1. Excuses and Aboutness (5/2/12)

ZY: You never take me to Friendly's any more.
SY: Ummmm, didn't we go last week on your birthday?
ZY: I wasn't talking about that.

SH: Things persist through the gain and loss of properties.
FP: Ummmm, you do know that properties don't exist?
SH: It doesn't matter, I wasn't talking about them.

AT: Falstaff's testimony demonstrates the innocence of my client Jones.
JU: Ummmm, you do realize that Falstaff's testimony was false?
AT: It was false, and about Jones. But it was not false about Jones.

Ullian and Goodman [1977]

True, and interesting, but...

The form of a semantic excuse: The statement is (or may be) false. But it is *partly* true—true in what it says about such and such. And that is what I was speaking to.

1 A hypothesis *A* is partly true iff it has wholly true parts.

2 *B* is part of *A* iff it is implied by *A. [???]*

Perhaps the true part should meet additional conditions: non-triviality; relevance to the matter at hand; the negation has no similarly true part....

The naive-seeming idea about partial truth is close to right, I think. The sensible one about parthood (inclusion, containment) being implication.....let's talk about it.

INCLUSION IN HISTORY Kant on analyticity. To be a fox is part of what is involved in being a vixen. Analytic truths predicate of a subject what was already there in it. Synthetic truths predicate of a subject *more* than was there in it. That makes them ampliative, so presumably empirical. And yet some of them (geometry, arithmetic) seem to be a priori. Hence the problem of how synthetic a priori knowledge is possible.

"By [analytic] means we recognize in something no more than we had originally thought in it...we recognize better what we already knew" (Coffa [1993],12)

Wittgenstein on validity. A valid argument merely unpacks what was there in the premises. Deduction on this view would seem incapable of teaching us anything new. That it sometimes does do this is unexpected and in need of explanation. Hence the problem of how deduction can extend our knowledge.

"[If] p follows from q, the sense of p is contained in the sense of q (5.1.22)....."A proposition [already] asserts every proposition which follows from it" (5.1.24)

Kant's view is dead and gone. Truths whose P ranges outside of S are ampliative in *some* sense. But not one that requires them to be substantive. Why can't analyticity be based on binary relations other than inclusion? *Ex*clusion, say: *a red thing is never green*. Or, *unary* relations: *if x is older than y & y is older than z, x is older than z*. Or not on conceptual relations at all: *if God made everything, everything was made by something*.

One difference: Kant shrinks the target (analyticity) to bring it into line with the containment constraint. Wittgenstein loosens the constraint to bring it into line with the target (implication).

Wittgenstein's version has fared better. We're still tempted to think of the conclusions of valid arguments as there in the premises. We still wonder how valid argumentation can extend knowledge, when the conclusion was already in effect known. Why this difference? Is it that no one spotted Wittgenstein's "mistake," the way Frege spotted Kant's?

But they did. Moore: *Cats mew & dogs bark* may contain *Cats mew*, but *Cats mew* does not contain *Cats mew or dogs bark*. Ramsey thinks a proposition implicitly asserts a few of its implications only.

"To say that *Cats mew* contains *Cats mew or dogs bark* is to give a false partial analysis of *Cats mew*;... this [disjunction], though it logically follows from *Cats mew*, is not 'a part of,' 'contained in,' 'included in' the proposition that cats mew" (Moore [2004]).

INCLUSION AND IMPLICATION A paradigm of inclusion is conjunctions including their conjuncts. *Snow is white & cold*$\geq$*Snow is white*. A paradigm of non-inclusion is *Snow is white* in relation to *Snow is white or cold*. Paradigm case intuitions are a poor basis for theory, perhaps. But we are dealing with more than one-off intuitions here. Parthood has an explanatory role to play that requires it to be more than implication.

Wittgenstein is proposing "an extension of the meaning of assert [only] partly in conformity with ordinary usage, which probably agrees as regards $p\&q$ and p, or $\forall x Fx$ and Fa, but not otherwise." (Ramsey [1923])

Saying: To say that snow is white and cold is to say inter alia that snow is white. But to say that snow is white is not inter alia to say that it is white or cold. Saying-that transmits down to the parts of what is said but not to "mere consequences"— consequences that aren't also parts.

"If q is "contained" in p, you can also say q is part of what you assert in asserting p (Moore [2004])

Agreement: Hempel, Carnap, Popper held that the shared or common content of A, B is $A \vee B$. Consistent theories always agree on something, their disjunction. This seems over the top. The shared or common content of A, B is given by their shared *parts*. They agree to the extent that A says inter alia something that B does too.

Priority: Sometimes A implies B because B is a precondition of A's truth, e.g., when $A = p \& q$ and $B = p$, or $A = \forall x Fx$ and $B = Fk$. Other times not, e.g., when let $A = p$ and $B = p \vee q$, or $A = Fk$ and $B = \exists x Fx$. Fk must hold before $\forall x Fx$ can hold, but $\exists x Fx$ is not in that way a precondition of Fk. Parts are prior to wholes, mere consequences are posterior.

Falsification: The falsity of a conjunct p explains the falsity of the conjunction $p \& q$. But the falsity of a disjunction $p \vee q$ only ensures, without explaining, the falsity of a disjunct p. (Similarly for an existential generalization and its instances.) Why? If A has a false part, it is false *thanks to the falsity of that part*. For mere consequences to be false is a symptom of A's falsity, not the reason for it.

If a part is contaminated, that explains why the whole is contaminated.

Permission: Permitting Al to eat pork chops is permitting Al to eat pork. This doesn't mean he can eat pork or human flesh. *Go ahead, kill the fly* doesn't entail *Go ahead, kill something* (narrow scope). One permits (normally) the parts of what one permits, but not implications more generally.

Confirmation: Bayesians say E confirms H iff $\mathrm{pr}(H \| E) > \mathrm{pr}(H)$. Often though we want confirmation to be "pervasive"—to reach through to H's parts, especially its untested parts. (Tacking by conjunction.) Conversely H seems better confirmed by its parts than its mere consequences. (Tacking by disjunction.)

Positivists often construed the untested part of H as $E \supset H$. More in Lecture IV.

Knowledge: Seeming counterexamples to closure almost always target entailments that are not parts. *It's a zebra* doesn't contain *It's not a cleverly painted mule*. *It's red and looks red* doesn't contain *My color vision is accurate. I locked the door* doesn't contain *Evidence to the contrary is misleading*. Perhaps knowing a thing suffices, not for knowing its consequences generally, but knowing its parts.

Cohen [2002], Dretske [2005], Kripke [2011]

Partial truth: *Snow is white and contains sugar* is partly true thanks to snow being white. *Snow contains sugar* is not made partly true by snow's containing sugar or being white. *Wood is edible* is not partly true through something being edible. True parts confer partial truth on their wholes. Other true implications lack this power.

PARTS AND DIFFERENCES What is the X such that parthood = implication + X? Falstaff's testimony is partly true because true in what it says about a certain subject matter. To identify content-parts, we'll have to broaden our focus from truth-conditions to what sentences are *about*, their subject matters. Not just yet, though—anything we might venture about subject matter is going to be controversial. Let's try first a direct route to content-parts, based on an idea about *parts as such*.

3 *Difference transmission:* y is part of x, just if y cannot change (in specified respects) without corresponding changes in x.

If x and y are material objects, it's changes in intrinsic character that percolate up. You can't bend the frame, or..... while holding the bicycle's intrinsic properties fixed. If they're sets, changes in membership percolate up. With pluralities, it's both; swapping out one duck for another changes the waterbird population, and the ducks can't fly south if the waterbirds stay put.

This is a how of manner, not means. A how of means might be: *it fell in some paint*. Among hows of manner we can distinguish the specifying and the adjunctive. An adjunctive how would be: *alarmingly blue*, or *regulation blue*. A specificational how would be: *periwinkle*. I'll often say *how and why* x is blue, or *how and whereby*, to indicate it's a specificational how we're after.

If x and y are properties, it is changes in "how they're had." Being +-ly charged $\geq$ being charged. A comb whose charge goes from 2 coulombs to 3 has changed in positive charge as well. Rectangularity $\geq$ polygon-hood. Figures that are differently polygonal cannot be identically rectangular. Conjunctions $\geq$ conjuncts. Differences in how a sapphire is blue (grue) percolate up to how it's blue (grue) & valuable.

If x and y are statements or propositions, how they're *true* percolates up. *Alexander learns logic* is part of *He learns logic and conquers Asia*; cross-world changes in how he does the first make for changes in how he does the two together. It does not include *He learns logic or conquers Asia*. If the disjunction is differently true just through his

This is again a specificational how.

conquering Asia differently, how he learns logic is unaffected.

4 B is part of A iff (i) A implies B, and (ii) changes in the way B is true (false) require changes in the way A is true (false)

In supervenience terms, worlds alike in how A holds, or fails to, are alike in how B holds, or fails to. A more exact statement is given later.

FINE-GRAINING WITHOUT STRUCTURE An extensional theory of properties identifies *being F* with the set of actual Fs. But coextensive properties need not be identical. Renatehood $\neq$ cordatehood even if the renates are exactly the cordates.

An intensional theory identifies a property with its actual *and possible* instances. But *necessarily* coextensive properties need not be identical, either. Berkeley suggests that a thing cannot be extended without being "colored" (or somehow sensibly-qualitied). Suppose he's right and that it goes the other direction as well.. Still, to be colored is not the same as being extended.

"It is not in my power to frame an idea of a body extended and moving, but I must withal give it some color or other sensible quality...." (Berkeley, *Principles of Human Knowledge*)

A hyperintensional theory distinguishes even necessarily coextensive properties. Some would distinguish them on the basis of *structure* (Lewis [1970]) But (1) We want to *continue* the sequence; properties should still be distinguished on the basis of their instantiation profile. Structure takes it in a new direction. (2) Structure slices too fine, distinguishing redness from its double negation and from the property of being red and red. (3) It doesn't slice finely enough. Color and extension might both be primitive.

Being in motion vs aging. To be round or not round is not the same as being red or not red.

Properties are not only instantiated, they're instantiated in ways. G is the property of being grue only if it is haveable either by being green and examined before T, or by being blue and not examined before T. E is electric charge only if it is haveable by being positively charged or negatively charged.

How does this help with fine-graining? Properties differing in *how* they're had need not differ in *whether* they're had. The ways of being extended are: cubical, spherical, etc, while the ways of being colored are blue, green, transparent, etc. To be red or not red differs from being round or not round in that only one is haveable by being red.

A *hyper*-hyperintensional property is a set P of possibilia, plus a bunch of subsets thereof corresponding to the ways P_1, P_2 etc of being P, plus a bunch of subsets P_1^1, P_2^1 etc of P_1, P_2^1, P_2^2 etc of P_2, ...

Hyperintensional properties are individuated by what instantiates them *and how*. This is in an intensionalist spirit since the ways of being P can themselves be sets of possibilia—subsets of the set of all possible Ps. A hyperintensional property on this view is a set together with a bunch of subsets of it whose union is the original set.

An extensional theory of propositions identifies the proposition that S with S's truth-value. An intensional theory identifies it with S's possible truth-values as we vary the world of evaluation, or just the set of S-worlds. A hyperintensional theory identifies it with the S-worlds understood as qualifying in such and such ways.

This is in an intensionalist spirit insofar as the ways of being S can be further sets of S-worlds—subsets of the coarse-grained proposition that S.

S is true in worlds where	S' is true in the same worlds	a context sensitive to the difference
All crows are black	*All non-black things are non-crows*	Rudy is an example of why,,...
All truths are known	*Nothing unknown is true*	I won't be happy until....
The King of France is bald	*A bald person is the King of France*	How am I supposed to tell if...?
She appreciates she is lost	*She is right to think she is lost*	Fortunately...
I drink DOS EQUIS	*I DRINK Dos Equis*	Usually,...
You eat	*You eat poison or dirt or ...*	You'll feel better if...
You get pneumonia	*You get bacterial or viral pneumonia*	You'll need antibiotics if.....
The rich keep on getting richer	*The poor keep on getting poorer*	I know from my own experience that...
Intelligent women tend to marry less intelligent men	*Spouses are not perfectly matched intelligence-wise*	It's weird how...
It was a Rolex	*It was a real Rolex*	If not...., it would have been a Timex.
You eat infinitely many apples	*.... other than those on the tree of knowledge*	God says it's OK if ....

ABOUTNESS IN HISTORY Subject matter has been relatively neglected in philosophy. How many times have you heard someone reject the analysis of P as ϕ on the ground that P can hold when ϕ doesn't, or vice versa? Even if they are true in the same cases, though, the subject matter may be wrong; P is about one thing, ϕ is about something else. How many times have you heard a philosopher argue like *that*?

Frege rejects his early treatment of identity statements on the ground that *Hesperus = Phosphorus* is not about names. BUT, Frege treats existence as a property, not of the things we call existent, but the *concepts* those things (if there are any) fall under. Attributing existence to Biden is saying something about *him*, one would think, not some concept he and everything else) falls under.

Does the sense theory do better? *Hesperus = Phosphorus* is no more about senses than names (Perry [2011]).

"Humphrey could care less whether someone else...would have been victorious in [another] world" (Kripke [1980]) True, it is *Humphrey himself*, not his counterpart, who is a possible President on this account. But Kripke is complaining, not that "Humphrey could have won" winds up *not* being about Humphrey, but that it winds up *also* being about a guy only resembling Humphrey.

Kripke gets the subject matter wrong in places. Our feeling that heat might have been low molecular energy supposedly reflects a confusion between *that* possibility and the possibility that *low molecular energy could have felt this way to creatures differently wired*. But the thought that *This heat I am feeling could have been low energy* is about how this heat could have felt to me, not differently wired others.

"Our total body of beliefs is empirically adequate if all its claims about observables are true....[But] van Fraassen never provides a characterisation of the aboutness relation." Are statements about the sun about observables? If so, science has to get nuclear physics right. (Sober [1985])

Might φ is thought to mean that φ is compatible with some body of information. Imagine the building's on fire and we are out on the sidewalk. Bob is nowhere to be seen; we are worried he might be still in his office. The extent of our information is not the problem! It helps to *explain* the worrying, but what we are worried *about* is Bob and whether he's on fire.

HISTORY OF ABOUTNESS

Ryle [1933], Goodman [1961], Lewis [1988]

	sentence	is about	subject matters are	problem....
Ryle, 'About'	*Jones climbed Helvellyn*	Jones, Helvellyn	things mentioned	indirect aboutness
Goodman, 'About'	*Everyone climbed Helvellyn*	you, me,..; Helvellyn	things *entailments* mention	off-topic entailments
Goodman, 'About'	*" " & Sparky = Sparky*	you, me,...,Helvellyn, ~~Sparky~~	things they *selectively* mention	unrestricted quantifiers
Goodman, 'About'	*Everything climbs Helvellyn*	universal set, Helvellyn	not clear	no real theory
Lewis, '..About...'	*The Sun is hot*	the Sun	world-parts	non-part-based sm's
Lewis, '..About...'	*A billion stars exist*	**the # of stars**	world-partitions/equivalence relations	overlapping cells
me	*A billion or so stars exist*	**the approx # of stars**	world-divisions/similarity relations	nested cells
me	*Red and blue stars exist*	**the colors of stars**	world-covers = sets of sets	we'll see

These definitions may seem too structural and abstract. Shouldn't a sm tell you *how matters stand* where it's concerned? They do: cells are sets of worlds, or propositions. Our cell of **the # of worlds** is **There are N stars**, for N the actual number of stars.

The structural conception lets us define relations: **m** is *orthogonal* to **n** if each **m**-cell intersects each **n**-cell. They're *disjoint* if they have no parts in common. The definition of part/whole changes with the conception of sm's, but they're variations on this theme:

5 **n** is part of **m** iff
(i) each **n**-cell contains an **m**-cell, *and* (ii) each **m**-cell is contained in an **n**-cell.

SENTENTIAL SUBJECT MATTER One question is, what are subject matters considered as entities in their own right? Another is, which of these entities is *the* subject matter **s** of a particular sentence S? All Lewis says about the second question is

6 S is wholly about **m** iff it supervenes truth-value-wise on **m**;
it evaluates the same in **m**-equivalent [**m**-similar] worlds.

Couid **s** be the *largest* sm S is wholly about? No, that's **how matters stand in every respect**. The *smallest*? No, that's **whether S**. Diagnosis: The "wholly" in "S is wholly about **m**" targets S, for Lewis: *all* of S is about **m**, none of it is about anything else. Intuitively one might want it also to target **m**: S is about *all* of **m**, there is nothing in **m** it is NOT about. Lewis misses the second "wholly." This leaves him nothing to be *the* subject matter of S— the one it is *exactly* about.

S's subject matter **s** ought to be the least **m** meeting some S-involving aboutness condition. *S is wholly about* **m** is too weak; it gives us **whether S**. Things can stand any number of ways where **s** is concerned such that S comes out with the same truth-value.

Examples. *The world will end in fire or in ice.* Matters stand differently with **s** in fiery-end worlds than icy-end worlds. But both are in the same cell of **whether or not S**.

Some say the world will end in fire, some say in ice. From what I've tasted of desire, I hold with those who favor fire. But if it had to perish twice, I think I know enough of hate, To say that for destruction ice Is also great, and would suffice (Frost).

S = *The US President in 2001 is a senator's son*.
in w, the president is George W. Bush (Dubya), son of senator George H.W. Bush.
in w', the president is Al Gore, son of senator Albert Gore, Sr.

S is true either way. All that's changed is the personnel; the President and his father are different people. This seems enough to change the state of things where **s** is concerned. A transworld reporter on the S beat could not say there was nothing to report.

Why is a change in *witnesses* newsworthy? It's a change in how S is true. A change in how the world ends is a change in how *It will end in fire or in ice* is true. This suggests a new lower bound on the similarity relations qualified to serve as S's subject matter: worlds are dissimilar if S is differently true in them. (S must take *notice* of a phenomenon, before variation in that phenomenon can affect the way S is true.)

By "changes in S's subject matter" we mean qualitative changes—changes in how matters stand **s**-wise—not numerical ones—changes in which subject matter S has. S's subject matter changes qualitatively if the Presidency goes to Gore; it changes numerically if S comes to mean that *The Queen is a minotaur's mom* (Pasiphaë gave birth to the minotaur Asterion when Queen of Crete.)

7 S's subject matter is the rel$^n \approx$ such that $w \not\approx w'$ iff S is differently true in them.

S is differently true in w and w' = there is no way it is true in both.

One says what S is about by structuring the set of S-worlds according to the changing reasons for S's truth. **s** is **how and why S is true**, or **S's ways of being true.**

POLARITY ISSUES Sentential subject matters as defined by (**7**) are not evenhanded as between truth and falsity. This causes three related problems.

(i) If S is false in w, it is false because of how matters stand there where its subject matter is concerned. (**7**) says they don't stand *any* way; **s** is not defined on w.
(ii) To know what S is about should not tell us its truth-value. It does, though, if **s** is **how S is true**, for **s** is not defined in w unless S is true there.
(iii) Negating a hypothesis should not change its subject matter. But this is not predicted by (**7**), or even allowed by it. **s** and $\overline{\mathbf{s}}$ are not defined on the same worlds.

So, **s** = **S's ways of being true** is only half of the story. The other half is $\overline{\mathbf{s}}$ = **S's ways of being false**. This is the subject *anti*-matter of S. The two together constitute S's *overall* subject matter (I'll sometimes just say subject matter). The problems just raised do not arise for overall subject matters.

S's overall sm = $\{\mathbf{s}, \overline{\mathbf{s}}\} = \{\overline{\neg\mathbf{s}}, \neg\mathbf{s}\} = \neg S$'s overall sm.

CONTENT-PARTS One gives a sentence's subject matter by carving up logical space according to its ways of being true/false. The larger subject matter corresponds to the finer carving. This lets us finally define content-parts.

8 B is part of A just if the argument $\underline{A, \text{ so } B}$ is
truth-preserving—A implies B;
aboutness-preserving—A's subject matter (anti-matter) includes B's.

Run through the definition of sentential subject matter, this becomes

9 $B \leq A$ iff A implies B, & changes in how B is true (..) force changes in how A is (..)

If we think of A's ways of being true/false as its *truthmakers*/*falsemakers*, then

10 $B \leq A$ iff A implies B, & B's truthmakers (...) are implied by truthmakers (...) for A.

LANGUAGE-DEPENDENCE Whether A has truth in it should not depend on whether the language happens to contain a sentence B that captures what A is getting right. The unavailability of such a B could be the reason we're using A in the first place.

"A is partly true if the language *could* contain a B like that." This puts the emphasis in the wrong place. B would be part of A in virtue of the proposition that it expressed. A is partly true because of this proposition—A includes a *truth*, expressible or not.

How are these propositional truths to be identified, in the absence of associated sentences? That is the wrong way to think about it. *A*'s propositional parts don't have to be picked out a crowd; they will be *constructed*. The part of *A* about **m** is a proposition that is true in *w* if *A* is false there for reasons independent of **m**—reasons that can be undone without changing anything where **m** is concerned. Also definable is the part of *A* that is *not* about **m**. This gives us a way to think about "logical remainders." What remains, when *B* is subtracted from *A*, is the part of *A* that is not about **whether B**.

"[Concerning] propositions which are partly true and partly false, all can be logically analyzed into two propositions one of which is true and the other false. Thus as knowledge advances only two modifications of any proposition of the older knowledge are logically possible; it can be rejected as false or it can be analyzed into at least two propositions one of which is rejected" (Holt et al. [1910]).

COMING NEXT

Suppose *A* has a true part. Why not just assert that part?

You might know it only, or understand it best, as the part of *A* about **m**.

Suppose *A* has a false part. Why not substitute a lesser claim that leaves it out?

You might know it only, or best, as what *A* adds to *B*.

Two applications to give the flavor. One involves false parts, the other true.

Non-catastrophic presupposition failure. Strawson to the contrary, statements sometimes survive the falsity of a presupposition to say something clearly evaluable. *The king of France is in my pocket. I am 10 feet tall and the king of France is bald*. *S* counts as false, maybe, if it has an independently false part—one false for reasons compatible with the truth of the presupposition. It counts as true if its negation counts as false. *The king of France is here in this chair* counts as false because the part about the chair is false.

Also *B* might not be cleanly extricable from *A*, as *We swam* is not cleanly extricable from *We swam ten laps*. Where it *is* extricable, the sought after truth is *A*-*B*.

Nominalists want, as much as platonists, to say that *The rabbit population is growing exponentially*, etc. How can that be the right thing to say, in the absence of functions? Consider the competition: *The rabbit population is exponentially shrinking*, *The rabbit population is growing linearly*, etc. These all count as false for KoF-type reasons; they have parts that are false "anyway." The one statement of this form *not* counting as false is the one we started with; it counts as true. The part about rabbits really is true. That is what the nominalist is asserting when she says that the growth rate is exponential.

The revolutionary nominalist thinks everyone *should* limit their advocacy to the part about the rabbits; the hermeneutic nominalist thinks they already do.

References

J.Alberto Coffa. *The semantic tradition from Kant to Carnap: to the Vienna station*. Cambridge University Press, 1993.

Stewart Cohen. Basic knowledge and the problem of easy knowledge. *Philosophy and Phenomenological Research*, 65(2):309–329, 2002.

Fred Dretske. Is knowledge closed under known entailment? In Matthias Steup, editor, *Contemporary Debates in Epistemology,*. Blackwell, Oxford, 2005.

Nelson Goodman. About. *Mind*, 70(277):1–24, 1961.

E.B. Holt, W.T. Marvin, W.P. Montague, R.B. Perry, W.B. Pitkin, and E.G. Spaulding. The program and first platform of six realists. *The Journal of Philosophy*, 7(15):393–401, 1910.

Saul Kripke. *Naming and Necessity*. Harvard University Press, Cambridge, Mass., 1980.

Saul A. Kripke. Two Paradoxes of Knowledge. In *Philosophical Troubles: Collected Papers, Volume 1*. Oxford University Press, 2011.

David Lewis. General semantics. *Synthese*, 22:18–67, 1970.

David Lewis. Statements partly about observation. In *Papers in philosophical logic*. Cambridge University Press, 1988.

G.E. Moore. *Commonplace Book: 1919-1953*. Routledge, 2004.

John Perry. Frege on identity, cognitive value, and subject matter. ms, 2011.

Frank Ramsey. Critical Notice: Tractatus Logico–Philosophicus. *MIND*, 1923.

Gilbert Ryle. About. *Analysis*, 1(1):10–12, 1933.

Scott Soames. *Beyond Rigidity: The Unfinished Semantic Agenda of Naming and Necessity*. Oxford University Press, Oxford, 2002.

Elliott Sober. Constructive empiricism and the problem of aboutness. *The British Journal for the Philosophy of Science*, 36(1):11, 1985.

Joseph Ullian and Nelson Goodman. Truth about Jones. *The Journal of Philosophy,*, pages 317–338, 1977.