TALKING WITH OBJECTS

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ABSTRACT

Talking *about* objects requires talking *with* objects, presenting objects in speech to identify a term's referent. I say *This figure is a circle* while handing you a ring. The ring is a *prop*, a perceptual object referenced by an extra-sentential event to identify the extension of a term, its *director* ('This figure'). Props operate in speech acts and their products, not in sentences. Intra-sentential objects we talk with are *displays*. Displayed objects needn't be words but must be like words, perceptually, reproductively, and syntactically. Displays are presented by their syntactical position, as terms, with a term-like function. Semantically they are props. The O in FOD (*This figure* O *is a circle*) is a prop-like referent, not a term. The O in OD (O *is a circle*) may be that of FOD, but that display may have semantically and syntactically diverse directors, and without a specific one OD has no determinate sense

Describing the display of quotations demands distinguishing displays from quotations. Quotations are repetitions of something said. Displays are perceptual objects, linguistic and non-linguistic, reproductions and originals, presented in sentences to identify a referent. Display markers are disambiguators that say: *Read this as a prop*. They may mark direct speech from indirect speech. Markers of quotation say: *Someone said this*. That historical claim is outside a sentence's propositional content. Those marks don't say: *This is a display*. They do make it true.

Calling displays quotations muddies the study of speaking with speech. Calling both displays and *intranyms* quotations muddies the study of meaning and truth. Intranyms are terms, consisting of an expression flanked by lines, that denote that interior expression. Intranyms are created by stipulation to formalize a metalanguage. Formalization of a metalanguage replaces displays with intranyms. Formalized metalanguages lack the logical form and subject matter of our natural metalanguage.

TALKING WTH OBECTS

We couldn't much talk *about* objects if we didn't talk *with* objects, presenting them in speech to identify the reference of our terms. We'd have only a primitive primate language if we couldn't name things and make sounds represent things out of sight, but naming something requires identifying it. Referring to things by name presupposes a way of identifying things by presenting them in speech. Only words can alway be referenced this way, so we can talk about words by talking with them, without naming them.

This basic point is rather simple, yet semantic theories have long denied it. Little was done with that denial until Tarski premised formalist semantic theory on it.[1] This essay explains some of our talking with objects that matters for semantic theory

Presentation: Initially, names are created and transmited by ostensive definitions. Such definitions explain a symbol by conjoining presentations of two perceptual objects, a name *(Mama, dog, water, red)* and its referent (an object, individual, property, relation, event, location, etc.) More broadly, we introduce you to some thing or some name by showing you the thing and saying its name.

Presentations of a thing direct our attention upon it. *Representations* of a thing direct our attention upon it in its absence. Initially, words come to represent things by appearing in the presence of their referent. The reference of a name gets identified by an extra-verbal reference to the perceptual object.

Presentations take many forms. Word-sounds may be presented by a parent or a babbling baby. Referents may be presented by putting the object before someone's eyes or putting her eyes upon it by pointing. The presenting may be passive; a speaker may just exploit circumstances priming the audience to fix on the referent when presented its name. Types, kinds, properties and other abstracta may be presented by presenting their perceptible instances.

Still, many terms cannot be learned ostensively, and most that can, aren't. Mostly, words are learned purely verbally, with words explaining other words. Yet, however wide and tight our net of verbal definitions, none of it represents anything unless some of its reference is established and verified

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[1] Tarski (1965) and Quine (1940) insisted that (a) words and objects can be used to refer to themselves only if they are used as terms, and (b) this is a fundamental principle.

by shared perceptions of a name presented in the presence of its referent. Whatever way we learned a word, our conclusive test of our referring to the same perceptual thing is our shared experience of the reference to it in its presence.

Talking with objects is our epistemic bedrock for establishing and maintaining reference. And predication too. I may say *This figure is a circle* while handing you a ring. I might be ascribing a predicate or introducing it. Either way, I present a perceptual object to identify the referent of a term.

Call the ring a *prop*. It's a perceptual object I reference with some extra-verbal means of directing your attention to it. My extra-linguistic reference to the prop identifies the extension of the term I present in speech: *this figure*. Call that term a *director*.

Props share the perceptual space of their director, but they are extra-sentential referents outside the director's syntactic space. We use them to refer to them, but we don't use them as terms. They don't designate, predicate or represent themselves or anything else. The director and the prop's presentation do all the denoting. Yet the prop's function is term-like, for its presentation augments an utterance's informational content by identifying an extension.

Props aren't parts of sentences, but they are informational components of communicational acts and their propositional products. Presenting a prop causes a perception of it, and that sensory information is an integral component of the information communicated by the speech act. I tell you the color of my kitchen by pointing at a color patch while saying *My kitchen is that color.* You don't properly understand what I've said if you don't properly observe the referent presented – or if you don't see that the verbal referent is the perceptual referent. By identifying the verbal referent as the perceptual referent your understanding is enhanced, and so is its epistemic status. Verbal reference is secured experientially. You now know (*kennen*) the thing I am talking about. Your acquaintance with the referent legitimates your own talk about it.

These generalities apply when words, pictures, maps and other symbolic objects are used, like any sentence-external perceptual object, as a prop to identify a director's extension. Symbolic props are presentations of objects that represent something distinct from themselves. We present symbolic props for them to be observed and, more specifically, to be *read*. We may present them to transmit their sensory information or their extra-sensory information or both. A prop sentence may identify a sentence-type it instances or a proposition it expresses.

Displays: Talking with objects takes many forms. Props are presented within a speech act and its product, but outside the sentence. The objects we talk with by presenting them within a sentence we'll

call *displays*. Displays of the word *displays* appear in the previous sentence and the present one. A circle is both displayed and described in sentences like:

    FOD: This figure O is a circle.
    OD: O is a circle.

Like props, displays are perceptual objects. They may be words or non-linguistic sounds or shapes. Unlike props, displays are sentence components, so they must be *like* words perceptually and syntactically.

Evidently, while we don't regard props as terms, we naturally think of displays as terms, a kind of word. With rare exceptions, linguists and logicians, East and West, from Panini on, have assumed that displays are some sort of name or noun denoting itself (or its kind), a referring expression independent of a director. Displays get called *autonyms* or *autonymous* uses of words (without insisting they be, specifically, names.).[2]

This conception is natural and compelling. Compare:

    NN: He is Nick.
    ND: His name is Nick.

These look like comparable, complete, grammatical sentences.[3] Each must have a predicate term to be a sentence, and what else could it be but *Nick*? Apparently, the NN *Nick* names a person while in ND that name refers to itself. Reading it as a term is so natural that even the displayed circles in FOD and OD look like a word of some sort -- unlike the ring, the prop figure of FOP (*This figure is a circle*).[4]

Certainly, displays do appear to be autonyms. Displays are things that could be words in some language. They must be perceptually, physically and metaphysically like the components of the sentence incorporating them. But this compatibility with the embedding sentence's perceptual properties is a vague and variously interpretable requirement. Our conception of the displayable gets

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[2] This apt terminology is due to Carnap (1937).

[3] The absence of the currently fashionable display marks on the ND *Nick* is deliberate. Their presence would be a distraction. The grammaticality of ND is intact without them. Their presence presupposes that ND is a grammatical sentence referring to the name *Nick.* We could not mark displays before using and understanding unmarked displays. We'll see that the marks are a consequence of the difference between NN and and ND not a cause or precondition of it.

[4] The simplest refutation of the orthodox conception takes this last conclusion to be a *reductio*. That displays of nonlinguistic sounds and shapes are words or terms referring to themselves is obviously absurd. Obviously such objects are semantically just like props. And since displays of linguistic objects are syntactically and semantically just like displays of nonlinguistic objects, they too are not self-referential terms. But, obviously, what's obvious to some people may not be obvious to others.

challenged by children's books, advertising, art, and innovations in sentence embodiment. Some cases are clear; some are not. C-sharp is displayable in auditory sentences, but not written ones. Color patches are displays in monochromatic sentences. They are props when waved while voicing the sentence. Some purists might balk at gluing a fabric swatch inside a greeting card sentence; few would object if the swatch-embedding sentence is woven in fabric. Tarski predicted that if the sentence *this stone is blue* has the words *this stone* replaced *w*ith a small blue stone, we would not regard the result as a sentence.[5] I'd bet that most of us would read the whole as a kosher sentence when *is blue* is written in similar small stones.[6]

Sentence unity further demands that displays be repeatable with their matrix sentence. Props needn't be repeatable, for they are sentence-independent perceptual objects. Sentence repetition and prop repetition are distinct matters. But displays are sentence components. They reoccur with the reoccurrence of their sentence, and as a component of semantically related sentences, so we can validly argue: *This figure* O *is a circle; Every circle is two-dimensional; So, this figure* O *is two-dimensional.* The parallel argument using FOP is an equivocation unless the two references are to the same concrete prop.[7]

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[5] *Ibid.*

[6]The physical limits of display is a large subject by itself. Smells and tastes are not displayable in auditory or visual sentences. Tickles and pains aren't displayable, but they can be props, for someone might present you with a tickle or pain by tickling or pinching you. Groans and giggles are displayable in voiced speech, and imitated in written speech (*argh, hee-hee*). Facial expressions and gestures may be symbols (expressions of a mental condition) or pointers presenting a prop, and they may themselves be props, demonstrations of a referent-movement that calls attention to itself. Gestures can be displays in sentences of ASL but not in spoken or written speech. Morse code can transmit displays of letter sequences but not other shapes and sounds. Braille has other limitations. Some nice questions: What can be displayed in a so-called Language of Thought? Displays are perceptual objects. How is a display-embedding sentence of Mentalese embodied in a brain?

[7] This argument using displays would be an equivocation if display tokens were their physical embodiments (ink, pixels, whatever). Displays are perceptual objects, not material objects. Displays are replicated consistent with the replication of their matrix sentence, but what consistency requires may be complex and contextually variable. Many variations in a sentence's perceptual properties (color, size, font, style, etc.) are semantically irrelevant. So too, generally, for displays, especially displays of words. But the variable features of a display vary with the matrix predicates on it. The matrix in *The Georgia zero* o *is a circle* may be in any font but the display should be a Georgia zero. That matrix may be italics, but not the display if italics distorts the shape. Sometimes the demands of consistency are uncertain. Consider: what precisely does the FOD director, *this figure,* refer to? Does a reproduction make a different statement if the display is enlarged or colored? What if the matrix sentence is correspondingly enlarged or colored? Does FOD printed on an off-round balloon become a different

Sentence reoccurrence requires reoccurrence of the display -- and its sentence position. Displays aren't plunked just any old place within a sentence. While a prop is presented and coordinated with its director by an extra-sentential reference, our attention is directed upon a display by its appearance positioned within a syntactic structure. Nothing extra-syntactic (other than its director) points at it. Displays are like props presented within a sentence by their syntactic position. Specifically, displays are positioned like names, because they function like names: they identify an extension.[8]

So, displays are like names, perceptually, reproductively, and syntactically. And OD (O *is a circle*) needs a subject term. OD is a fragmentary thought unless some term in that thought denotes that displayed circle. The director of FOD (*This figure* O *is a circle*) *appears* dispensable, semantically redundant and syntactically optional. OD *seems* to say the same without it. So, when displays appear *solo*, with no director in sight, we seem compelled to consider them terms referring to themselves.[9,10]

Directors: The alternative to this conclusion was first recognized by Pedro da Fonseca (1564):

> [W]hether you write the following whole [sentence], *This figure* O *is a circle*, or only this, O *is a circle*, in neither writing will that O be the subject of the proposition, but rather *This figure*, which is expressed in the prior sentence, is [implicitly] understood in the latter [sentence].(BK I, Ch 16).

Fonseca considered the displayed O a pseudo-term. It may seem self-referential in OD, but actually OD is short for FOD, whose display is the semantic equivalent of FOP's prop, a perceptual referent

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sentence making a false statement when the expanding balloon distorts the display? Or does the balloon *This figure* continue to refer to its display's original, deflated shape?

[8] The syntax of displays is further exhibited in languages like English permitting director-display transposition:
   My Edsel went (made a sound) kehfloo/ My Edsel made a kehfloo sound
   This figure O is a circle/This O figure is a circle
   Apparent exceptions to the name-like position of displays in indirect speech contexts are explained later.

[9] Displays appear to be independent of a director because they commonly appear without a director. They can do so because they are syntactically like names, so elision of their directors leaves a sentence that looks grammatically complete. Props don't look like director-independent terms. Eliding a prop director leaves a sentence fragment, like: *is a circle*. The prop isn't a syntactic component that can complete a grammatical sentence.

[10] The most curious fact about the history of display studies is that no one instinctively or eventually balks at very idea of words referring to themselves. Certainly, sentences may refer to themselves, and predicates may apply to themelves, but the possibility of any (let alone every) word referring to itself should boggle the mind.

identifying a director's extension.[11] Positing that OD's display refers is pointless, as it is with props.

The display needn't denote, since it presupposes a director that does.[12] Here Fonseca oversimplified. His core insight becomes more compelling by noting that OD might be short for many sorts of sentences. Solo displays have numerous possible director predicates, and each might operate in diverse syntactic constructions. Any reading of OD assumes some director with a specific content and grammatical context. Apart from a director, OD has no definite meaning or reference; it doesn't express a determinate thought.[13]

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[11]Somehow, this elegant insight of the once famed "Portuguese Aristotle" has gone little known and never appreciated for near five centuries. (My thanks to Jennifer Ashworth for introducing me to my predecessor. Thanks also to John Doyle for further educating me about Fonseca and generously providing translations.) Over the last eight decades some theorists, unaware of Fonseca, observed that a display is semantically like an prop and unlike a term. Only Fonseca noticed that, like a prop, a display enters an utterance as a device in the service of a director. Logicians and linguistic theorists have not denied that (1) displays very commonly appear adjoined to a director, and (2) a director could be inserted when absent without altering propositional content. Theorists have simply not observed this always-possible and frequently-actual adjunction of displays to a director. (Jackendoff (1984) came close but went astray by regarding displays like any element E in the form: *the N (noun)-E)*. Some modern theorists saw that a display is not a term semantically, but didn't notice that something else must function as a term, doing what the display had been thought to do, for otherwise the embedding sentence would be fragmentary, grammatically incomplete. (Cf. Reach (1938), Whiteley (1957), Christensen (1967), Searle (1969) Binkley (1970), Clark (1990), Read (1997), Recanati (2001) de Brabanter (2005).) Davidson (1979) saw that displays aren't terms, and noticed the need for a term, and tried to fill it with a typographic convention marking displays. Sellars, (1950) saw a need for an additional term and typographic convention. We'll see that such theories mistake display marks for the director they presuppose. Fonseca's identification of the real director in natural language is obvious, once stated.

[12] There is no need for names of words. Any word is displayable in its own language; anything that can be used "lexicly", like a word, can be used as a display of itself. Since words are so readily referenced by just presenting them in a sentence, we have no call to name them and refer to them by name. Sometimes we can identify a word only with a demonstrative or descriptor, but any word you might refer to by name you can better refer to by presenting it. We do name word sequences (poems, theories, books) since their length may make intra-sentential presentation impractical, but there's scant reason to refer to a word with a name as long as the word.

[13]Like most matters of logical form, the operation of unexpressed director terms is a posit of an explanation of linguistic data. Again, in brief, director terms commonly are explicit, always could be explicit, must be explicit with props, and, when absent from displays, need to be assumed for a sentence to have a determinate sense. Unexpressed display directors are like unexpressed imperative subject terms ([*You*] *Go!*), but identifying the intended director term may be far more problematic. Various factors of sentence content and speech context may be relevant but inconclusive. The director may be indeterminate in various ways and degrees. A speaker's intention may be inchoate in various ways and degrees. (Cf. Merchant (2004).)

Any object instances countless kinds. A director verbally categorizes the extension that a prop or display perceptually identifies. Instead of FOD, OD might be short for, for example:

> LOD: This letter O is a circle
> NOD: This numeral O is a circle.

The options here are open-ended: *font, ring, name, title,* etc. A director might be most any predicable of the perceptual object. The options are not equivalents. Numerals aren't letters. LOD's and NOD's displays are materially indistinguishable, yet metaphysically distinct kinds of entities, as are the displays in: *The German adjective 'rot' is not the English verb 'rot'.* Directors identify their extension conceptually. They determine how a prop or display is to be read, which of its properties are relevant, which extension it perceptually identifies.[14]

A solo display has multiple possible directors, and those terms may have alternative possible syntactic positions. Instead of FOD, OD may be short for:

> FODk: The figure O is a circle.

FOD's demonstrative *this* favors reading its descriptor, *this figure*, as referring to the adjacent sentence component, whereas FODk's definite article *the* favors taking the topic to be some abstraction, a kind,

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[14] A director's identification of its display is a large subject. Outside displays, a particular circle is a letter or numeral or neither because of its contextual function, as in:

> (oL) The circle in this sentence is a letter, not a numeral
> (oN): The circle in this sentence is a numeral, not a letter.

(oL) is true and (oN) false because their referent constituent circles function, not as displays, but as constituents of words, as letters. What is predicated doesn't affect their function. LOD and NOD are true because their referent constituent circles function as displays, so they are what their director says they are. Detached from a director, an OD circle is neither a number nor a letter.

A displayed circle may be a letter by being a constituent of a displayed word, as in (oL):

> (10) The circle in 'not' is a letter.

We presume (10) true, because we presume its implicit director is *the circle in the word*, so the display is read as a word, a sequence of letters. With a function-neutral director, the display needn't be a letter:

> (11) The circle in this sequence of shapes, 'not', is a numeral.

This director lets the object be a numeral. (The display is made a numeral by another matrix predicate on it. A display is an object subserving a sentence, a syntactic whole, not just its director.)

A displayed object is the kind of thing the sentence says it is. Not that the sentence can make the object be something it isn't. Consider:

> (12) This figure ▼ is a circle
> (13) This figure 0 is a circle
> (14) This numeral ▼ is a triangle.

(12) is simply false. (13) is not so simple. The (13) on this page is false because it is a mechanically produced oval. If I free hand write such a sentence on a blackboard it might properly pass as true. (14) is a curious case of a failure of reference. Arguably it is nonsensical rather than false.

type, class, property. Compare: *This zebra is a striped animal/ The zebra is a striped animal.*

Directors may refer to perceptual individuals or the abstractions they instance. Their props and displays don't refer to either; they aren't referentially ambiguous terms. Instead, presenting the perceptual object can refer to the individual or an abstraction, because attention can be directed upon the abstraction by directing attention upon a perceptual instance.[15]

Director-display relationships seem to multiply still further, for the director may be a predicate with an extension but no referent for the display to identify:

FODa: A (any, every) figure O is a circle.[16]

Also, a director may have a referent other than the display:

G0D: The Georgia numeral 0 is a circle.[17]

\However, such constructions may be derivative. Displays may be basically identifiers of a director's referent, for when displays don't ostensibly do that, they do it in an equivalent sentence. FODa seems reformulable as:

A (any, every) figure with this shape O is a circle,

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[15]The instance/kind ambiguity may matter more in theory than practice. Sentences like FOD and FODk are commonly ambiguous over concreta and abstracta. Such ambiguities are commonly live but inconsequential. Which is being referenced may go undetermined (or bounce around) in some speech because the relevant truths may be much the same either way. That's especially common with displays of linguistic objects, since the semantic and syntactic properties of sentence tokens and their constituents are mainly properties of their abstract types.

[16] All of Fonseca's many examples are of directors with a demonstrative or definite article like *this figure, the word.* He (and later logicians) should have learned from John Buridan (1986, p. 128):

> I can certainly say "Every term 'Socrates' is a singular term", and "Some term 'Socrates' is a singular term", and "A term 'Socrates' is a singular term, and "This term 'Socrates' is a singular term". The first of these is universal, the second is particular, the third is indefinite, and the fourth is singular.

> Notice here that what gets "quantified" (into or over) is the director, not the display. Director terms are quantifiable like any term, with or without a display. Talk of quantifying into or over a prop is not well-defined. So called substitutional quantification into or over displays makes sense when and because the display's implict director is something like: *the expression.* (Cf. Dunn (1968), Marcus (1972)).

[17] Consider also:

> KOD: My keyboard's letter O is a circle.

> G0D's and KOD's displays are in the extension of their director's head predicate (*letter, numeral*), yet the predication (*is a circle*) may apply to the director's referent but not its display. G0D's display is not a circle. While the KOD display presented here is a circle, KOD can be reproduced in italics, distorting the shape of the display, without distorting the sentence's sense. (Question: while OD can be short for KOD, can it be a proper ellipsis of G0D?)

The entailments don't run the other way: the singular FOD (*This figure* O *is a circle*) isn't equivalent to any generalization about such figures.[18]

 This priority of singular directors is evidenced in languages marking displays verbally, in speech and writing, with particles. Ancient Greek fronted displays with a definite article, usually a neuter whatever the display's gender.[19] Displays in Arabic and Sanskrit are succeeded by a demonstrative.[20] Such particles seem grammatically perspicuous, unlike our display punctuation.[21] A plausible conjecture: they are elliptical remnants of singular directors, evidence of displays being basically identifiers of director referents.[22]

 The matter calls for further research.[23] Scholarship on display in diverse languages is lacking. There's little of it, and much of the data gets corrupted by observation and description that presumes that displays are autonyms. A prime example is this matter of marking. Scholars always automatically equate display particles with modern punctuational disambiguators, and never consider any difference.

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[18] Whatever their syntax, commonly directors are incomplete descriptors. They don't themselves identify the specific intended extension. Displays identify a specific extension. They do that just as well with directors that sufficiently identify their extension, as in: *A geometric square □ is an equilateral rectangle*.

[19]Cf. Barnes, (2003), 319-22. My thanks to John Cooper for further edification on this, and reference to the examples in Kuehner-Gerth, *Ausfuhrliche Grammatik der Griechischen Sprache,* Part II vol. 1, Paragraph 461 # 7.

[20] The initial *i* of the Sanskrit particle, *iti,* marking displays "is related to the deictic element '*i′* in *idam 'this', iha* 'here', *idanim* 'now, etc." (Frits Staal (1975), 325). However, the use of *iti* in Sanskrit grammatical texts is controversial. (Seaghdha (2004), 8ff.) On Arabic, cf. Carter (1981), 345-57.

[21]Fourteenth and fifteenth century Scholastic logicians, like Buridan, may have (perhaps unwittingly) revived a previously common practice when they standardly marked displays with a *nota materialitatis* by prefixing *iste terminus* (*this term*) or *ly* (or *li*), a particle derived from the French definite article *le*, which derived from Latin *ille*. Leibniz sometimes preceded displays with the Greek definite article. (Spade (1996), 118, fn 72.)

[22] That the particles originated as disambiguators seems unlikely. Display disambiguators are generally superfluous and unmotivated outside linguistics and logic. And particles are ill-designed for disambiguation, for they don't mark display boundaries end to end, as all modern marks do. Also, the operation of an originary bare *this* or *the* is implausible. Some descriptor (explicit or implicit) seems generally needed for much the same reasons that proper names seem to presuppose some metaphysical categorization of the referent. There are difficulties in identifying or referring to some thing without assumptions about its basic category.

[23]For example, Japanese may have another sort of display particle (Coulmas (1986a)).

Display vs Quotation   Logical and linguistic studies have long suffered from confusing displays with autonyms. Modern scholars compound confusion by imitating Quine and calling displays quotations.[24] Such talk has consequences. We couldn't much speak at all if we didn't speak *with* speech by displaying quotations to relay information. Describing the display of quotations (let alone understanding it) demands distinguishing displays from quotations.

   Quotations are repetitions of something said.[25] Displays are referenced objects, linguistic and non-linguistic, repetitions and originals. Display is a grammatical category, a matter of logical form. Quotation is an extra-logical, extra-grammatical, etiological category. The categories intersect. Many displays are quotations. But many displays aren't: they aren't words or they aren't reproductions. And, many quotations aren't displays. In saying, *Cosmological arguments are an unnecessary shuffle,* I quote Wittgenstein by using (a translation of) his words (*unnecessary shuffle*) much as he used them. He didn't denote or display his words, and neither do I. Quoting is repeating words, not referencing them.

   Calling displays quotations is a perilous habit of mind. It now passes as a scholarly platitude that we mark displays in speech, mimicking inverted commas with air quotes (wagging fingers or voicing *quote/unquote*). Actually, we never say:

   *Quote if unquote is spelled quote i unquote, quote f unquote.

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[24]As a term for displays, *quotation* first appears in print in Quine (1940): *"*The name of a name or other expression is commonly formed by putting the named expression in single quotation marks; the whole, called a quotation, denotes its interior". Evidently, Quine thought some people had so-used *quotation.* He did not credit himself with creating this usage. His "Autobiography" ((1986), 20) does not list *quotation* among his many successful neologisms. In 1932-3 he began working with Tarski, whose Tarski (1932) refers to displays as "the so-called *quotation-mark names*" (156). Likely, displays were so-called by his teacher, Stanislaw Leśniewski, whom Tarski credited for most of his ideas about displays (*Ibid*., fn 1, 154-5). Tarski (1932) initiated its abbreviation by often contracting *quotation-mark name* to *quotation name* and contracting *quotation-mark expression* (which denotes *quotation functions* along with *quotation-mark names*) to *quotation expression*. With his receptivity to such shortening, he and Quine might well have, without deliberate intent, fallen into the habit of conversationally using the final contraction to *quotation*. Or perhaps Tarski just didn't object when Quine started to so use it. Tarski never took to Quine's habit in his writings. Nor did their contemporaries (Church, Carnap, Reichenbach, et. al.) *Quotation* is the jargon of generations brought up on Quine.

[25] This initial capsule definition is both partial (e.g., the repetition must be partly explained by its prior utterance), and polysemous (e.g., the thing said may be variously individuated). What passes as a quotation varies with our contextual interests. We'll see that our concept of quotation has considerable complexity.

*His name is quote Nick unquote.[26]

Displays get air quotes only when and because they are quotations.[27]

Lumping marks of display with marks of quotation loses track of disparate punctuational messages:

DM: This is a display: Read this as a referent, like a prop of some director.
QM: This is a quotation: Someone said this/These words were said.

Compare:

(20) Bertie thought we are 'but brief meat and brains'.
(21) 'Peace' means peace
(22) 'Peace' preceded 'prosperity'
(23) 'Peace' is pronounced like 'piece'
(24) Peace is prized.

All the above words flanked by lines are displayed referents. Flanking lines in (21)-(23) insert the DM message. Flanking lines in (20) insert the QM message.

All the words of (20) and (24) are used "lexicly", as words doing what syntactic components do unreferenced. None of the words referenced in (21)-(23) are used lexicly, as they are in (24) and the predicate of (21). In the equivocal:

(22e) Peace preceded prosperity

the nouns may be used as referents or used lexicly as names of events, but they can't be used both ways simultaneously. Only in (20) are words used lexicly while used as referents.

If displays were autonyms, the marked words of (20) would mean two things at once, one of them self-referential. Actually, referent words have only the meaning they have unreferenced. (21) is true just when and because the word *peace* has the same meaning and reference in both occurrences in (21) -- and in (22), (23) and (24).

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[26]You might say *His name is quote Nick unquote* when air quoting scare quotes. So too, you might air quote a vocal display when displaying a marked display, for your air quotes are a display component, not disambiguators of your display.

[27] Another cost of calling displays quotations is that you're primed to suppose that display is paratactic, because quotation is peculiarly prone to external transpositions. Quotations are specially fit to stand on their own apart from a sentence, because (a) they tend to be sentences, whole units of speech, and (b) they tend to be words of another, an object independent of the sentence they adjoin, and (c) the speaker need not affirm what the quotation says. Meanwhile, nonquotational displays generally don't transpose paratactically. We might write: 'This figure is a circle: O'. Standardly we don't write:
O. That is a circle.
The following is a circle. O.

The initial word in (21)-(23) is a prop-like sentence referent. Like any sentence referent, (a) reference to it doesn't alter its properties, and (b) which of its properties affect the sentence's meaning or truth depends on the sentence. Used lexicly, a word's meaning contributes to the sentence meaning. In (21) the word's meaning matters to the sentence's meaning because the sentence predicates that meaning. In (22)-(23) the word's semantic properties are simply irrelevant to the semantic properties of the sentence.

Marking words as displays has zero effect on their meaning or reference. Display punctuation is like capitalizing initial sentence letters, a typographical device facilitating identification of the intended reading. It presupposes and does not create the reading it flags. The marks of (22) are informative by eliminating an alternative lexic reading. The marks of (21) and (23) are redundant because their matrix predicates aren't sensibly predicable when *peace* is used lexicly. In (24) the predicate is not plausibly predicable when *peace* is the referent.[28]

Now, speaking with speech is special. Outside metalinguistic studies, the live display/lexic ambiguity of (22e) (*Peace preceded prosperity*) is rare – with one salient exception: solo displays identifying the referent of an implicit *speech director.*[29] A speech director is the (implicit) direct object of a verb of speech (or thought).

(25) Pete reported [made the report] 'Paul spied'

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[28] The primary display mark function entails that iterable marks (flanking lines, not italics) provide a perspicuous presentation of displays of displays (of displays, ...). It's this derivative function that specially endears display marks to logicians and semantic theorists whose professional speech is distinguished by the prevalence of displays of displays, something rarely seen elsewhere. What we say using ' 'dog' ' and ' ' 'dog' ' ' can't well be said at all without marking a displayed display as a display. Displays of displays are like props of props -- but we have no system for marking a prop as a prop. (Consider how we disambiguate: *Dwight here is my pal Donald*. Dwight may be the prop, and Donald the addressee, or Dwight the addressee, Donald the prop.)

[29] Possible display/lexic ambiguity is virtually eliminated by explicit directors. (The exceptions use a syntactically different appositive for addressees, as in the sentence: *His name, Bob, is short.*) The possibilities of solo displays permitting lexic readings outside the scope of a speech director are limited. (1) Displays of nonlinguistic objects have no lexic readings. (2) Since displays are syntactically like nouns, only displayed nouns have syntactically viable lexic readings (unless the words are displayed by quotation marking, as discussed below.) (3) The syntactic possibility is closed semantically for most displayed nouns, because (a) they denote things categorially unlike themselves, and (b) most predicates are not predicable of both the noun and its denotation. Outside the scope of speech directors, live display/lexic ambiguity is mainly confined to meta-metalinguistic speech where the displayed nouns denote nouns. Astute logicians like Buridan, Leibniz and Frege marked displays in their writings, and sensibly refrained from recommending the practice outside such studies.

(26) No one ever said [the words/made the statement] 'I am a transsexual Pope'.
(27) Has anyone ever thought [had the thought] 'I am a transsexual Pope'?

Speech directors name those peculiar objects produced by speech that are identifiable by both *direct speech* and *indirect speech*. Direct speech presents words, using them as referents to perceptually identify a speech director's referent. Indirect speech represents words, using words lexicly to represent the content of a speech director's referent. Display marks sharply distinguish direct from indirect speech.[30]

Sentences (25)-(27) illustrate marks of display, not quotation. If the marks of (26) inserted the QM message (*This was said*), they would deny the matrix sentence message. In (27) quotation marking would preclude the questioning of that message by the sentence. In (25) the marks could insert a QM message consistent with the matrix message, but it's rendered redundant by the QM message of the matrix predicate and the display marking.[31]

Quotation marking becomes informative when the QM message is otherwise absent. Contrast:

(28) We are "but brief meat and brains"
(29) We are but brief meat and brains.

Virtually any word sequence of virtually any sentence is utterable as a quotation, and can be so marked; suffice that a precedent utterance partly explains the words' occurrence.[32] Normally, quotations (are to)

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[30] Beware: Instead of *direct speech/indirect speech,* the terms *direct speech/indirect speech* are commonly and properly used. Less commonly, the terms *direct quotation/indirect quotation* get used. This latter terminology is inexcusably confusing. Direct quotation is a display of something previously said. It is only a species of direct speech (the display of something sayable), not the whole of it. So too, it is only a species of quotation (the repetition of something said), not the whole of it. Its foil, indirect quotation*,* is a representation of a quotation in indirect speech, so indirect quotation is not a kind of quotation. We say, *She said, and here I quote: ...,* to enforce a display reading and exclude an indirect speech reading.

[31] Displays are standardly distinguished from quotations in style books (but rarely in texts of logic or semantic theory). Mid-20th Century English style books frequently urged italicizing displays and reserving flanking lines for quotation. That proposal disappears in current English style books, perhaps because it proved infeasible because of pervasive confusions. Style books standardly mischaracterize displays as autonyms, and their paradigms of proper quotation marking are instances of display marking like (25).

[32] However, quotation is not mere repetition. Otherwise virtually every utterance would consist of quotations. To ask *What is truth?* is not *ipso facto* to quote Pilate. A quotation is a word sequence whose occurrence is explained partly by its repeating its prior utterance. The repetition needn't be intentional. You might quote Mencken unaware of his originating some phrase you favor. Intentionality of repetition is not essential. Nor enough. Reciting is not quoting. We may quote lyrics or dramatic lines, but not while singing the song or performing the part. Adding sincerity doesn't help: we may

have the meaning of their original, and, normally, marking a quotation doesn't affect the meaning of the marked words or their matrix, so normally, sentence pairs like (28)/(29) have the same propositional content. The QM message of (28)'s marks is off-stage, a side-comment on the words used, not a component of *their* message or the matrix message. (28)'s meaning and truth withstand any error in the mark's historical claim.[33]

(28)'s marks don't say *This is a display*. However, they do imply it, for they make it true. The words are displayed by and within the QM message: *These words were said*. Within that message the display is syntactically noun-like. That message lies outside the matrix sentence structure, so the displayed words needn't be noun-like in their lexic use in that matrix.

The QM message may stay outside the sentence message when the marks fall within the scope of the speech verb in (20) *(Bertie thought we are 'but brief meat and brains')*. (20) may be true just whenever the unmarked (30) is true:

(30) Bertie thought we are but brief meat and brains.

But, by creating a display within indirect speech, (20)'s marks create a *potential* referent of a speech director: *Bertie's thought*. The marks don't themselves create the reference. The speaker does.

Speakers mark quotations from various motives, and may mean various things by the marking.

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quote pledges and prayers, but not while authentically pledging or fervently praying. Repeating is transitive; quotation is not: I repeat, but don't quote, Veblen, when I quote Mencken quoting Veblen. A nice question is whether you quote someone when you mock them by repeating their words. Another nice question: what in our current conception of quotation is universal and what is culturally peculiar?

[33] Still, quotation marking *can* variously affect our reading of a quotation and its matrix. For one thing, speakers may mean diverse things by the marks distinct from what the marks mean. (See below.) Also, the QM message of (28) may reference an (unspecified) prior use differing semantically from its usage in (29). (Since the proper reading of some words may depend on who said them or the occasion of utterance, quotation marking may influence interpretation by way of background beliefs about the speaker, sentence content and speech context.) Further, in itself, quoting words repeats a lexic use of the words and does not refer to it. Consequently, absent any QM message (by punctuation or matrix term) quoted indexicals have the referent of their matrix lexic use, not the referent of their original lexic use. (I may commit myself by quoting Patrick Henry's words: *Give me liberty or give me death*.) Marking the quotation refers to the words and identifies them with a prior lexic use, so the marked indexicals have the reference of their original lexic use, not their matrix lexic use. (However such rules are subject to "exceptions" because what qualifies as a proper quotation -- which features of the original must be replicated -- may vary with our contextual interests in the replication. (See below.)) All that aside, the matrix message is independent of the marks' QM message: synonym substitution into the marked quotation of (28) may alter the QM message meaning and truth without affecting the matrix sentence meaning or truth. (See below.)

Someone might mark (20) just to disavow credit for Thomas Kinsella's striking phrase that captures Lord Russell's thinking. If so, the QM message is extraneous to the matrix, so (20) may state the same fact as (30).

Instead, more commonly quotations in indirect speech are marked to indicate that the speech referenced contained this quotation. Here (20)'s speaker represents the content of Bertie's thought partly by presenting his words encased in quotation marking and forming a noun-like display identifying a quotation of Bertie's thought. Now the off-stage, *Someone said these words,* becomes the on-stage: *Bertie said these words.*[34] Here the falsity of the matrix QM claim legitimates the denial of (20): *No, he didn't.*[35]

Quotation marking makes extra-propositional reference to words used lexicly, and it makes possible intra-propositional reference to words used lexicly. Quoting is as old as language. Quotation marking is an innovation of 16th Century printers. Pre-print languages lack this way of talking with words.[36] It is a distinctively modern channel of self-reference and communication, with new content and concerns and kinds of irony and self-consciousness. Calling displays quotations muddies the study of our displaying quotations and our modern modes of speaking with speech.[37]

[34] More fully, here (20) has the form: *Bertie thought we are -- and here I quote his words -- 'but brief meat and brains'.* That's the natural reading if (and generally only if) we are unfamiliar with Kinsella's line.

[35] So too, if that QM claim were true, then synonym substitution into the quotation would falsify the QM claim, and the matrix sentence. (On the other hand, synonym substitution might not affect the matrix meaning or truth, because it might not affect the truth of the QM message, because sometimes semantic equivalents (translations) are (accepted as) quotations. (See below.))

[36] Even animal speech relays messages, but the pre-print mind knows of nothing like our elemental marks of quotation, let alone the later development of scare quotes and their cousins.(Cf. Parkes (1993)) Pre-print people do refer quotations in direct speech, and most languages have grammatical, prosodic and paralinguistic markers distinguishing direct from indirect speech (Cf. Coulmas, 1986, Kvavik (1986), Klewitz and Couper-Kuhlen (1999).) But marking quotations outside speech as in (26) is a grammatically and culturally peculiar linguistic device. (Marking foreign words outside the matrix language lexicon is structurally similar but far less frequently called for.) Unlike other punctuation, quotation marking needn't affect our understanding of a sentence. The marking and its message are something added after all the words and other punctuation are in place.

[37]The subject is immense, for the QM message, *Someone said this,* is profusely polysemous. The *this* may refer to the words used or their content, and both of those generic categories have myriad subcategories, semantic, syntactic, phonemic, pragmatic, etc. The saying might be inner speech or outer. And the saying might be a single event – or a pattern with the someone being a group, and the words being, not strictly a quotation, but a usage.

More: our motives for quoting are motley, and so are our motives for marking. Humans have all

Display Formalization: Calling both displays and *intranyms* quotations muddies the study of meaning and truth. Intranyms are terms created by stipulation to formalize a metalanguage. Formalized languages are "artificially constructed languages in which the sense of every expression is unambiguously determined by its form".[38] Such languages are artifacts whose every feature is fixed by explicit stipulations and their entailments. A formal language -- call it *Formalese* -- goes metalinguistic by stipulating some formation rule like:

FI: An expression, 'E', consisting of marks flanking an expression, E, denotes E (or its kind).

FI creates a species of expressions properly called *intranyms* because they are terms denoting the expression within themselves.[39]

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kinds of keen interests, epistemological and practical (social, political, legal, etc.), in who said what and what was said by whom, and we adjust to our current interests our standards for accuracy and adequacy of quotation. Sometimes close paraphrase passes for quotation. Sometimes deictic rules are transgressed. Sometimes quotations are translations. Other times verbatim accuracy is insufficient, and prosodic factors, along with stutters and stammers, must be replicated. Quotation attributions can go wrong all kinds of ways, and our concerns with imperfections are no less variable.

The marking may have many motives, so it may come to carry various messages. We now use inverted commas and italics to riff on *this was said.* We may send that signal just to set the words apart, sometimes just for emphasis, sometimes to distance them from our own words and attitudes, sometimes to express some attitude toward them. They can be scare quotes disavowing association with the jargon of some speaker or community. Or they may be marks of modesty, disavowing credit for a clever turn of phrase. Such options are unbounded. The marks may even be used to imply that no one so uses the words. These may be variations in speaker meaning not requiring new conventions assigning distinct symbol meanings. With all this freedom, little wonder we're left with an unprecedented linguistic anarchy. Try googling *unnecessary quotation* for sites with reproductions of store signs, print matter, and whatever, where the quotation marks defy interpretation.

[38] Tarski (1932).

[39]Tarski (1932) and Quine (1940) promoted an alternative to intranyms: "structural-descriptive" designators, singular descriptions identifying an expression by its spelling. (On one reading, intranyms are "abbreviations" of such spelling-designators.) These, allegedly, could be used when, allegedly, intranyms presented problems of referential opacity. The adequacy of this alternative went unexplained and undefended. Some skepticism seems in order. Consider: (1) How could the spelling alternative avoid the semantical problems if it were semantically equivalent? (2) How could spelling-designators be extensionally equivalent to intranyms qualified by spelling-neutral graphemic predicates, as in: '**Square**' is boldface? (3) How could spelling-designators be equivalent to iterated intranyms: *'''Is an intranym' is an intranym' is an intranym'*? (4) Would spelling-designators be fit for the practice of science if they are extensionally equivalent, but informationally inequivalent, cognitively infeasible? Like displayed words, intranyms can be *read.* Words represented by a spelling description must be *deciphered* to be read, a formidable procedure far more liable to error. How is a science of language furthered by resorting to an imperspicuous and prohibitively impractical gimmick?

Intranyms are used only in Formalese. They are not *used* interchangeably with marked displays, but they get "*mentioned*" interchangeably. Quinean *quotation* has always referred indiscriminately to (i) repetitions, (ii) marked displays, (iii) intranyms.[40]

Through a glass darkly, Davidson saw that Tarski, Quine, et. al. had misconceived intranyms as marked autonyms.[41] Both intranyms and marked autonyms denote their interior, but intranyms don't name their interior. Intranym marks don't disambiguate. They are indexical directors like *this expression* that refer to an extrasyntactic prop.

Davidson's advance was limited. Like everyone else, his quotations are both intranyms and marked displays. Intranyms are formalizations of autonyms: they are terms denoting linguistic objects. Displays don't denote. Display marks are disambiguators, not referential components. Intranyms are not the Formalese counterpart of displays. They are the counterpart of the composite of director-with-display.[42] But the referent of an intranym is its interior. A display is not the interior of a director. Unlike

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[40] Versions of FI are generally presented as though stating a Formalese formation rule, but they get used as though FI is a description of displays. Cf. Smullyan (1957), Richard (1986), 397, Ludwig (1998), Soames (1999), 87. Capellen and Lepore (2007) defend the descriptive reading of FI by declaring that unmarked displays are optional, that a natural language could prohibit unmarked displays as Formalese does. From this they infer that a theory of display needn't consider unmarked displays.

[41] The intranym/marked autonym confusion bespeaks a confusion of FI with our rule for display disambiguation:
>   DD: An expression 'E' consisting of marks flanking an expression, E, displays E.
>   If displays are autonyms, marked displays are disambiguated autonyms, so DD says:
>   DA: An expression 'E' consisting of marks flanking an expression, E, uses E autonymously.
>   A marked autonym marks its interior as an autonym, an expression denoting itself. If autonyms existed, Formalese couldn't contain them. Formalese isn't a formal language if it stipulates or entails any ambiguity. Stipulating an autonymous use of words doubles the uses of a word, as does stipulating a display use. And Formalese can't use disambiguators because disambiguators presuppose the legitimacy of an ambiguity. Disambiguated autonyms denote their interior only because their interiors are autonyms denoting themselves. Formalese autonym marks couldn't disambiguate unless Formalese had first, self-defeatingly, stipulated that unmarked Formalese expressions can be used as autonyms.

[42] Intranyms cannot intersubstitute with displays. Substituting an intranym for the display in a marked display creates an intranym nonsensically flanked by display marks: *His name is ' 'Nick' '*. Intranyms seem to replace solo displays, but those displays are ellipses for a director-with-display. Since an intranym contains a director it can't itself be properly headed by one. An intranym can't replace the marked display of:
>   ND1: The name 'Nick' is his name
>   The resultant sentence implicitly stutters, for it would say something like:
>   NIi: The name the name 'Nick' is his name.
>   NIi is ungrammatical or absurdly false. The phrase, *the name 'Nick'*, is not a name, let alone Nick's name. The display is Nick's name and doesn't denote it. The intranym denotes his name, but it

an intranym's interior, a display is an independent syntactic element, not a paratactic prop.

Conceiving of displays as autonyms or intranyms comes to the same. Both conceptions confuse a term with a referent.[43] That confusion is rife in formalist semantics[44,45]

Disquotationalism is a neat example. It says that the truth predicate "cancels" the semantic import of display marks. Actually, display marks have no semantic import to cancel. Disquotationalism says nothing sensible about natural language semantic predicates. It could be true of only Formalese semantic predicates. It is, at best, simply an entailment of FI, and thus a corollary of a problematic stipulation.[46]

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isn't his name and doesn't name it.

[43] Among the current *cognescenti* on the topic, the thesis that displays are autonyms is deemed a horse long dead, not needing further beating. (Cf. the *Stanford Encyclopedia of Philosophy* entry on quotation.) Yet: (1) Logicians and linguists outside the circle of specialists still standardly refer to displays and intranyms as names. (2) Logicians and linguists inside and outside the specialists' circle all call displays and intranyms alike quotations. (3) The import of allegedly competing analyses of displays is dubious when they are consistent with formalized metalanguages.

[44] Quine claimed that a confusion of name and referent comes with the acquisition of language. The claim is purely *a priori*, a projection of his own confusion. Learning theories don't confirm his posit. There is scant evidence of people being disposed to infer: *If he is Nick and Nick is his name, then he is his name.* Certainly, people are naturally prone to attribute magical powers to names, for we call speakers by their names; we call them forth and control their attention by saying their names. The truth in Quine's claim is that people do naturally share his confusion of displays with autonyms -- but they aren't prone to construct semantic and metaphysical theories founded on this confusion.

[45] A term-object confusion lurks in talk of displays being referentially opaque contexts. Displays are not referential contexts. They are referents, not referring expressions. Substitutability of displays is the substitutability of objects, not the substituability of terms. '**Greece** is boldface' and '*Greece* is boldface' display the same term but different kinds of object. Which objects can replace a display without altering the sentence's meaning or truth is a function of which properties of a display are relevant to a sentence's meaning and truth, which is a function of the matrix sentence predicates. With matrix semantic predicates -- the predicates formal metalinguistics focuses on -- displays with the same semantic property are perforce intersubstitutable in referentially transparent contexts. While the opacity of a referential context is a semantic reflection of metaphysical facts, display substitutability has no metaphysical import. (Belief contexts are opaque because actual coextension may not be believed coextension. Alethic modal contexts are opaque because actual coextension may not be necessary coextension.)

[46] Pre-Tarski, Disquotationalism was unthinkable. Absent the formalization of a metalanguage, there's no reason -- not even a bad reason -- to imagine anything like an intranym. The whole idea that display marks are essential constituents of displays (as they are, definitionally, parts of intranyms) is utterly alien to the thinking of Frege and two millenia of predecessors. While Frege may have over-promoted the "formalization" of "scientific" language, he didn't take or advocate the fatal step of formalizing language about language. Like his predecessors, Frege thought displays are autonymously used

Now, formalization of our metalanguage replaces displays with intranyms. Tarski's metalanguage differs semantically from its object language to preclude semantic paradox. His metalanguage is restricted to the syntax of its object language to preclude syntactic paradox. Natural languages naturally legitimate sentences like:

He is Nick, and Nick is his name, so he is his name.

For most folks, this formal entailment is an amusing absurdity canceled by extra-formal disambiguation.[47] That entailment challenges the very idea of a formalized metalanguage. Formally entailing an absurdity is fatal for a language lacking extra-formal means of disarming syntactic equivocations.[48]

Formalists weren't content to regiment natural language by requiring the disambiguation of displays.[49] Formalist semantics is founded on the principle that words can be used to refer to themselves only when used as terms. That's a denial of the legitimacy of our natural metalanguage syntax of displays. Formalists promise a language superior to natural language for the scientific study of anything -- and especially superior to natural language for the scientfic study of semantic properties,

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expressions that should be marked in formal work to disambiguate them. That's unmistakable in his comments on the innocuous absence of display marking in Riemann's writings (Frege (1979), 158). Like his predecessors, Frege's statements about language are all made in natural language sentences using disambiguated displays. So while he thought he used autonyms, he never did, so his misconception didn't infect the logic and semantic theory he developed. Frege never considered a formal counterpart of displays, and he warned against presuming that expressions we invent make good sense, a warning unheeded in subsequent adventures in the regimentation of language.

[47] Both the director and disambiguating marks are redundant and regularly omitted from ND, because in usual contexts the predicate, *his name,* permits but one sensible reading of the unmarked solo display. For competent speakers, ND has no live ambiguity. We aren't edified by NDm (*His name is 'Nick'*) or NDmd (*His name is the name 'Nick'*). It would take a peculiar aphasia to infer *He is his name* from *He is Nick* and *Nick is his name.* But Formalese cannot assign interpretations by the extra-formal principles of rational thought required for speaking a natural language.

[48] Per Frege, "the first requirement" of an ideal language for logic and science is that the symbols be univocal, unambiguous (Frege (1972), 84). Formalese must preclude fallacies of equivocation. To make "logical" transitions from one judgment to another, "we may not use the same symbols with a double meaning in the same context" (Frege (1972a)*,* 93). To repeat: Formalese can't use disambiguated displays without legitimating unmarked displays, and thereby legitimating object-name absurdities.

[49] That reform is reasonable only if it's not universalized. The rule:
DDO: An expression displays E if and only if it consists of marks flanking E
violates itself. Marked displays (autonyms) make sense only if unmarked displays (autonyms) do.

because it requires that words be used to refer to themselves only when used as terms.

But, how could this regimented language give a more reliable representation of semantic properties? Formalese is parasitic on displays. It is a set of stipulations formulated in natural language sentences like FI using displays. Formalese cannot formulate its own rules like FI. And its own sentences have semantic properties only by assignments made in a natural language that secures all propositional reference by presenting props and displays. Formalese terms don't refer to words unless such referents can be identified by presenting them in speech without representing them.

More: the formalist denial of displays means that Formalese cannot state the formal truths expressed by what we'll call *metalogical sentences*, like:

> 'N'N: [The name] Nick names Nick
> 'S'S: [The sentence] Snow melts says snow melts.
> 'S'TS: [The sentence] Snow melts is true just if snow melts.

Metalogical sentences are comparable to first-order, objectual logical sentences like:

> Nick is Nick
> Snow melts if and only if snow melts

Both logical and metalogical sentences can express both formal, necessary truths and contingent, empirical truths and falsehoods. Whether their utterance expresses a necessity or a contingency is itself a contingency dependent on whether the speaker is using two occurrences of the semantically same word(s), two tokens with identical semantic properties. Languages require semantic elements that are repeatable objects, perceptual types with semantically identical tokens. Still, in principle, any two instances of a perceptual type may differ semantically.

So, speech would be epistemologically impossible without the interpretive principle that the normal, default reading of sentence tokens is that perceptually identical sentence components are semantically identical. Necessarily, that's the standard reading of logical and metalogical sentences. As elsewhere, while utterances of (*the name) 'Nick',* might refer to various usages of the name with various referents, our normal, default reading of 'N'N utterances is that whatever either token may name, they name the same.[50] Consequently, 'N'N is true, necessarily.

Metalogical truths are *formal* necessities, truths explained by logico-syntactic form. Such truths

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[50] The flip side of this is the normal reading of sentences like: *Nick is not Nick, Nick might not be Nick, 'Nick' does not name Nick, 'Nick' might not name Nick.* Rather than read them as denials of obvious necessities (or denials of their obvious necessity) we assume that the two occurrences of *Nick* in such sentences differ semantically.

are represented by a relation between two syntactic forms of a semantic object: a presentation of the object and a representational, lexic use of the object. *'a' names b* is true just when the displayed name and the predicate name corefer: viz., just when *a=b* is true. Sentences of either form are formally necessary just when the coreference is free of semantic contingency -- and thus, just when the two names are the same name. *'a' names a* is a syntactically distinctive form of *'a' names b* because its structure explains its truth.[51]

     A semantic equivalent of a metalogical sentence must have the same truth securing syntax and a semantically equivalent semantic object. So a proper translation of 'S'S must be like 'G'G and not like 'S'G:

     'S'S: 'Snow melts' says snow melts.
     'G'G: 'Schnee schmelzen' sagt schnee schmelzen.
     'S'G: 'Snow melts' sagt schnee schmelzen

'S'S's syntax demands that its translation switch its ostensible referent by translating the display consistent with its semantic predicate. Elsewhere, extensional equivalence is essential for proper translation, but here the perceptual referent loses its role explaining the truth ostensibly about it. Like objectual logical truths, metalogical truths are translinguistic. They are explained by a structural feature of any semantically equivalent referent, whatever its perceptual properties.

     The Formalese 'S'S is not a formal truth. It represents a relation between contingently related semantic objects: an intranym and a lexicly used sentence. The intranym referent might be the semantically same words of its semantic predicate, but that coincidence is a contingency dependent on FI, a formally arbitrary stipulation. So, a Formalese 'S'S and 'G'G are structurally like an inter-linguisitic contingency like 'S'G. So, in Formalese, 'S'S is semantically equivalent to 'S'G, not 'G'G. [52] Formalese metalogical sentences state necessities comparable to *Greece is Hellas* and *Greeks are Hellenes*. They are necessities explained by semantic contingencies. Formalese lacks the logical form

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[51] What is meant by "logical form" and how it explains the truth of a sentence is all problematical. The argument in the text makes many assumptions, some of which are argued for elsewhere. For example, I assume that the truth of $a>b.b>c \rightarrow a>c$ is explained, not by the sentence having some distinctive syntax, but by the transitive structure of the relational property represented by $>$. Elsewhere I explain that the identity represented by = is not equality; it's not a relational property like being larger than. Instead, identity statements have a distinctive, non-predicational syntax: they are true just when their terms corefer, whatever the (extra-semantic) properties of the referent, and thus their truth is formally necessary just when the constituent terms are the same. The claim in the above paragraph is that semantic properties are like syntactic relations, comparable to identity, and not substantive like being larger.

[52] Cf. Church (1954), Salmon (2002).

of metalogical truth.[53]

Formalese form differs, and so does its subject matter. In Formalese the referent of a metalogical sentence needn't be semantically the words in the semantic predicate, unless Formalese supplements FI with a stipulation like:

FIL: The expression within an intranym's marks is an expression of a language, L1, contained in Formalese.

Formalese semantic truths are indexed to the language of the words referenced. Our metalogical truths aren't indexed to any language: their displayed words replicate the words of the predicate, whatever the language of those words.

This might seem otherwise because a metalogical sentence utterance might not express a metalogical truth. Whether it does depends on the speaker's intent, which may be uncertain. So sometimes there's need for the display's director to specify the display as the words of some language or as used on some occasion. Sometimes we can infer that p from an utterance of *'p' is true* only on the empirical assumption that the referent sentence means what we now mean by its utterance.

Still, if *'p' is true* normally needed the premise *'p' says p* to imply *p,* it would need the further premise:

'p' says p says 'p' says p

which needs the premise:

'p' says p says 'p' says p says *'p' says p* says 'p' says p.

Like *modus ponens,* metalogical truths are principles of reasoning and representation, not premises of it. If that weren't the default reading of metalogical sentences, they wouldn't sometimes state empirical contingencies. So when we talk about truth by talking with some language, normally we're not talking talking about any language. We're predicating a translinguistic property of a translinguistic object.

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[53] In brief, an intranym's interior is an extrasyntactic object, a prop outside the sentence's logical form. Sentences true due solely to their form cannot be constructed with such components. So too, Davidsonian sentences cannot refer to words used lexicly in the sentence, because words cannot be used lexicly in a sentence unless they are syntactic elements of the sentence.

Kommentarz do Isagogi Porfiriusza", *Przeglad Tomistyczyny.*

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