The Omnitude Determiner and Emplacement for the Square of Opposition

A. K. Bierman
http://www.sfsu.edu/~phlsphr/arthur_bierman.html

These remarks come out of an essay, "On Emplacing", which I conceive as a sequel to Russell's "On Denoting" and Strawson's "On Referring". I correct their differing ways of altering the traditional Square of Opposition's alethic relations between its categorical statements. I supplement alethic logic with a conceptual logic and replace [Refer] with [Emplace], thereby reframing the way to think about the Square.

By using conceptual negation, [~], in addition to alethic negation, [-], we can re-conceive the relations between categorical statements. Think of [Not, ~] as the English prefixes, such as [non-] in "non-red/~red" and [un-] as in "unreal/~real". I do not base my account of the relations between categoricals in the Square of Opposition by assuming their truth or falsity and drawing the conclusion of its immediate inferences, but base it on our entitlements to claim that a categorical is **T**rue, **F**alse, or **U**nknown. It's a 3-valued doxastic approach to the Square.

For explanations of quotation symbols, several new ones used here and in other essays and of my conceptual logic's symbols, go to page 17ff.

Entitlements

Our entitlements to claim a categorical is **true** depends
> on our success in coherently emplacing objects or other substantives into sentences' subject tokens and tropes into sentences' predicate tokens;

entitlements to claim that a categorical is **false** depends
> on incoherent emplacements in the subject and/or predicate tokens or on our entitlement to claim a would-be coherent substantive and/or trope emplacement doesn't exist;

entitlements to claim a categorical's truth value is **unknown** depends
> on not having evidence for any of the above true or false entitlements.

Emplacement is putting an object in the place occupied by a sentence's subject token, and putting a trope in its predicate token's place. Note B. Russell and Quine quotes on page 4. A fuller explanation and examples of emplacement come after the Emplacement Chart that governs doxastic judgments on page 3.

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In case you're wondering about the overworked ^coherent^/^incoherent^ concepts, widely deployed (~1995 – 2007) in contemporary philosophical literature without guilt although inadequately understood, sometimes acknowledged rightly not to be identical to the alethically ^consistent^/^inconsistent^, the central point of my conceptual logic is to mature the concept of ^coherence^ value as a logical alternative to the embryonic concepts of sentences' ^sense^ and ^meaning^, and to clarify the difference and interrelations between coherence and truth value. The following remarks might reassure you of the legitimacy of such an inquiry since the early years of the Twentieth Century.

"'Bring me sugar,' and 'Bring me milk' make sense, but not the combination 'Milk me sugar'".[1] The latter "'combination of words makes no sense' and excludes it from the sphere of language and thereby bounds the domain of language". He adds, "For us a language is a calculus; it is characterized by *linguistic activities*" (p. 193, W.'s emphases) My conceptual logic captures an important part of the active calculus he alleged, never formulated, but amply hinted at in examples, and later repudiated. There is a calculus but it ain't rigid.

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I treat the A and E categoricals as conjunctive statements and the I and O as disjunctive statements with an OM determiner. **OM** is the **Omnitude Determiner** for categorical statements. OM's scope covers the complete lists of the subject arguments in the A and E conjuncts and in the I and O disjuncts. The conjuncts and disjuncts must have the same list.

Suppose Patsy and Quentin are Jill's children, and that she has no others.

p = Patsy is asleep	-p = Patsy is ~asleep/awake
q = Quentin is asleep	-q = Quentin is ~asleep/awake

With these and OM, we can construct the Square of Categorical Statements, as

OM(p & q)	OM(-p & -q)
A	E
I	O
OM(p or q)	OM(-p or -q)

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[1] Ludwig Wittgenstein, *Philosophical Grammar*, p. 189, (Ed,) Rush Rhees, (Trans.) Anthony Kenny; Berkeley and Los Angeles, University of California Press, 1978.

The following Emplacement Chart isn’t for three-valued logic but for three-valued doxastic, entitlement judgments about truth values.

And, don’t confuse statements’ ^truth value^, a dear, simple ideal, with ^entitled judgments^ about our emplacement successes and failures. My friend, Professor Don Gieschen made me be clear about this.

EMPLACEMENT CHART

S = Subject, P = Predicate, V = Entitlement Value

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

In the **S**(ubject) and **P**(redicate) columns, "**+**" indicates you’re entitled to claim there is a coherent emplacement; "**-**" indicates you’re entitled to claim no coherent emplacement exists; "**~**" indicates you’re entitled to claim there’s an incoherent emplacement; "**?**” indicates you don't know if there is or isn’t a coherent emplacement for a sentence’s grammatical subject or predicate. In the **V**(alue) column, **T** is true, **F** is false, and **U** is unknown. For example, you're entitled to say <<The dot is black> is true> if you've done this:

You've coherently emplaced a dot, E **.** E into /dot/, the subject of the senence token /The dot is black/, and a black trope carried by the dot into the sentence’s predicate, /black/; /dot/ and /black/ are this sentence’s categorematic tokens. Row

1 represents this case, S+ P+, because you've coherently emplaced a dot in /dot/ and a black trope in /black/. You can write your coherence emplacements this way.

^E . E @ /dot/ & E . E @ /black/^.

The E...E quotation marks indicate the dot and the black trope have been emplaced. This emplacement proposition shows us we're entitled to claim <This dot is black> is true. ^E . E @ /dot/^ shows a dot is coherently emplaced--/@/--in /dot/'s place, which is that sentence's subject token; and ^E . E @ /black/^ shows the dot has carried the black trope into that sentence's predicate token, /black/, which is a coherent trope emplacement, giving us the S+ P+ profile, Row 1 of the Chart.

I call E . E @ /dot/ and E . E @ /black/ *collocated* emplacements of the dot in /dot/ and its black color in /black/ in /The dot is black/. They're actual emplacements. But when I write virtual emplacements, such as this one,

^EsnakeE @ /snake/ & E(snake)coiledE @ /coiled/^,

we have to conceive or imagine coherently emplacing a snake, S+, or incoherently emplacing, S~, say, a turtle into /snake/. Similarly, you have to conceive or imagine emplacing either a coiled trope, P+, or a wriggling one, P~, in /coiled/. The parenthesized /snake/ shows this S+ snake is supposed to carry the trope coiled into /coiled/, which, if it's a coherent emplacement of that trope, P+, shows that <The snake is coiled> is true, S+ P+, Row 1. If the snake isn't coiled, then it incoherently carries that trope into /coiled/, P~, and <The snake is coiled> is false, S+ P~, Row 3.

You may be able to detect some archaic plausibility in my proposed emplacement acts as an interpretation of predication, and as a logically incorporated substitute for a vaguely psychological, alogical interpretation of /reference/ (as if, from our mind's bow, we released an arrow aimed at a target beyond our skin and mucous surfaces) by recalling Russell and Quine's forceful *de re* remarks.

> "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 in a letter to Gottlob Frege

> "It is rather the object designated by such a [singular] name that counts as a value of the variable; and the objects stay on as values of variables though the singular terms be swept away."
>
> --W. V. O. Quine

Emplacement conceptually logicizes direct reference and clarifies its semantic status. The extension-intension dualism disappears as emplacement incorporates substantives and tropes into one, combinatory logical space, and shows coherence and truth values are fused in that singular space. My essay, "On Emplacing", soon to be in a respectable draft (Sept. '07) will appear on my web site; it's more formal, detailed Appendix on conceptual logic is nearing its morning horizon.

Row 5 of the Emplacement Chart: S- P+

Anyone who reasonably believes that a sentence's emplacement profile is S-P+, Row 5, is entitled to say it's false, despite Strawson's claim that it's not a statement, because, he claims, statements presuppose an S+ profile.

Examples are Russell's "the present king of France", Louis XX (of France), and Strawson's <My child is asleep> when the speaker has no child, or <The butler did it> when there is no butler in the manse. By hypothesis, S-, we know there is no coherent emplacement, although we know bald and sleep tropes exist, P+. My Roman neighbor, Oreste, sports a bald trope, and his nephew is asleep more than he's awake.

TOM: I agree. The non-existence of a subject emplacement implies we can't get S+, which we need for truth, Row 1, the only row that gives us truth entitlement grounds. And, if we have no doubts about S-, we're not entitled to say its truth is unknown. Russell was right and Strawson wrong.

THELMA: Russell was right for the wrong reason, as I explain later. And you agree with Strawson's--and Frege's--claim that sentences whose singular grammatical subjects are known not to have coherent emplacements aren't statements, and, so, can't be false? Is <Pegasus is swift> false?

TOM: I thought we settled that question when you agreed that if an auditor believes a speaker intends to refer with her statement's subject, her sentence is a statement, and she's responsible for it, even if the auditor doesn't know the subject has no existing emplacement. That was a maid's lie about a non-existent butler. On the other hand, if the auditor does know there is no such butler, he may take the sentence as fiction or a whopper.

THELMA: But fictional sentences aren't taken as statements precisely because their subjects don't refer and speaker and auditor agree they don't, S-, unlike deliberate S- lies that liars hide, foiling agreement on S- outside of whoppers and fiction..

TOM: You're saying Strawson's right in fictional or whoppers' cases. But you're also saying we shouldn't put statements about states of affairs in the same category as fictional and whopper sentences. But who ever thought fictional sentences are statements, including Lord Russell? Both parties to fiction know there's no intended referent, hence, no intended statement, although I'm not sure these shared attitudes apply to parodies and satires that float ambiguously between fiction and fact. To protect themselves from litigious, naïf and avaricious readers, authors put disclaimers in novels' fore matter--"Any resemblance to persons living or dead is purely coincidental"--which isn't much comfort to strawsonians.

THELMA: Nor would it have been to Strawson. We can offer them this comfort: (S- P+), Row 5, is "subject false, while Row 2 (S+ P-) is "predicate false".

TOM: "Subject false" sounds more like an insult than comfort. I don't think Lord Strawson would have agreed that all sentences with an S- P+ profile are false, because you've made your point only with singular subjects, not with universally quantified statements, such as <All my children are asleep>. His point was that it’s contradictory to <Some of my children are asleep> only if the speaker has some children, because if the speaker doesn't have any, she hasn't made a statement and "the question of the truth or falsity of [it] simply does not arise", so, neither can its contradictory’s status “arise”.[2]

If the presupposition that a person who says <All my children are asleep> has children is satisfied, Strawson thinks we can save the traditional Square of Opposition. Then <All my children are asleep> is a statement, may be true, and be the contradictory of <Some of my children are not asleep> as well as be the contrary of <None of my children are asleep>. Modernists’ view is that universally quantified statements, rewritten as material implication, may be true even if their subjects' have no existing, coherent emplacements. They have but one falsification condition in the truth table: $T \rightarrow F = F$. In the other three cases where the conditional statement = T, the contrariety of A and E statements is nullified. Venn diagrams reflect the same view. Strawson condemns that interpretation of universal categorical sentences.

Pardon me for lecturing the learned.

THELMA: Thanks for the irony, sweetie. As to the learned, T. Parsons pointed out that the existential interpretation of O statements (Some S is not P) is recent; Aristotle's English translators correctly render his O as "Not every S is P", which does not presume "S" has existing emplacements, S+, as the modernist “Some” interpretation does. Consequently, Aristotle’s Square of Opposition doesn’t have ‘extensional’ troubles and doesn't need Strawson's remedy.[3]

However I'm sympathetic to Strawson's resistance to the modernist critique of the so-called 'Traditional' Square’. If our detective were told by the father that no son of his could have been the murderer because <All my children were asleep>, our sleuth would have taken his sentence as a statement, believing the father intended to refer with his /my children/. Remember, you said the auditor's in the saddle. But Strawson aimed at the wrong target. His proper target is the misrep-

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[2] Strawson, P. F., *Introduction to Logical Theory*, p. 174; London, Methuen, 1952. On p. 176 we read, "Thus the rule that A is the contradictory of O states that, if *corresponding statements of the A and O forms both have truth valu*es, then they must have opposite truth values".

[3] Parsons, Terence, "The Traditional Square of Opposition", *Stanford Encyclopedia of Philosophy*, (Fall, 1999 Edition), especially pp. 5 – 8; Edward N. Zelta (ed.), URL = http*://plato.stanford.edu/entries/square/*, last revised Sept. 11, 1997. Aristotle, *On Interpretation*, 17b, 17 - 26, trans. E. M. Edghill.

resentation of universal categorical statements as material implicative class inclusions:

> If any child is in the class of my children, then each is included in the class of sleeping children

Logicists, trying to base mathematics on logic as Frege and Russell did, find their logic in natural languages like everyone else, but the portion of logic they took from it was selected and tooled for its utility in deriving mathematical statements, improving proofs, establishing relations between classes and between sets. Logicists selected a logic for their purpose.

However, not all of natural languages' logic is captured by their truth logic. Natural languages also host coherence logic, which logically antedates and supplements truth logic; a sentence must have a coherent interpretation before it can be used to make a statement; coherence stands between grammar and truth logic. By working out a language's coherence logic, we can avoid putting the whole of logic in the one-size-fits-all truth logic of Boole, Frege, Russell, and their successors.

TOM: You're stepping on a lot of toes attached to a lot of big-booted people in the field

THELMA: No problem. The wiser the philosopher with, say, an 8-size shoe, the more open-minded she is.

To continue upstream, the class interpretation of universal statements rests on two wrong turns: (a) Class relation predicates, such as [Included in], devour the copula and (b) turn both subjects, "my children", and predicates, "asleep", into class forming functions, f(x), my-children(x) and asleep(x), utilizing material implication as the relation between them. This way of interpreting universal statements has sucked unsuspecting, untold millions of logic students, to say nothing of their untold thousands of mentors who took it from their mentors, into this voracious, Boolean, Venn-diagram-abetted, extensional vortex.

TOM: Aren't you a little too harsh

THELMA: No more than Strawson who called it "grotesque' for anyone to claim "'All the books in his room are by English authors' had made a true statement if the room referred to were empty of books…".[4] Tom, if we employed coherent emplacement requirements into each sentence's subject tokens, /Patsy/ and /Quentin/, in order to verify <All my children are asleep> instead of using "children" and "asleep" as functions to be satisfied and for forming classes, the logical functor for <All my children are asleep> would be conjunction rather than material implication. We'd have a conjunction of singular statements about the aforementioned children: <My child Patsy is asleep> and <My child Quentin> is asleep> and, per OM, <This lists all my children>.

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[4] Strawson, *Introduction*, p. 148.

TOM: I suppose that conjunction and <That lists all my children> play the role of the determiner “all” in <All my children are asleep>.

THELMA: Not at all. I propose replacing it with the Omnitude Determiner, OM. [All] is usually understood by extensionalist logicians as [Every member of a class has a specified property(s)], I interpret it as

[List conjunctively each entity claimed to have a specified property(s); list no more].

How else could you verify that <All of my children are asleep> is true? Plus more good news: With OM there’s no taint of classes or members.

Interpret OM for [Some] claims, as in <Some of my children are asleep>, as

[List disjunctively each child claimed to have a specified property and list each claimed to have an incompatible property; list no more].

Because OM serves both [All] and [Some], it can’t be treated as a universal member/class determiner nor as a particular categorical statement. You can supply the relevant interpretations for E and O categorical statements.

* * * *

Universal positive, A statements, OM calls for conjunction:

[OM] <<My child Patsy is asleep> and <My child Quentin is sleep>>,

[OM] <<S1 is P> & <S2 is P>>.

Particular positive, I statements, OM calls for disjunction:

OM <<My child Patsy is asleep> or <My child Quentin is asleep>>,

OM <<S1 is P> or <S2 is P>>.

Universal negative, E statements, OM calls for conjunction:

OM <<My child Patsy is ~asleep> & <My child Quentin is ~asleep>>

OM <<S1 is ~P> or <S2 is ~P>>.

Particular negative, O statements, OM calls for disjunction:

OM <<My child Patsy is ~asleep> or <My child Quentin is ~asleep>>.

OM <<S1 is ~P> or <S2 is ~P>>.

* * *

Don’t forget, Tom, OM places a listing obligation on a person who uses both “all” and “some”, and “none” and “not all”, and their equivalents: The speaker is obligated to list each thing she asserts has the predicated property, P, asleep, and that has its contradictory or a contrary property, ~P, ~asleep/awake in the A/O pair and their equivalents in the E/I pair.

Interpret ^~asleep^ as a contrary rather than a contradictory of ^asleep^, if you conceptualize nodding and drowsing as neither a sleeping nor a waking state. I explain further how [~] may be interpreted as both contradictory and contrary in the Appendix to this essay.

Suppose Patsy and Quentin are Jill’s children, and that she has no others.

p = Patsy is asleep   -p = Patsy is ~asleep/awake

q = Quentin is asleep   -q = Quentin is ~asleep/awake

With these and OM, we can construct the Square of Categorical Statements, as follows:

OM(p & q)	OM(-p & -q)
A	E
I	O
OM(p or q)	OM(-p or -q)

TOM: I still don’t think “some” in I and O statements is an OM determiner, even if you tell me it’s not an interpretation of “all”. I need some assurance here.

THELMA: O and I need OM, because if Jill didn’t list the same children she did in the A and E statements, there’d be no way of establishing relations between those categorical statements. Its true, the omnitude determiner has different truth conditions in “all” and “some” statements. In I and O statements, she uses [or] rather than [and] as the functor between the statements in the list and it’s allowed that in I and O statements she may list entities with incompatible properties, <Quentin is awake> and <Patsy is asleep>.

But OM obligates her to list the conjuncts that make her A and E statements true, and to list all the disjuncts that make her I and O statements true as well as all those that, respectively would make E and A statements false. If her 'universal' and 'particular' lists aren't identical, she’s not entitled to claim that the A and O nor that E and I are contradictory. Contradictory statements must have identical subjects. Not listing all her children in the I and O hampers them from falsifying E and A.

Also, listing the names of children she doesn’t have, claiming <Jason is asleep>, doesn't verify her I statement nor falsify her E statement; nor does it help verify her A nor help falsify her O. That's because Jason’s profile is S-. Listing <Jason is awake/~asleep> has parallel consequences.

OM requires us to make the I and O disjuncts identical to A and E's conjuncts, which makes it possible to establish relations between categorical statements in the Square of Opposition. I’ll do that now.

TOM: Before you begin, I'm curious about why you use conceptual negation in the E and O statements. That's unorthodox for traditionalists.

THELMA: Not at all. With it, we get obverse transformations of A and E in which traditionalists used "non-", which I interpret as conceptual negation, [~]:

All S is P = No S is non-P/~P,

No S is P = All S is non-P/~P, and so forth.

Strawson implicitly uses [~]. I recall his talk about incompatible predicates, which is what P and ~P are, and that it's we agents who make them so. I think he was trying to improve on Aristotle's argument in his Metaphysics with a de jure conceptual argument for why we should accept the principle of non-contradiction; it would have been stronger if he'd distinguished explicitly between conceptual and statement negation.[5] Aristotle's syllogistic requires that P and ~P be incompatible concepts and can't be predicated of the same subject. Strawson’s de jure conceptual argument explains why we should embrace the principle of non-contradiction. I'm sure you see the connection to Plato's anti-parmenidean move.[6] The non-contradiction truth principle rests on the conceptual incompatibility principle that says two propositions that have the same subject concept and conceptually incompatible property concepts can’t both be true.

TOM: I'd guess you think the omnitude determiner differs from Strawson's pre-supposition proposal for universal statements.

THELMA: You’d guess right. If Jill, can't meet her obligation to supply a list because she has no children, Strawson thinks her /All my children are asleep/ can't be used to make a statement, whereas I think it can, and I also think it's false.

Remember your point that the auditor's in the saddle. If an auditor thinks another has made a statement, it’s to be taken as one. If that weren’t our practice, no one could successfully lie to someone else. Omnitude commits Jill to giving a list, and it must be a full list.

If she makes a partial list, leaving out her child Ruth, perhaps because Ruth is awake, we don't have all the information to which we're entitled. We may think we do, but she knows we don't. While we may reasonably believe from what she said that her conjunction is true because we have S+ P+ for the Patsy and Quentin conjuncts, she knows we're entitled only to say her universal statement's truth

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[5] Strawson, *Introduction*, p. 5. Aristotle, *Metaphysics*, Book IV, Chapter 4.

[6] Plato shows in his *Sophist* why Parmenidies is wrong when he claimed (if he did) that you can’t say what is false. Plato uses (in most English translations) the concept ^Other^ in his refutation. I turn ^Other^ into a conceptual negation [~] of predicates. ^P^ and ^~P^ are others to each other. The falsity of a statement, <S is P> is inferred from the truth of a proposition whose predicate is an Other, <S is ~P>, or vice versa. The argument goes like this: <S is P> (is true); ^P^ and ^~P^ are incompatible concepts; therefore, <S is ~P> (is false). <My cherry is sour> (is true); ^sour^ and ^sweet^ are incompatible concepts; therefore, <My cherry is sweet/~sour> (is false). Russell, perhaps under the supposition that true and false statements’ need distinct correspondent facts, opted in *Logical Atomism* for ‘negative’ facts as false-makers. That’s too speedy; falsity detours through inference from ‘other’ truths.

Carets indicate concepts, which are not mental entities, but tokens with a single place in lexical space. See ^…^ in the list of symbols on p. 18.

value is unknown, because she's withheld information about Ruth's asleep/awake state.

It's also possible she may have no children and can't list anyone; in that case, she's lied; to lie is to make a false statement. It's false because any attempt to fulfill her omnitude obligation, say by listing <Patsy is asleep> and <Quentin is asleep>, produces false conjuncts; the profiles for their subjects or any other conjunct she might list are S-. By rows 5 - 8 of the substitution chart they're false, and, of course, if any conjunct is false, the omnitude conjunction is also false.

TOM: But I think that entails the O statement,

OM<<Patsy is ~asleep/awake> or <Quentin is ~asleep/awake>>,

isn't contradictory to A. Two falses don't make a contradiction; O needs to be true to contradict A. Nor are E and I contradictory, on the same grounds as for the A and O. An S- profile makes each conjunct of E and each disjunct of I false.

This isn't what I'd exactly call a way of saving the relations in the ‘good-old Square of Opposition’, which you said you could do with your omnitude determiner. I don't see much difference in your omnitude and Strawson's presupposition results. You don't get a contradiction if Jill has no children; neither does he, because he doesn't think A and E sentences can be used to make statements if she has none.

Nor can contrariety between A and E hold if Jill has no children. That both may be false, if their conjuncts have S- profiles (rows 5 - 8) is OKAY for contrariety. But, by the same reason, if A and E have S- profiles neither can be true, which isn't OKAY, because one of two contrary statements may be true.

Whatta ya' say to that, pilgrim?

THELMA: Tom, since when did you expect two false statements could contradict anything? I thought language-equipped agents did that. And how can two false statements by themselves, absent an agent, be contrary? (Skeptical silence)

The emplacement chart plots emplacement conditions under which *agents* are entitled to say statements are contradictory, contrary, true, false, or unknown. The logical forms of A, E, I, and O statements, whether aristotelean, traditional, or boolean/russellian, don’t plot their own logical relations in the Square. You seem to think that any statement with an A form is contradictory to a statement with the O form. That's the wrong way to read the Square. Get doxastic, Tom! Read it in the bright light emplacements throw. They confer truth values on statements via entitlement judgments on the Square’s agent-interpreted forms without which there are no logical truth relations between categorical statements. Read the Squares’s relation between A and O as: If we’re entitled to claim either the A or the O statement is true, we’re entitled to say the other is false. Strawson understood and developed this, but, in comparison to the emplacement chart, his reference conditions were too spare. The Square isn't merely a square of categorical statement forms and presuppositions, but of agents' coherent S+, S~, S-, S? and P+, P~, P-, P? emplacement efforts into the Square's categorical statements. I marvel at the persistence of platonic realism among logicians whose logical skills fall short of their ontological capacities. Perhaps they're cursed by misplaced confidence in their fervid, confident intuitions the relations between aspatial, atemporal, airy-fairy 'objects', or by the surety of their belief in their intellectual superiority over the lesser tribes. Who knows the causes? Not I. So let's go on.

If the A statement by entitlement is true, its O is false, and if the O is true by entitlement, the A is false. If <OM <Patsy is asleep> & <Quentin is asleep> & <That lists all my children>> is true, <OM <Patsy is ~asleep> or <Quentin is ~asleep> & <that lists all my children>> is false. And vice versa.

TOM: So, by you, <All S are P> and <Some S are not P> are not always contradictory, nor are <No S are P> and <Some S are P>. The form of categorical sentences isn't enough to establish logical relations between them.

THELMA: Good. Sentences with those forms can be contradictory only if they have an S+ emplacement profile and the identical entity that makes them S+ is emplaced in all the Ss of the Squares' A, E, I and O sentences. If Jill has no children, both her A conjuncts and O disjuncts have S- profiles; they're both false. The emplacement conditions for either's truth fail; hence, their contradiction conditions aren't met.

TOM: You're maintaining that the failure of S+ reference conditions, sentences with S-, S~, or S? profiles, don't have the same logical results as violations of Strawson's presupposition requirement. He won't allow sentences to be used as statements if they're subjects don't have coherent S+ profiles, while you do. In any of the three failures of S+, S-, S~, or S?, we're entitled to one of the three truth value claims.

THELMA: Given the luxury of Unknown among the entitled truth values. Tom, we have to keep via attiva, epistemological entitlements distinct from via passive, logical relations. Don't shunt thinking agents aside; without them, there is no via passive logic. Russell didn't appreciate this distinction that's so central to Dewey's logical theory.

TOM: You don't want S or P to be functions with which we may form classes, and you don't interpret traditional categorical statements as asserting relations between classes nor between members and classes.

THELMA: A class interpretation of quantified statements may be suited to mathematics where there are well-defined classes, but not to ill- or undefined, amathematical situations involving existing or non-existing children. Also, in real life situations, we don't have to worry about an infinite number of members that can't be listed in anyone's lifetime. What we want in real, finite, life situations are a conjunction and disjunction of statements to whose subjects and predicates we may give emplacement profiles.

TOM: But what about big, big classes, such as dogs? Do you think <All dogs are faithful> could be verified by verifying each conjunct? And what about really huge classes, such as molecules? Verification of each conjunct is out of reach in such cases.

THELMA: Isn't that why ardent generalizing scientists want laws? Eternally tentative as they may be? Or want a probability logic, or a statistical theory?

"If the law applies, the inference flies."

And don't ask me about how to establish unproblematically the reliability of laws, OK? Do you really think their sole role is to be true premises in inferences? Why can a single false statement falsify an [All] statement if universal statements' truth didn't depend on the truth of its individual conjuncts per OM? (Reflective silence)

Do you know about the Slow Food movement?

TOM: Never heard of it.

THELMA: Its proponents want to slow down our eating habits, and advocates avoidance of unhealthy fast food. Carlo Petrini started the movement in Bra, Italy. Eating slowly gives us time to enjoy our fellow diners' company, to converse leisurely with them in cultured repose rather than solipsistically wolfing paper-wrapped garbage. I organize semi-annual, five-hour Slow Food Lunches at Moose's restaurant here in the city. Perhaps it's time for Slow Truth, verifying conjuncts and disjuncts while going to and fro, stalking un'impiazzamento. But, if you're into Fast Truth, you can always induct.

TOM: Why didn't you invite me to your slow lunches?

THELMA: I didn't want to unsettle your ironclad, hotdog routine.

TOM: Did you explain at those lunches how Slow Truth will save the good-old Square? What Strawson defended.

THELMA: I didn't there, but I will here. Suppose John, Joan, and Juan are a Julia's children, and that she has no others.

p = John is asleep
q = Joan is asleep
r = Juan is asleep
OM = The A, E, I, and O statements list the same children

A conjunctive interpretation of an A universal statement, OM(p & q & r), is the contradictory form of a disjunctive interpretation of an O statement, OM(-p or -q or -r), by De Morgan, dropping the negation on the disjunction.

An E statement, OM(-p & -q & -r), and an I, OM(p or q or r), are also contradictory forms by De Morgan and the negation-dropping move

We get the same results by interpreting O statements as <Not every S is P>, as Aristotle did. This denies that all the A conjuncts are true, entailing that at least one disjunct is true, say, <Juan is ~asleep>. But if there is no Juan, S-, there's no emplaced person to carry an awake trope into the predicate of /Juan is ~asleep/, although there are lots of awake, P+ tropes in the world despite Oreste's sleepy nephew. Since <Juan is asleep> is a false conjunct (S- P+), Row 5, it follows that the A conjunction is false, as is that disjunct in A's O. But it's not the O's false disjunct that falsifies its A, but the falsity of A's 'Juan' conjunct. Contradiction sometimes has to sit at the back of the bus. On the other hand, if every one of A's conjuncts are true, its contradictory O statement (Not every S is P) is false.

TOM: I'll bet this would have made John Stuart Mill happy. Remember how question-begging he thought it was to affirm the truth of universal statements (All men are mortal) without acknowledging that it depends upon verifying the truth of statements about each covered individual (Socrates, Plato, Tom, ... is mortal)? I can find the passage in his *Logic,* if you have a copy of it. Oh good.

Here it is. "It must be granted that in every syllogism, considered as an argument to prove the conclusion, there is a petitio principii...That, in short, no reasoning from generals to particulars can, as such, prove anything: since from a general principle we can not infer any particulars, but those that the principle itself assumes as known."[7]

THELMA: Mill was definitely in favor of Slow Truth. And emplacement entitlements. But he shouldn't have written that syllogisms don't "prove anything". He should have written they only affirm the entitled truth of the conclusion".

In line with that, OM also rids traditional logic of singular statement embarrassments, such as <Socrates is a man> and <Socrates is mortal>, which don't fit happily in "all" or "some" categorical statements. With the determiner OM, however, they do fit happily, because logical relations between categorical statements turn finally on the truth value of singular conjuncts and disjuncts, including truths of such OM singular statements as those about the faithfulness of Fido, your Burney, my Plumbea, and the discomfiting pesterings of everybody's Socrates.

Are you ready to appreciate how my treatment of categorical statements saves the other semantic relations in the Square?

TOM: I just realized, really, that I've been waiting for this all my life!

THELMA: Despite your redundancy, I'm so glad I'm the one to be there for you, Tom.

As I explained, entitlement truths and falsities save the traditional square. A and O, E and I are contradictory. Statements with the same subject emplacements that have incompatible predicates, P and ~P, can't both be true--short for "we're not entitled to claim or believe they're both true", to remind you of the alert, omni-pre-

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[7] Mill, J. S., *A System of Logic*, Eighth Edition, Book II, Chapter III, Section 2.

sent, guardian agents in all epistemological claims. This holds whether ~P is interpreted as a contradictory or a contrary of P.

A and E are contrary. Both can't be true, because both p and -p and q and -q have incompatible predicates. They can both be false in case a disjunct in each of their sub-contraries is true.

I and O are sub-contrary. Both may be true. I is true, if Patsy is asleep, and O is true if Quentin is ~asleep/awake. A disjunction is made true by a true disjunct. Not both may be false if one is true, because I and O disjuncts have identical subjects and incompatible predicates, P and ~P.

I and O are sub-altern, respectively, to A and E. Because A's conjuncts are identical to I's disjuncts, the truth of A entails the truth of I. Similarly, E’s truth entails O's truth. From the falsity of A and E, we can conclude only Unknown value for their sub-alterns, unless each of the conjuncts is false, in which case their sub-alterns are false.

A and E are super-alterns, respectively, to I and O, because the falsity of I and O entail, respectively, the falsity of A and E. From the truth of I and O, we may conclude only Unknown value for their super-alterns, unless each of I or O’s disjuncts is true, in which case their super-alterns, A or E, respectively are true. *I remind you* that all talk of truth value is shorthand for agents' entitlements, and there are no logical relations between categorical statements without them.

(Thelma sings to the tune of Kurt Weill’s "That Old Bilbao Moon") That old agent behest/I won't forget it lest/I'm doomed to sad regrets.

TOM: You're turning into a real humanist, Thelma.

THELMA: Too trying, like love at last sight. But, I must confess, I've lost what little love I had for a class interpretation of categorical sentences, empty classes, and vacuously false antecedents of true material implications. The Extension Apple in Frege's Garden of Eden is one source of the Original Sin that afflicts the Square.

The infatuation of modern logicians with classes and sets, and the neglect of conceptual negation, overwhelmed by alethic negation, has made the late 19^{th} and the whole of the 20^{th} century a stunted epoch for logic. Strawson should have steared clear of its wracks. By using coherence logic and coherence emplacement conditions in subject-predicate sentences, we avoid a Boole/Russell quantified, material implication distortion of ordinary languages’ categorical sentences.

Sorry for that last sentential barbarism, Tom.

TOM: Go in peace, Thelma, speak plainly, and sin no more.

THELMA: I've got to get back to writing plays. Help me! (Pensive pause)

OKAY. Starting back: I think I've shown how to preserve Aristotle's and the Medieval Square of Opposition without having to endorse Strawson's rescue tactic (no statement without referential content); and without having to abandon Russell's analysis of definite descriptions, which, I point out, specifies coherent emplacement conditions for definite descriptions, as in <Jill's only child is asleep>. If these conditions aren't satisfied, because of an S- profile, the statement containing that description is false, rows 5 - 8, as Russell would have it.

TOM: But giving up Russell's and others' class interpretation of universal statements, such as, <All integers divisible by two without a remainder are even>, is costly.

THELMA: Not at all. To interpret mathematical statements, which was his and Frege's principal end, let them use material implication. But we don't have to use it for amathematical statements. Every teacher of logic has had to explain to students—often not very successfully--the counter-intuitive material implication reading of "if..., then..." statements ever since.

For logical interpretations of amathematical statements, we can use conjunction. It was Strawson's merit to see that amathematical, ordinary language discourse was at odds with the modernist Square of Opposition. Good. By moving to coherent emplacement conditions and a conjunctive interpretation of universal statements, we maintain the relations that traditionalists and Aristotle found in the Square, plus, we get Russell's result: Statements with an S- profile, rows 5 - 8, are false.

TOM: Usually, you're not so diplomatic.

THELMA: It's not diplomacy, Tom. It's an inexorable movement toward the Absolute where all contradictions are resolved by Aufhebung distinctions.

TOM: I never took you for an Hegelian.

THELMA: Irony doesn't seem to be your strong point, dear. You'll never make it as a post-modernist. But forget the part about the Absolute, OKAY?

TOM: Before you go on to row 6, I have one more question. The class of whole numbers and the class of even numbers, both infinite classes, have the same cardinal number. Do you think such 'uneven' classes exist?

THELMA: That's easy to answer: No. Also, finite classes don't exist. Universal statements about members of finite classes give way to finite conjunctions per the omnitude determiner.

TOM: But it seems to follow then that all mathematical statements that refer to infinite classes are false, S-, per rows 5 - 8; so, they can't be used in proofs. But without them, you can't prove every bounded class of real numbers has a least bound. Few mathematicians are willing to relinguish least bounds, because they're needed for mathematical analysis resting on continuity. That's a lot to trash.[8]

Which will you give up? Your views about the falsity of statements with an S- profile, rows 5 - 8, or your claim that infinite classes don't exist?

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[8] Quine, W. V. O., *Set Theory and its Logic*, pp. 249 – 250; Cambridge, Harvard University Press, 1963.

THELMA: Neither. I detect a transcendental argument in your reasoning: Infinite classes must exist, because if they don't, we couldn't prove some exigent mathematical statements are true. Obviously, this assumes these statements are or can be known to be true, even though we can’t back up their truth with putative proofs, a curious position to take for anyone who thinks we're entitled to claim a mathematical statement is true only if it's proven, Goedel and his Legionnaires excepted. Further, in such proofs, existence axioms are introduced, but there's no way of showing infinite classes really exist outside the virtual reality these axioms give them.

Transcendental arguments don't prove an entity exists, only that it's needed to validate the truth of some claim. Kant plumped for transcendental arguments, but firmly denied that they entailed the existence of a transcendental entities. Such virtual, transcendental reality was too pale for him. They cast no shadows.

TOM: Your argument reminds me of a magician trying to stuff a resistant rabbit into a tophat!

THELMA: Tom, I think there's a third choice beyond giving up the falsity of statements with an S- profile or giving up mathematical analysis and classical theories of continuity: Mathematical statements have coherence rather than truth value. Coherence value doesn't hang on the existence of sets, finite or infinite. Once you give up alleging truth for mathematical ‘statements’, you can give up the existence of sets. I know this is a promissory note, and one I can't honor here although I will try to do so partially in the Appendix.[9]

TOM: On to row 6?

THELMA: I'd love to go there.

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Here are symbols I use in my conceptual/coherence logic. I also use the augmented list of quotation marks in all philosophical essays intended for the discriminating trade. See my web site for essays in which I use the following symbols. My “Appendix” to “On Emplacing”, hopefully to appear in 2008, is (will be) the best site to go to for elaborations, examples, and explanations of the following symbols.

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[9] This promissory note develops Leslie Tharp’s attempt to base mathematics on conceptual grounds in the direction of a coherence-valued logic and mathematics.. Leslie Tharp, “Myth and Mathematics: A Conceptualistic Philosophy of Mathematics”; *SYNTHESE*, Volume 81, No. 2, November, 1989, LESLIE THARP MEMORIAL ISSUE, pp.167 – 201.

Symbols

Quotation Marks

/…/	For a token word or sentence
“…”	For a type word or sentence
^…^	For a concept; an interpretation of a word; or a proposition, an interpretation of a sentence. Interpretations are the same or different token rewrites of the interpreted token.
<…>	For a statement; a claim made with the use of an interpreted sentence. Medieval logicians called these four references above material supposition.
E…E	For a substantive emplaced in an S token: EpotE @ /pot/; a trope emplaced in a P token: EhardE @ /hard/. Medieval logicians called this formal supposition. It is ‘direct’, de re, reference. .
[F]	Brace quotation marks distinguish functors, [Subsume], from other components of sentences, propositions, and statements. Functors are interpreted copulas.
{C…Cn}	A link range of incompatible concepts subsumed by an adjacent concept coherently linkable to a substantive concept, ^[Link] flower {red blue yellow …}^. A subsuming concept is adjacent to a range if it doesn’t subsume any concepts intermediate between it and the range of, for example, color concepts.
[A…An]	A congery of predicate concepts is a list of the property tropes bonded to a substantive concept. The [Bond] functor is explained below. I use “A”, for “**A**ttribute” in congeries, [A…An], in place of “P’ in ranges, {P…Pn}, to make it easier to distinguish between predicative ranges, {P…Pn} and attributive bondings, [A…An].

Components of Subject-predicate Sentences, Propositions, and Statements

Sentences and categorematic terms in them are tokens and types; concepts are interpretative token rewrites of token terms and occupy identical places in lexical space; propositions are interpretative token rewrites of token sentences and their categorematic terms; we use interpreted sentences to assert statements.

^S^ - A substantive concept; objects, events, acts are emplacement candidates for Ss

^P^, ^Q^ - Property concepts; property tropes are emplacement candidates for ^P^s & ^Q^s

[F] - A functor; an interpretation of a copula; an advisory in the via attiva mode, a reporting relation in the via passive mode

^C^ - A concept; resident in propositions first, then in statements; each has a unique place in lexical space. Here, I do not present inferences for sentences, propositions, or statements with 2-place or 2+-place predicates. I make suggestions for them in the appendix to “On Emplacing”, “Your Appendix to “On Emplacing”, Tom”.

Functor Symbols

I indicate functor symbols in the via attiva mode with square brackets, […], to distinguish them from concepts, ^…^. For example, [~] is the symbol for the via attiva conceptual advisory, [*Negate*]; I use [~] also in via passive reports of conceptual excursions, <^~Fresh^ is the negation of ^fresh^>. Functors, except for [~], are interpretations of copulas; in my logic there are eight of them. They advise us how to identify and distinguish other’s *lexical acts* so we can interpret their sentences as they do, and advise us which functors we should use so others can identify our *lexical acts* and interpret our sentences as we do. Speakers and writers use these various copulas to put the come-hither on others to promote reciprocal understanding of each other’s sentences.

Monary Functor

[**~**] Negates a concept or a proposition; not identical to negating [-] a statement. A conceptual negation [~] of a concept may generate either a contradictory concept or contrary concepts. Negating [~] a proposition alters its coherence value.

[-] Negates a statement, alters its alethic value.

Binary Functors

I drop the carets around concepts, ^colored^, ^blue^, in propositions for brevity, as in the next line’s example.

[/] Subsume one concept under another: ^[/] colored blue^.

[**@**] Emplace a substantive in, [@], the place held open by an /S/ token, or emplace a trope in the place held open by a /P/ token: ^EboyE @ /boy/^, ^EsweetE @ /sweet/^.

[**:**] Bond a substantive concept to trope concepts. A congery of bonded concepts enables us to distinguish one *kind* of substantive from another, including categorically different kinds of objects: ^[:] bog [wet spongy]^ versus ^[:] desert [dry firm]^. A congery must have at least one trope concept incompatible with a trope concept in another congery to provide a kind distinction, whether it's a natural or a ~natural/constructed kind.

[!] Two concepts or two propositions are incompatible. ^[!] happy morose^ are incompatible concepts. ^[Subsume, /] happy cheerful^ and ^[~Subsume, ~/] happy morose^ are incompatible propositions. If one is coherent, the other is incoherent and vice versa.

[=] Identify the interpretation of two or more words or sentences as one and the same. In an as yet unpublished essay, I explain how to identify conceptual identity, as in ^[=] stolen hot^.

[*] Link a substantive concept to a range of incompatible property concepts: ^[*] Water {hot cold tepid frozen…}^

[.] Soothe a property of an object; it's traditionally called "predication": <[.] meat cooked>, <[.] Oedipus blinded^. Typically used in factual statements. This functor's name is drawn from a peasant's "Forsooth, Sire" his Prince, pulling on his alethic-confirming forelock.

Grammar

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

Carets around token categorematic words indicate concepts. Around ^C^, ^S^, and ^P^ they indicate variables for concepts. ^C^ may be either ^S^ or ^P^. Well-formed expressions with their functors and concept variables are not, of course, propositions, but the forms of propositions. We get propositions when concepts replace the variables or when substantives are emplaced in Ss and tropes are emplaced in Ps.

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Well-formed Concepts - WFC

^C^ ^~C^
^S^ ^~S^
^P^ ^~P^

Well-formed propositions – WFP

One-place functors

^[F] S P^ ^[F] S ~P^   ^[F] ~S P^   ^[F] ~S ~P^

^[~F] S P^   Similar combinations of concept negations

Two-place functors

^[F] S1-S2 P^ ^[F] S1-S2 ~P^   ^[F] ~S1-S2 P^   ^[F] ~S1-~S2 P^

^[F] ~S1-~S2 P^   ^[F] ~S1-~S2 ~P^ und so weiter, and also for

^[~F] ~S1-~S2 P^   Similar combinations of concept negations

This is a revised version of my handout for the 1st International Conference on the Square of Opposition at Montreux, Switzerland, in a lovely June, 2007.