how proponents of aR&R say they know an illocutionary lexical act succeeded. I rely on what Bach and Harnish say about this. For definite descriptions, pronouns, and proper names, referring is successful if you "pick out" with one of those kinds of expressions something "definite"[52] They note that in general these kinds of expressions' "linguistic meaning does not determine their reference" (p.25). Then how do internalists know others have 'picked out' the same definite referent as they intended if these expressions' shared 'meanings' don't help them identify referents? This entails that we have to use something else to get accord on referents' identities. Is this 'something else', perchance, analogous to judging our and others' success and failure in archery? Also, shared observations of augmented sensations enable us to agree on successes and failures of assignments.

   It's worth noting that Bach is no longer a pure internalist but a friend of emplacement in his *Thought and Reference*[53], a post-*Linguistic Communication* work, there he deals with "singular propositions" in contrast to "general, uniqueness propositions" expressed by "description sentences." "A singular proposition, such as, ^Kent Bach is retired^, has as one of its constituents not an individual concept but the individual denoted by the name. Such a proposition literally contains that individual." (P. 131; see also pp. 120, and p. 199.)   Kent, like D. Kaplan, knows

---

[51] Op. cite, p. 26. Francois Recanati's *Direct Reference: From Language to Thought*, Blackwell 1993, is so jargonized and over-complicated that I find it impossible to remember what I've read after three or four hours/days.

[52]   ^Trope^ is more "definite" (*one* time/*one* place) than ^property^ (*one* time/*many* places). *Any* (one) trope coherently emplaceable in any similar token or its rewrite's singular place in lexical space is a property. That's why I treat properties as emplaced 'referents'. Tropes are 'picked out'—at 9:17 AM at 27 Portland Place in Austin, Texas--and, per above, so is the property in one of its many places. Both tropes and properties differ from substantives (*many* times/*one* place), as the Buddha is picked out under his banyan tree day in, day out.

[53]   Kent Bach, *Thought and Reference*, New York/Oxford, Oxford University Press, 1987.

the difference between grammatic and semantic subjects and predicates. I welcome all friends of assignment/emplacement. Emplaced physical substantives and tropes are moved within inscribed tokens' places and are gestured into spoken tokens; I explain the latter on p. 41. Nominalists, materialists, and naturalists dun these checks on 'reference'.

The great, classically-based *Century Dictionary: An Encyclopedic Lexicon of the English Language*, *With Supplement* traces "refer" to the Latin *referre* that may be rewritten as *bear back*: re-, back*, +ferre*, to bear. The *Century*'s Englished rewrite is "to bear or carry back; bring back". I cite this because the original use of terms that have come down to us from antiquity have become more abstract than their source, which originally were more manual, physical, nominalistic.[54] My use of [Emplace] to explain referring would be obvious to ancient Greeks. aR&R proponents need to explain how others can grasp our intentions without circuitous inferences. What we take for self-conscious, interior mental dialogues, a factor in illocutionary referring amongst those who favor aR&R accounts of it, was for the ancient Greeks a conversation with the gods, as reported in the *Iliad*. The ancient Greeks required two conversants, a man and a god, to do what we do when we reflect on our own thinking. Our achieved, interior self-reflection, however, makes intentions private, unlike public emplacements that render intentions irrelevant to illocutionary referential communication.

(ii)
Varieties of emplacing

I'll remind you of the many ways we emplace that satisfy the Gold Standard other than the visual, **E**dot/black**E**, **E**thumbnail/pink/**E**, ways described above. I chose that introductory way of exemplifying emplacement for illustrative purposes, because we share this print/electronic visual medium, and because it disrupts comfortable habits of repeating the usual mentalist regimen about 'refer-ring'.

^**Ostensive definition**^ sits wrist by elbow to logic texts in which it's almost universally described as spoken tokens accompanied by gestures to an area occupied by an intended substantive or trope, or by laying on of hands as God the Father does in "This is my beloved Son in Whom I am well pleased". With this ostensive definition, the Father identified the coherent emplacement of/Jesus/. A driving instructor says to her student, laying her hand on the car's shift control, "Dil, this is a

---

[54] See Eric Havelock's *Preface to Plato*. Cambridge MA: Harvard University Press, 1963. Also see http://www.wikipedia.org/wiki/Eric_A._Havelock for a summary of his work and influence. I cite this reference here, because Havelock explored the transition from oral to literate Greek literature, with particular emphasis on how to translate Plato's works with due respect to the conceptual remnants of less abstract oral poetry. Recommended.

shift stick". "Oh", says Dil, a philosophy major, "is /shift stick/ a general term?" The driving instructor, an adjunct philosophy teacher by night, is mightily pleased: "Very good, Dil. Any car's shift stick is coherently emplaceable into any /shift stick/ interpreted by ^shift^'s congery: ^[Conger, **:**+] shift [auto part   power train transmission control   manual/automatic]^. OK?" Dil replies, "I'm only an under-graduate and am no mechanic".

It's well known that identifying the 'referents' of ostensive definitions re-quires additional resources beyond vague gestures. It should be as well known that a driving teacher who relies on an account of concepts grounded on a functor-structured lexical system helps to identify the 'referent'. This example requires a student's acquaintance with the English lexical system and its ^[Bond, **:**] auto part^ to interpret /shift stick/. The teacher cites this proposition to help students, who implicitly know some conceptual logic, how to identify the ostensively emplaced substantive, a shift stick. It helps, because this coherent congery debars identifying the shift stick as a brake handle or a compressor control, either of which would be incoherent emplacements for /shift stick/.

If you willingly use ostensive definitions to relate tokens/types to substan-tives and tropes, you should happily greet it as a familiar variety of emplacement, not usually recognized as such, although such emplacements are a major, indispen-sable aid to learning a language and to referring successes. Neophyte science students acquiring a new technical vocabulary use them daily, hourly, and for any one learning a second language, kindly helped by native speakers who reveal how lexical space is structured by functor|copula interpretations—even if kind natives know nothing about the formal apparatus of conceptual logic that I've introduced.

Ostensive definition is a fundamental exemplar of *reverse emplacement*, which I explain on the next page,

Utter/gesture emplacement and aural tokens: Conceptual logic's em-placement functor is the part of the logical structure of lexical space we use to connect linguistic tokens to substantives and tropes. It's the basic way we use to teach children and second-language learners what we can and cannot coherently emplace in which tokens. Thenceforth, they use that wit for cognitive possession of the world and its events. Challengers of the adequacy of **E**dot/black**E** and **E**fin-ger-nail/pink**E** emplacement exemplars haven't generously stretched themselves enough to acknowledge the physical variety of tokens nor the variety of means we use to emplace substantives and tropes into lexical space to achieve conceptual coherence within language-and-world and, thusly, achieve alethic success.

Emplacements antedating the literate epoch had to be gestured into **uttered** tokens. Ancestors may have uttered /losom/ while nodding their noggin at a meaty, young bison. This utter/gesture mode of emplacing in daily life still prevails over

literate substantive/trope emplacements into inscribed tokens' places. Babies can't read, yet they learn coherent emplacements: **^E**mommy**E @ /**(aural)mommy/**^**. Perhaps the drawings of bison and other animals on French cave walls were 'blackboard' instructions for teaching teenage scouts when to shout /LOSOM!/ to intrepid hunters should they spy a coherent emplacement(s) for such a drawing.

Reverse emplacement

One direction of emplacement is:

      Substantives and tropes into inscribed, aural, tactile, … tokens,

      ^Ecrow**E @** /crow/**^** & **^E**(crow)caws**E @** /caws/**^**.

A *reverse, emplacement direction*, is:

      Tokens into substantives and tropes,

      ^ E/crow/**E @** crow**^** and **^E**(/crow/)/caws/**E @** caws**^**.

Tokens and their emplacements are bi-emplaceable. The clue to understanding this bi-directional possibility is that it's no accident that crows and /crow/s are pronounced the same way, as are crows' caws tropes and /caws/.

Pronouncing a word token and a substantive or trope with the same sound is prima facie evidence a speaker is 'referring'. If a losom, a beast, and /losom/ are pronounced alike, I'm provisionally entitled to believe a losom may be coherently emplaced in the aural /losom/ *and* that an aural /losom/ may be reverse emplaced coherently in a losom beast. This implies we may reasonably surmise that a losom and /losom/ may coherently occupy the same place in lexical|conceptual space.

One morning I was walking behind a woman and two loquacious ~four-year old girls. One of the girls pointed to a Xmas tree lying on a street corner we were passing. She said /tree/, then added /Xmas tree/. She was reverse emplacing, because she pronounced—what else?-- the substantive tree as /tree/, and its Xmas decorated tropes as /Xmas/. When she becomes literate, she'll pronounce the written tokens /tree/ and /Xmas/ in the same way she pronounced the tree and its Xmas tropes. She, and we, can successfully 'refer' this way when the tree and its tropes occupy the same place in lexical space as, respectively, /tree/ and /Xmas/ do. It's smart to exploit similar pronunciations for emplacements and the tokens into which they're coherently, interchangeably emplaceable.

It indicates (i) we're emplacing; (ii) it stresses bi-emplaceability; (iii), and similar pronunciations are publicly observable, shareable; there's no need to infer to private intentions to vault the walls of privacy. Good-bye to inferring exclusively to speakers' private intentions. They're unreachable; hence, we can't verify the truth of our inference's conclusion; and we don't need them to explain how we successfully refer. Keep in mind that both the speaker and auditor are (1) cooperatively referring in a speaker's illuctionary act, and (2) that successful communication requires that both refer to identical referents|emplacements. Many, if not

most, accounts of referring don't explicitly remind us that the auditor and the speaker are 'referring' in this joint illuctionary venture.

These observations on similar pronunciations and the coherent bi-emplace-ablity of substantive and trope tokens and their coherent emplacements help us understand what's going on in ostensive definitions, and language-world learning. The driving instructor ostensively taught Dil the bi-emplaceability of the shift stick and /shift/, where /shift/ is partially interpreted as the coherent ^[Bond, **:**] shift transmission controller^ rather than, say, as ^[Bond, **:**] shift turn-signaler^. She could do this because she knew **E**shift**E** is coherently emplaceable in /shift/, so interpreted, and vice versa by virtue of being able to occupy the same place in lexical space. So, pronouncing **E**shift**E** and /shift/ alike, she teaches Dil that the two objects may occupy the same location in lexical space and, if they do, they're coherently bi-emplaceable.

I've had such resistance to and so much misunderstanding of my [Emplace] functor that I feel bound to expand on the remarks about reverse emplacement at the expense of being redundant for those who understand and accept it.

When you reverse emplace coherently, you literally 'read' substantives and tropes; you pronounce them, just as you read|pronounce the inscribed, physical tokens into which you emplace them. Pictographic and hieroglyphic tokens should weaken resistance, even for orthodox partisans of name/refer renown, to the 'very idea of pronouncing substantives and tropes'. Once past that barrier, you can eas-ily accept reading/pronouncing the world's substantives and tropes; it's but a one-to-one match of reading/pronouncing the world's tokens and their coherently em-placeable substantives and tropes, which is an ancient, simple idea of bi-pronouc-eability as bi-emplaceability. Join the pictograph readers and scratchers, Tom, and those splendid Egyptian stonecutters carving hieroglyphics for royalty.[55] They chose lasting material; nothing of our fleeting electronic civilization will be pre-served three millenia from now. Of course, there'll be no trace of you, either; you won't be able to care then, so why should you care now? Good-bye to all that.

Reading 'facts' is cut from the same cloth as reading tokens. Glub, the teen-age scout, spied a losom and pronounced it /losom/[56] just as he pronounces the

---

[55] See the brilliant cartoon by Frank O'Neal, "Short Ribs", on p. 165 of *LOGIC: A Dialogue*, A. K. Bierman; San Francisco, London, Amsterdam; Holden-Day (1964).

[56] Note : Glub doesn't pronounce the 'name' /losom/. That gets off on the wrong foot! It's the first step in the direction of "Names refer" and all its nascent quibbles. He pronounces the losom. ^Name^ is one of those hangers-on in the nth-told tales of referring, an idle fixture. The pronunciation of a substantive or trope will do nicely.

The 'names' of substantives/tropes have not been identified with their pronunciations in the literature, nor should they be, because similarly pronounced emplacements and tokens may be bi-directional, whereas, 'names'of substantives and 'names' of their tokens never are. Naming-School enrollees don't pronounce bison substantives nor their meaty tropes, only their names. So, name/referent is a one-way street. For them; </Losom/ is the 'name' of a losom, but not vice versa, because <losom, the beast, is not the name of /losom/>. /Losom/ is not a name, it's a pronounceable token and is also a coherent pronunciation of a losom, a beast, which is not a name. When we're mentioning a token, <[**.**] E/losom/E has five letters>, /losom/ might be thought a name of a token, taken as a substan-

cave painting of a losom as /losom/, prima facie evidence he's coherently reverse-emplaced the aural /losom/ into his sighted losom. When Glub coherently pronounced a substantive and one of its tropes as <[Sooth, **.**] losom fluff>, whose reverse form accepts

$$^\wedge \mathbf{E}/losom/\mathbf{E} @ losam^\wedge \text{ and } ^\wedge \mathbf{E}(/losum/)/fluff/\mathbf{E} @ fluff^\wedge,$$

he reverse-emplaced /losom/ into the substantive losom, a lesson he'd learned from the cave painting instruction, which puts **E**losom**E** and /losom/ into the same place in his lexical space. When he sooth , [**.**], connected**E**/losom/**E** and **E**/fluff/**E**, he constructed a grammatic and semantically coherent subject/predicate statement,

<[Sooth, **.**] losom fluff>.

If his emplacements are coherent, he's also constructed a substantive-trope 'fact', that is, a true statement that organizes substantives and tropes lexically. This is how Glub incorporates the world's Subject/Predicate 'aspects' and uses them to construct 'facts' portaged via the craft of language. There's no other way.

Glub spots a fluff/meaty losom from a crest, reads|pronounces it and its location. By structuring them with a [Sooth] copula, he constructs the sentence, /[Sooth, **.**] losom ahead/; his tone of voice warrants that his utterance is a statement; he's claiming it's a fact, a verified-statement, that there is losom prey on the other side of the crest. The hunters, like our scout, are accustomed to pronouncing the /painted-wall-tokens/ of losoms as they pronounced losoms, which is why they can understand the scout's reverse emplaced statement. If he whispers <Losom fluff> to the hunters, pointing in the losom's direction he makes the statement,

<**E**/losom/**E** @ losam & **E**/fluff/**E** @ fluff ronder>.

Glub is reading, pronouncing substantive/trope aspects of the world. Thank you, Glub. The hunters trust Glub (Smart kid); they believe his reverse emplacement statement, the reading|pronunciation of a world 'fact', <[Sooth, **.**] losom fluff>; they climb the crest, eager to slay the announced prey.

If the mighty hunters move to the crest next to Glub, they believe they'll be able to coherently emplace the spied losom into Glub's aural /losom/ and its fluff trope into his aural /fluff/:

(**E**) $^\wedge \mathbf{E}$losom$\mathbf{E}$ @ /losom/ & **E**(losom)fluff**E** @ /fluff/$^\wedge$.

They believe that, because they trust Glub to have coherently reverse emplaced

(**RE**) $^\wedge \mathbf{E}$/losom/$\mathbf{E}$ @ (substantive)losom & **E**/fluff/**E** @ (trope)fluff$^\wedge$.

Each of the reverse emplacements has the same pronunciation as the direct emplacements. Thank the doughty, alert Glub and the trained, mighty hunters for mastering these bi-emplaceable skills that ensured the survival of *homo sapiens*.

---

tive, but I discourage this. Why not consider it just a different kind of substantive with its own kind of tropes, such as, is 'written with five letters'? That's more direct than the 'name' of a substantive. Pronounce, name not.

Without reverse emplaced/pronounced 'facts', we wouldn't be able to report what we observe in the world. How else could you coherently and truly report the discovery that your dog has fleas or that there's mud on Joe's nose? That your son is ill? That the moon is full? That there's a Xmas tree on the street corner? Re-

porting that you're bankrupt is more complex, awaiting a conceptual logic with a fuller account of 'relations' and alloyed ordering predicates than I've given so far. (Next on the project is "On Coherent Logic for Relations".)

Here's a **Bi-emplacement Principle,** Tom, per (E) and (RE), above:
> **(E) iff (RE).**

If an emplacement of a substantive or a trope into a token is coherent, so is each of their reverse emplacements. The Bi-emplacement Principle is entertained, prima facie, on the same-pronunciation ground.[57] It holds, however, only if the token and the emplacement share all functor relations in lexical space. Since each interpret-tation of a lexical token has a unique functored place in lexical space, any coherent emplacement or reverse coherent emplacement under the same interpretation can not but share the token's coherent functor relations.

Just, between us, Tom, I'm on to your favorite reverse emplacement. Uh huh. You read|pronounce a sexy woman coming our way, as /Hot babe!/, gawking shamelessly. You defend yourself by reminding me I sometimes read a guy, /Ooh, big hunk!/. That's true, but, I read him quietly and I don't gawk. Women's and men's style of reading the world are often vastly different. Think about it.

Accepting reverse emplacement will help you shed the lengthy hold ^refer^ and ^content^ have had on maldescriptions of what we actually do when we relate language to the world and vice versa. The [Emplace] functor and its reverse set us right. Be grateful to the early hunters, masters of emplacement and its reverse turn.

Glub, lead us.

* * * *

The varieties of emplacing are so myriad they can't be listed exhaustively. While facing fascinating Belva, consider Bud's eye-shift in the direction of Dud, the town's bore, entering your mayor's reception; Bud scrunches up his face in distaste. His soporific scrunch reverse emplaces Dud's deadly personality:
> ^**E**/soporific/**E** @ soporific^.

Recall the daunting number of ways you daily perform astonishing reverse em-placements. You can proudly acknowledge your right to renounce any simplistic scorn you'd harbored for ^**E**Pacific Ocean**E** @ /Pacific Ocean/^ as a ridiculously

---

[57] ^Prima facie^ is, of course, a hedge, beloved of early 20th century British philosophers. In my use here, the hedge is quite uninteresting. I concede that there are multiple interpretations of token/types with the same pro-nunciations. If the 'prima facie' ground fails, as it often does, same-pronunciation doesn't guarantee the bi-em-placeability of tokens and their prima facie substantives and tropes.

restricted standard of emplacing. You're now fitted to quell the power that philosophical stars have long exercised via their scripted journal articles and books. You need no longer fear they've strangled hope for a happy ending to the centuries-old, Ptolemaic referring elaborations of ^refer^ and ^content^ proffered lately from J.S. Mill to Francois Recanati's *Direct Reference*. Earnest, brilliant, learned,

skilled, 19th and 20th Century philosophers have stirred the air into a whirlwind. I bow down to my betters, Tom, but not to their over-elaborated distortions of these concepts.

Let us review: Uttered tokens don't have the space limitations of inscribed ones; so, the familiar charge that literal emplacement, "Hey! Lake Woebegone doesn't fit into an inscribed /Lake Woebegone/!" is simplistic; it's just lost its steam. Reverse emplacement and the endless variety of emplacement modes we command fortify my point.

The virtual redeemed by the actual

An attenuated emplacement tactic appeals to virtual, unperceived assignments or emplacements as promissory notes to be redeemed later with actual, sensed assignments or emplacements. Galileo curiosity about the unidentified irregularities on the moon—virtual geological features?--was rewarded by his later, actually seen telescopic sightings. Einstein's virtual, mathematical account of gravity and space-time physics was accepted as actual when observers saw stars' light bending around bodies interposed between the light source and observers' positions. Virtual emplacement is defensible if it relies on a theoretically well supported belief that a promissory, actual instrument-enhanced sighting may be in the offing; it's a hopeful prelude to an actual assignment/emplacement.

A recent experiment in the bowels of the Gran Sasso in Abruzzo, Italy, near Aquila, devastated by the 2009 earthquake, provides a good example of the shift from the virtual to the actual. This mountain is relatively young, so isn't as neutrino contaminated as older mountains. The Italian government had intended to tunnel through it to build a short freeway route to the Adriatic. But it was so riddled with rivers that the engineers gave up. Its gutted innards were turned into a station for physics experiments. Huge vats of water were installed to capture neutrino-tau particles from outer space. For fifty years, none were captured. Recently, they were. Experimenters aimed neutrino-mus from Geneva at the Gran Sasso. The mus traveled underground for 732 kilometers, but they disappeared en route. In the 1950s, Bruno Pontecorvo, an Italian physicist who'd defected to Russia, had proposed they didn't disappear but were transformed into another type during their long journey underground. Meanwhile, the Japanese studied neutrinos in depth and gave reason to Pontecorvo's hypothesis, but needed proof, which would be to

detect neutrino-taus in Gran Sasso's bathtubs. After three years work, taus were captured. The researchers are 98% sure of the results, but require some work "to complete the verification". "The Japanese would have to see the neutrino-electron". The Italian word for "see" is "vedere". So, there you have it, Tom, a nice

example of working physicists moving from "virtual" to "actual reality" by *seeing* via augmenting instruments the long hypothesized neutrino-tau.[58]

Less theorectically, the virtual → actual move goes beyond the illuctionary act of [picking out] Lake Woebegone from Lake Michigan. Picking out one from the other is a lesser task than being able to coherently emplace Lake Woebegone into aural/Lake Woebegone/. [Picking out] needs but <Lake Woebegone is the first lake west of Lake Michigan>, providing, of course, you've previously coherently emplaced Lake Michigan and its location in the world. To emplace the lake coherently, you need more information than for 'picking out' it out from another.

Carl Nolte reports overhearing remarks at the Cliff House, a landmark San Francisco restaurant and bar perched over the restless waters of the Pacific crashing against the rocks below. "…A local resident point(s) with pride to the view: "'Well, Aunt Maude', he said, 'There it is. The Pacific Ocean'". "'Is that so?' the lady said, sourly. 'I thought it would be bigger'".[59] Here it is again, the **^E**pacific ocean**E @** /Pacific Ocean/**^**-size problem, now from the mouth of a visiting aunt. "Try a satellite photo of the ocean, Maude", the nephew adds. And if Aunt Maude replies, "Too virtual"? "No, Auntie, you'd actually be perceiving the great extent of the Pacific, because it's sized down by the photo." We *actually* perceive that ocean better from outer space than we do from our table here at the Cliff House."

In short, there's a response if you've been paying attention: "Maude, instruments often give us better actual assignments than our bodily sensing equipment does. Get past the British empiricism you learned in college fifty years ago".

Maude could profit from advice you might give Bella in a similar, but more tractable, situation. You're standing on a shore of Lake Woebegone. Gazing on it, you remark to Bella, "This is the lake made famous by Garrison Keillor". She's new to Minnesota, fresh from Italy. In school English; she says "I see water, but where is il lago?" You're taken aback. "Bella, you can't see the whole lake from here; there's more to it. Lake Woebegone includes what you can't see from here". "How can I include what I don't see?" she asks. This is close to the critique that there's not enough room in /Lake Woebegone/'s space to emplace that lake. You ask, as Lenin once did: "What's to be done?"

[58] "The neutrino that changes idenity is captured", Giovanni Caprara, *Corriere della Sera*, 1 June, 2010.
[59] From Nolte's "Native Son" column in the *San Francisco Chronicle*, October 25, 2009.

Well, several things. One is to show her a photo of it taken with a camera from a plane as the Pacific was from a satellite. The photos of the lake are as good an actual emplacement in /Lake Woebegone/ tokens, whether inscribed or uttered, as photos of the moon's cratering via satellite photos or as seen by Galileo through his telescope. That's because the photos show the lake's and the Pacific's tropes to the extent that our seashore-virtual-sightings of them don't show. If you don't honor this distinction, Ms. Luddite, say /Goodbye/ to technologically supported

science and assignments. Cast your microscopes, telescopes, CT scans, atomic accelerators into the deepest part of the actual Pacific. Feel better, Tom?

Another variant, antedating our current sophisticated imaging instruments that aid our emplacement powers, is to give her measurements of the lake's extent with the added note that both her seen and unseen portions are part of Lake Woebegone. Bella's vaunted imaginative-power ties her concepts to sensible content without which they would be "empty|leer", per Kant. With this faculty, we synthesize the reproduction of our sensible experiences and give content to our cognitive concepts.[60]

Another variant is to walk around the lake's edge, noting that the water you see "is included within Lake Woebegone's continuous shore"; then you boat across it, noting that the water you see "is included in Lake Woebegone". Isn't that a standard way to help Aunt Maude construct an emplacement of a lake and to learn that a body of water is coherently emplaceable into and aural /Lake Woebegone/? It's more demanding than stroking a pig to indicate it's your emplacement for /that pig/. Geographers could tell us more. And notice again: These emplacment instructions go well beyond what's needed for "picking out" Lake Woebegone from Lake Michigan. The illocutionary acts of picking-out and emplacing are not identical, unless you extend ^pick out^ to give it the same powers that [Emplace] has, that is, to coherently put substantives and tropes into their places in visual and aural lexical space.

The globes in classrooms are mediating means of emplacing countries, regions. My Madison County Little Red School House's globe was such a device, although miserably faded, obscured by the fatty residue of pupils' index fingers, and outdated. Nebraska was never a rich state. Globes give us geometrical arrays that help us "pick out" one country from another but with hazy assignment boundaries. They give us preliminary instructions for assigning Hungary, Turkey, and your home state. Borders and countries; emplacements change; Danzig was once a free city, then became part of Germany, and is now (2013) in Russia. Countries' coherent emplacements aren't as stable as my Edot/blackE emplacement is. In my zeal

---

[60] See *Critique of Pure Reason*, Part II, First Edition, Section 2., "On the Synthesis of Reproduction in Imagination", pp. 154 – 5; (trans.) Werner S. Pluhar; Indianapolis; Hackett Publishing Company, 1996.

to provide a vivid corrective to over-mentalized accounts of ^refer^, I misled many to believe inscription-emplacement was the only way to emplace. Alors.

Mental reference is too generic

Another shortcoming of a mentalized [Refer] is that it's too generic. [Emplace] forces us to make distinctions that [Refer] glosses over.

For starters, it's discouraging to note how many theories of reference don't distinguish 'relations' from tropes. One-place tropes need but one substantive.

But who has sensed a two-substantive taller, later, or meaner 'trope' as they have a one-place trope such as dirty (ugh) or wet (slimy)? Two-place predicates identity depend on conceptually comparing and contrasting substantives' tropes. I'm six feet one and you're five feet nine, Tom. I'm taller than you because of our comparative and contrasting binary 'relations' with a measuring device or our back-to-back, very touching, comparison. So-called 'relations' are ordering functors. I expand on this in a forthcoming essay about two-term+ ordering sentences.

Between you and me, Tom, I've long entertained the idea that there are no one-place tropes, that all 'tropes' are relations in grammatical disguise. ^Tall^ almost certainly is; and ^angry^ may well be. How can we attribute anger to a person except in contrast to peeved or serene, whether yesterday or ten minutes ago, whether it's Maude who's peeved and Bella who's serene? Conceptual incompatibility is a constant companion of every trope—they belong to trope ranges, ^{angry peeved serene}^ subsumed by ^emotion^. No concept travels without its contrary or contradictory linked companions. Without them, we have no way of distinguishing one trope/property from another, hence, also, no ability to distinguish sortal or individual substantives. Our conceptual discriminations would be reduced to Sir Toby Belch's "It's all one", said rashly but gaily while deep in his cups.

Maybe I'm being too fanciful even for speculation, but do you think the inspiration for Hegel's Absolute is Sir Toby'remark? For Hegel, the dialectical adventure of the 'Spirit' is to overcome/aufheben the contradictions within our understanding of die Welt so that we may conceive it as an Absolute One. If that's stretching the origins of Hegel's One Big Idea, at least now we know there're two ways to achieve this Oneness: Hegel's elaboration of concepts a la Plato by introducing distinctions[61] or Sir Toby's simpler, faster, surer, more pleasurable way, namely, imbibe enough ale to erase conceptual distinctions. No need to master Hegel's turgid *Phenomenology* to know "it's all one". Take your pick, Tom.

---

[61] Plato pointed out in his *Republic* that a top may be both at rest and in motion without contradiction by distinguishing between its *axis* at rest with respect to a surface and the motion of its *periphery* with respect to the same surface. The axis/periphery distinction nullifies the rest/~rest /in-motion contradiction..

Here's more detail on my too-generic critique of mentalized [Refer], how it contrasts with [Emplace]. [Emplace] incorporates the category markers of substantives (and tropes) while [Pick out] does not. Each substantive has its place in a subsumption pathway, is bonded or soothed to its distinctive tropes and/or relations by lexical space's functors. Coherent emplacement puts substantives into their proper place in structured lexical space, picking up logical functor information undreamed of by [Pick out]. Think of the difference between human ^act^ qualified by ^moral^ and ^immoral^, versus ^number^ qualified by ^even^ and ^odd^, and versus ^radish^ qualified by ^sweet^ and ^piquant^. None of these tropes or 'relations' of these diverse substantives are coherently exchangeable in sooth propo-

sitions, nor, consequently, in sooth statements: ^[Link, *****] act {even piquant}^ are incoherent, as are ^[Link, *****] radish {odd moral}^, and [Link, *****] number {sweet moral}>.

Nor can an account of [Refer] as [Pick out] explain coherence evaluations; they call for more logical detail than [Pick out] supplies. To 'pick out' malignant from healthy cells, a pathologist uses conceptual logic information embedded in her lexical space formed by such functors as [Subsume] and [Conger]. Functors add coherence emplacement detail to the meager contribution of [Refer]/[pick out]. Philosophers who neglect the fuller tidings conceptual logic brings to ^reference^ deprive themselves of additional tools that can help them achieve a better understanding of the relation between languages and the rest of the world's furniture.

I'm not primed to explain how to emplace events and processes coherently into /event/ and /process/. Is heating water to boiling a process? Is it a series of distinct or continuous event-changes in the temperature of water? Should we say the same about radiating cancer cells, which we hope will kill them? There's plenty of work to be done by smart, young logicians. The pay's not good, but the psychic payoff can be appreciable. Start with Emily Dickinson's poem.

> Crumbling is not an instant's Act
> A fundamental pause
> Dilapidation's processes
> Are organized Decays…[62]

Some Brief Reminders and Refinements
Both [Assign/Emplace], [**A/E**], are illocutionary semantic functors in two coherent directions, whereas [Refer] has but one coherent direction:

> (r) ^[Refer] /Fido/ **E**fido**E**^ is coherent, ^[Refer] **E**fido**E** /Fido/^
> is not.

---

[62] *The Complete Poems of Emily Dickinson*, # 997, p. 463; Ed.) Thomas H. Johnson; Boston, Little, Brown and Company, 1960.

[A/E] has two coherent directions. The first direction is
>   (a) ^[Emplace] **E**fido**E** @ /Fido/^.
Both (a), and [A/E]'s second, reverse direction, (a'), is coherent:
>   (a') ^[Emplace] **E**/Fido/**E** @ fido^.
Since [Refer] has but one direction while [A/E] has two, they're not identical functors, hence, not identical illocutionary acts.

(a)'s direction explains how lexical concepts guide our cognitive and communicative enterprises. It explains

(i) how they enable us to carve 'facts' out of the manifold excitations of our sensorium, and how coherent [A/E] public insertions of world substantives and tropes into sentences' subject and predicate tokens does this.   [A/E] gifts speakers

and auditors with shared observable evidence to determine if they've 'picked out' the same 'referent'; and explain

(ii) how we move from sensations to conceptual, cognitive judgments, which Kant strove to 'prove' in his first *Critique*'s Transcendental Analytic; and also explains

(iii) how to conceive the 'unity' of propositions and statements. The tendency has been to look at the role copula tokens play in turning a plurality of concepts into the unity of 'meaningful' propositions. But copulas are inert; agents are active. So, look to agents' acts to explain how we move from plurality to unity, how we unify many words' 'meanings' into a proposition's single 'meaning'.

Consider a hammer, Tom. How do we explain how its two parts became one? Simple enough: An agent attached a head to a handle, or vice versa; voila', plurality is turned into unity. Agents perform unifying feats by putting substantive and trope concepts together under the aegis of one of a copula's seven via attiva functors. Instead of looking for some magic glue in a grammatical copula, look to agents' seven ways they may travel from substantive-to-trope concepts, trope-to-trope concepts, substantive-to-substantive concepts to yield unified conceptual journeys, which are called propositions, always under functor advisements. Physically attaching head-to-handle is analogous to nominalistic functor acts. [Subsume], [Bond], [Sooth], [Link] are different ways we unify plural lexical tokens/ concepts into a single coherent proposition:

>   [Sooth] substantive-trope → sooth proposition; [Subsume] trope-trope →
>   subsumptive proposition, and so forth.

Agents travel a route between two concepts. The route ^[Bond, **:**] triangle 3-sided^ has a beginning and an ending place in lexical space that specifies your conceptual journey as a *unit*, just as your Chicago to Cleveland auto route specifies your auto journey as a *unit*; "What route did you take/not take, Tom?" You travel on geographical and lexical routes daily, easily, mostly unconsciously.

Once (a)'s coherent unity is achieved, we inherit the power to unify (a')'s [A/E] reverse return trip coherently.

* * * *

Instead of using the part/whole composition metaphor for constructing propositions and statements, I've used the metaphor of traveling in lexical space from one concept to another to construct propositions. However, conceptual traveling might be conceived literally rather than metaphorically. Let's take a walk on the wild side, Tom.

Excited neurons initiate an electrical charge that travels via axons to other neurons; these discharges start a journey from one neuron and end at another, however circuitous their path, or distant they are from each other in our brain. Conceptual logic's structure might be used as a research guide to brains' conceptual activities. The underlying assumption here is that lexical and neural spaces have an isomorphic or near isomorphic structure. Just watching lit-up areas of the brain doesn't inform us of anything unless interventions in the brain are coordinated with observed behavior, including cognitive linguistic behavior, such as that presented in conceptual/lexical logic 3.0.

Recall that there are

S/S travels from one substantive concept to another via [Subsume], which includes [**E**…**E**], ^[Subsume] **E**Tabby**E** [under] cat^. This gets Tabby into the conceptual structure and the magic moment when she becomes a concept. /Cat/ is a concept, because it's in the English lexical structure.

There are **P/P** travels from one predicate trope concept to another, also via ^[Subsume] **E**green**E** [under] colored ^; and

There are **S/P** travels between a substantive and trope concepts via [Bond], [Conger], [Link], and [Sooth]. Also recall that leutic modality divides into [Enjoined to], [Enjoined not to], and [Allowed to] on a route from one concept to another. Leutic modalities advise us on travel limits and allowances in lexical space. I doubt it does so in neural space.

Consider two journeys between **Start** and **End**.

Start: /Hello, Tom!/ → **End**. Greeting.

Start: /Come out, Tom!/ → **End.** Request.

(a)   If interpretations, ^S^ and ^P^, of lexical tokens occupy unique places in lexical space, and

(b)   if they occupy uniquely placed neurons or clusters of them, Sne and Pne, in **neural space**, and

(c)   if lexical/conceptual space and its relevant part of neural space (lit up technique) have a structure isomorphic to that proposed in conceptual logic 3.0;

(d)   if an electrical charge is initiated at neuron Sne/^S^ and discharged at neuron Pne/^P^, we can then say,

(e)   the route from Sne/^S^ to Pne/^P^is a unified proposition, a literal version of my Start/End travel metaphor.

Both conceptual and electrical journeys unity is delineated by the Start → End of electrical transmission in neural space. Further, if something such as Alzheimer's plaque blocks movements of electrical charges from Sne/^S^ to Pne/^P, or from Sne^a/^S^a^ to Sne^b/^S^b^, it thereby blocks cognitive travels between concepts in lexical space. A coherent path can no longer be treked. Unifying its start and end points can no longer be achieved. Alas, alack.

These features belong also to (a')'s [A/E] reverse direction per the Bi-Emplacement Principle, **(E) iff (RE)** (p. 45).

63

* * * *

By coherently incorporating substantives and tropes into conceptual space via [A/E], whelping such emplacements as ^**E**fido**E** @ /Fido/^, we erase the crippling ontological dualism of lexical tokens vs. alexical substantives and tropes. Philosophers seduced by residual Platonism, reflexively nudge language into a domain *outside* the alexical world and, so, preserve the 'intractablity' of the unity problem How do you bring two 'worlds' together? A nominalistic conceptual/lexical system, instead, allocates the lexical and the alexical domain to one and the same world. By existing ontologically on the same physical plane, the lexical/alexical ontological dualism is expunged. Agents acting in an ontologically concordant world have no more difficulty traveling from one concept to another, joining them into coherent propositions—Start neuron-axon-End neuron--[63] than tool makers have in joining hammer heads to handles. Again, think of attaching a hammer head and its handle as a physical unifying act analogous to the physical functor act of traveling in lexical/neuron space to link two physical lexical/conceptual neurons into a Start → End propositional journey, from $Pne^a/^S^a{}^\wedge$ to $Pne^b{}^\wedge P^b{}^\wedge$.

Sorry, Tom, tho' not very, this is a dense set of reminders, refinements, and speculations; but if you synthesize them with what I've said before, sometimes more than once, and achieve a serenely confident grasp of them, you'll understand why nominalism is crucially important to the escape from lexical/alexical dualism. If I haven't given an unanswerable case for it, even though I've supplied abundant valid reasons, I think it gut-necessary for us and our fellow travelers to continue pursuing an improved account of nominalism.

We are but animals who rely on our senses to see, hear, feel lexical tokens and alexical substantives and tropes. The Empiricists and Kant are right in the big picture: We start our cognitive adventure at the sensorium and wrest our conceptual emporium from it. Kant's explanation of this is the beginning of a more sophisticated account of this human journey than Hume supplied, despite his predecessor's, Berkeley, better account of it. Puzzle: Why didn't Hume make use of Berkeley's nominalism in his account of 'abstract' ideas?

Tom, the use of [Any] as the sole conceptual logic determiner, dropping [All] and [Every] alethic determiners, is the beginning of nominalistic wisdom (along with distinguishing between conceptual [~] and alethic [-] negation). [Any] blocks the ontological excesses of sets and classes.[64]

---

[63] Except for Alzheimers' and dementially afflicted persons.
[64] Michael Friedman's article, "Geometry, Construction, and Intuition in Kant and His Successors" is instructive. It provides a clear account of Kant's theory of the active construction of geometrical space with a straight edge linearity and rotation, akin to Euclid's proof procedure. Unlimited iteration of these constructions gives us the possibility of infinite dimensions. (*Between Logic and Intuition: Essays in Honor of Charles Parsons*, (Eds) Gila Sher and Richard Tieszen; Cambridge UK, Cambridge University Press, 2000)

* * * *

(r) ^[Refer] /Fido/ **E**fido**E^** unadorned, without mighty qualifications, is a private act, aR&R; it provides no publicly observable grounds for speakers/auditors to check their agreement or disagreement that the dog Fido is the referent of a speaker's /Fido/. Bach and D. Kaplan, while going to and fro speaking of referrentoes, allow that the *semantic* subject, the entity 'referred' to in singular propositions, resides **within** the proposition, a proper part of the 'proposition' (in their, not my use, of /proposition/). Kaplan's "dthat" snuggles comfortably akin to [A/E], although, maybe, less literally 'within'. Despite this kinship, I recommend deserting the baffled vocabulary, [Refer], [Represent], [Correspond], and any allied functors from philosophical discourse for a century. It will take at least that long for professional philosophers to rid them themselves of the reflex-induced habits they tote into logical-philosophical discourse from their Ph.D enforced training. Of course, banning them from citizens' every day discourse would be futile. They're not reading, studying, nor obediently adopting philosophers' vocabulary. Only philosophers, associated professsional colleagues, and acolytes may, although reluctantly, adopt [Assign]/[Emplace] functors and consign tattered [Refer] and its cousin functors to the dust bin.

Tom, you, helped me understand a new, oblique way of thinking about the relation between the lexical and the alexical; we don't have to mimic the uninitiateds' habits. By being intractable, following a new logic, we may influence even philosophers to revocabulate their discourse, although I doubt 'plain speaking' fellow citizens will do so. Thus, I mistrust Austin and Wittgenstein's confidence in ordinary language, because ordinary discourse neglects a lot of available, unused concepts; but, then, so do philosophers as A. and W. report so stylistically.

* * * *

I end here. I think I've said enough to defend myself against the charge that my **E**dot/black**E** account of emplacement is ridiculously inadequate, although I never claimed an hegemonic status for it as you'll recall from our "On Emplacing" conversations where I first addressed this critique. Here, I've supplied numerous other varieties of emplacements; I've added augmented perceptual assignments to draft Kant's muscular faculty of imagination with which we join sensory intuition to cognitive understanding. This grants us access to the many ways we humans have adapted our lexical part of the world to its alexical part and vice versa.

Yours, in respectful sincerity and genuine gratitude, Thelma

N. B. Tom, whatever you think falls short or is mistaken in this essay, please don't halt at that point, but go on to suggest what I should have written that you think will improve this essay or correct its mistakes. Thank you.

Rome, Italy; March, 2013

Post-Quote
"When we measure something we are forcing an undetermined, undefined world to assume an experimental value. We are not 'measuring' the world, we are creating it."

-- Niels Bohr