4. Knowing About Things (5/23/12)

(Frege) The # of Martian moons is prime. Numbers exist.
(Moore) I have a hand. There is an external world.
(Nozick) I am standing. I am not a bodiless BIV.
(Dretske) That is a zebra. So it's not a cleverly disguised mule.
(Kripke) I locked the door. Evidence that I didn't is thus misleading.
(Cohen) It's 3pm. So, my watch is accurate iff it reads 3pm.
(Vogel) I will be teaching logic next year. So, I won't die in the meantime.

Kripke [2011], Dretske [1971], Cohen [2002], Vogel [1987]

The implication in each case *seems* harder to know than its implier. Let's take this to mean that we seemingly *do* know the implier A, and *don't* know its consequence B. They then look like counterexamples to

1 *Closure:* Knowing a thing puts you in a position to know its known entailments.

COSTS The view nowadays is that the violations must be reckoned only apparent. Closure has too much going for it, the costs of denial are too high.

(Cost 1) Deduction cannot be relied on to preserve knowledge? Kripke *pretends* to worry about this: "I committed the fallacy of logical deduction!" But only to bring out that the worry is ridiculous.

One can ask how the false appearance arises. Maybe, Q is not known *on the basis* of its implier; it is not super-known; it is not known to be known; epistemic anxiety prevents us from *believing* it, or that we know it; the knowledge is entitlement-based and so unearned.

(Cost 2) All known technologies for containing closure wind up strangling it in the cradle, or allowing too much through—sometimes both at the same time. Sensitivity theories—S knows that P iff S would have noticed, if $\neg P$, make for

egregious violations: knowing it's a red barn, but not that it's a barn.
egregious *non*-violations: knowing I'm a hungry non-BIV, but not that I'm a non-BIV .

Sensitivity re P entails sensitivity re $P\&Q$ whenever $\neg P$ is "more possible" than $\neg Q$ in the sense of obtaining in nearer worlds.

(Cost 3) Simpler principles must be dropped too, or closure comes roaring back. Assume

[Equivalence (Eq)]: S knows that P, P is a priori equivalent to $Q \Rightarrow$ S knows Q.

Then two such closure-reinstating principles are

[Addition (Ad)] S knows that P, and competently infers $P \vee Q \Rightarrow$ S knows that $P \vee Q$.

[Distribution (Di)] S knows that $P\&Q \Rightarrow$ S knows that P and S knows that Q.

Hawthorne [2004, 2005]

The proof with distribution. Z = zebra and M = cleverly painted mule,

1.	K(Z)	[assumption]
2.	K($Z \leftrightarrow \neg M$)	[assumption]
3.	K($Z \leftrightarrow Z\&\neg M$)	[Logic, (2)]
4.	K($Z\&\neg M$)	[Eq, (1,3)]
5.	K($\neg M$)	[Di, (4)]

A solution should ideally do *some* amount of justice, pay some kind of respect, to

1. the seeming counterexamples
2. the feeling that competent deduction cannot lead us astray
3. the egregious violations point (knowing it's a red barn without knowing it's a barn)
4. the egregious non-violations point (heavy-duty consequences still get through)
5. the proof of closure from innocent-seeming assumptions: (Ad), or (Di).

Nozick [1981], Dretske [1981], Dretske [1971], Cohen [1998], DeRose [1995], Lewis [1996], Carnap [1950]

Start at the bottom, with 5. (Ad) and (Di) are about similarly basic transitions: disjunct-adding and conjunct-dropping. They differ though in the kind of endorsement offered. (Ad) says we know $P \vee Q$ on competently inferring it from P. (Di) doesn't say that you know P on competently inferring it from $P\&Q$? To know the conjunction, it seems, you should know the conjunct *already*, whereas there is no requirement to first know that $P \vee Q$ before you count as knowing that P.

IMMANENT CLOSURE This suggests that there might be two forms of closure at issue. Some implications one *already* knows; others have, potentially, to be worked out. Call them *immanent* closure and *transeunt* closure. The obvious principle about the first

2 S knows a thing $\Rightarrow$ S knows its parts.

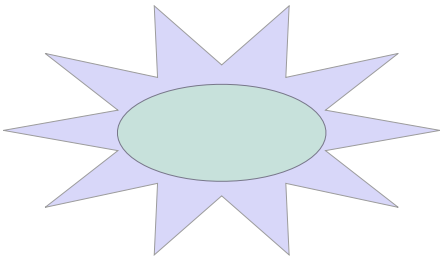
Perhaps also, knowing the parts puts one in a position to know the whole.

Equivalently given how we defined part:

3 S knows that $P \Rightarrow$ S knows those of its implications *that do not change the subject*.

Looking back at the seeming counterexamples, none of them are to *immanent* closure; Q always brings in new subject matter. Is that a coincidence? Intuitively, no. The new subject matter seems to make Q more vulnerable. There are newly exposed flanks, to do with misleading evidence, painted mules, unreliable vision, and so on.

Why would that be? Q is part of P iff (i) Q's ways of being true are implied by P's, (ii) Q's ways of being false are implied by P's. Focus on (ii). Q's ways of being false are *among* P's ways of being false, if P includes Q (proof in margin). Not if Q's a mere consequence. Additional ways of being false pose a threat on any theory that links knowledge to counterpossibilities. Mere consequences are weaker, yes, but they pick more fights, as weaklings have been known to do. The threat is averted if Q is part of P.



I am standing keeps its distance from the BIV hypothesis; *I am not a BIV* marches right up to it.

COUNTERPOSSIBILITIES What kind of theory links knowledge to counterpossibilities? It could be a sensitivity theory: we would have noticed, or had different evidence, had a counterpossibility obtained. Or a *safety*-type theory which sees the counterpossibiities as dangerous each in its own way. Or a probabilistic theory whereby the chance of believing P should be low conditional on any of them. Or an *explanatory* theory that sees them as new possible explanations of how S could wind up believing P despite its falsity.

P's falsemakers imply Q's by definition of part. It's enough to show they aren't stronger. Extra strength would be wasted since Q's falsemakers already falsify P (by *modus tollens*)

I'll go with the sensitivity approach, despite the difficulties. Write $\overline{\mathbf{P}}_i$ for the counterpossibilities envisaged in P's subject matter. P is false iff $\overline{\mathbf{P}}_1$ obtains or $\overline{\mathbf{P}}_2$ etc. S knows that P only if

(i) had $\overline{\mathbf{P}}_1$ obtained or $\overline{\mathbf{P}}_2$ or $\overline{\mathbf{P}}_3$, etc..., S would have noticed.

Say counterfactuals are given the "strong" reading. (i) becomes

$(A \vee B) \mathbin{\Box\!\!\rightarrow} C = A \mathbin{\Box\!\!\rightarrow} C \;\&\; B \mathbin{\Box\!\!\rightarrow} C$.

(ii) had $\overline{\mathbf{P}}_1$ obtained, S would have noticed; also if $\overline{\mathbf{P}}_2$ had obtained; also if $\overline{\mathbf{P}}_3$....

Should Q be part of P, its falsemakers are some among the $\overline{\mathbf{P}}_i$s—the prime-numbered ones, e.g. The condition on Q is

(iii) had $\overline{\mathbf{P}}_2$ obtained, S would have noticed; also if $\overline{\mathbf{P}}_3$ had obtained; also if $\overline{\mathbf{P}}_5$....

(iii) stands to (ii) as a sub-conjunction to the conjunction it subs. Knowing that P suffices (to this extent) for knowing its part Q. With other consequences we have no such assurance.

I am fudging by putting "S would have noticed" rather than "S would not have believed that P (Q)." This is ignoring the possibility that S is defended against a possibility wrt P but not Q. I am not alleging an air-tight connection in any case, so I propose not to bother about this.

EGREGIOUS VIOLATIONS Kripke objects to Nozick that one can know it's a red barn without knowing it's a barn. I'd have noticed if it hadn't been a red barn, but not if it hadn't been a barn. That goes against even immanent closure, so something has to give. The point to notice is that *Red barn* has two ways of failing. Nozick asks only for sensitivity to the easier way; we're requiring sensitivity to both. I may not know it's a barn, but I don't know it's a red barn either.

The egregious non-violations point. Dretske wants his sensitivity-type theory to deliver knowledge of lightweight truths but not heavyweight (heavy duty?) truths. Hawthorne questions whether heavy duty knowledge has in fact been blocked. I know it's a zebra and not a disguised mule, even if it might for all I know be a disguised mule. But, *Zebra & not disguised mule* has two ways of being false, to both of which I ought to be sensitive. I fail to know it's a non-muley zebra just as I don't know it's not a red barn.

SIMPLER PRINCIPLES Immanent closure is prima facie "safer" than full closure, and certainly weaker. This is puzzling, since immanent closure is of a piece with distribution, which is all one needs to prove (full) closure.

Almost all..... there's also (Eq). But (Eq) looks undeniable. How can I know Q but not Q', if the two are priori equivalent? Recall from lecture 1 that equivalents do not

Proof repeated from above. Z = zebra and M = cleverly painted mule,

1.	K(Z)	[assumption]
2.	K($Z \leftrightarrow \neg M$)	[assumption]
3.	K($Z \leftrightarrow Z\&\neg M$)	[Logic, (2)]
4.	K($Z\&\neg M$)	[Eq, (1,3)]
5.	K($\neg M$)	[Di, (4)]

necessarily agree in what they're about. (*The rich get richer*, *Intelligent women tend to marry down*, etc.) So it would seem with *That is a zebra* and *That is a zebra and not a cleverly painted mule*. *It's a zebra* is about, say, **whether it's a zebra or a horse or a mule or a some fourth thing**. *It's a zebra* is about **whether it's a zebra or a horse or a regular mule or a painted mule or some fifth thing**.

I know it's a zebra as regards the first. The second, by subdividing the mule-worlds, asks more of me; it calls for greater powers of discernment. The same worlds are in play either way; it's not a Lewis-type contextualism in which distant scenarios are ignored. It's how the scenarios are divided up. The mulish region of logical space presents *one* challenge to the would-be *That's a zebra*-knower, two to the would-be knower of *That's a zebra and not a disguised mule.*

INTENSIONALITY AND BEYOND A chart from earlier. *S* is intensionally equivalent to *S**. Why would they differ in truth-conditional contribution? Regular propositions track cross-world variation in whether *S* is true or false. Directed propositions track variation in how it is true/false. Do hyperintensional contexts care about the how? Counterfactuals on the strong reading do. See how many of our examples can be shoehorned into that format.

"emotives and more generally causatives select the subjunctive because their lexical semantics involves counterfactual reasoning" (Schlenker)

S	*S**	context	counterfactual cousin
All crows are black	*Non-black things are not crows*	Rudy is an example of how...	...cannot given Rudy be wholly false.
All truths are known	*Nothing unknown is true.*	Jane hopes for the day when...	Jane will be happier if....than otherwise.
She appreciates she is lost	*She is right to think she is lost.*	Fortunately....	It would be worse for her, if not...
You drink SCHLITZ	*You DRINK Schlitz*	In beer pong, ...	You aren't playing right unless....
CLAIRE stole the diamonds	*Claire stole the DIAMONDS.*	Al testified that....	Al perjured himself if it was Daphne.
You eat	*You eat poison or dirt or ...*	My advice is,....	You'll feel better if...
You don't have pneumonia	*....bacterial or viral pneumonia*	The evidence suggests...	Otherwise the test would be negative.
It's a Rolex	*It's a real Rolex*	I can see from here that.....	It would look different if not...
You eat infinitely many apples	*.... not on the tree of knowledge*	Go ahead,..., it's OK	Nothing bad will happen, if....

These are not a million miles from epistemology. I can't know that it was diamonds, if all I have to go on is Al's testimony. Rudy is not as supportive of *All non-black things are non-crows* because it might be wholly false, where he's concerned. I don't know it's a real Rolex, if all I have to on is how it looks from here. I don't know you have neither type of pneumonia, if the test is sensitive only to one. I shouldn't advise you to eat poison or dirt or... if I don't know that it would be better for you. Knowledge-contexts do not look *too* out of place here.

Or, my failure to realise would be unexplained, if...

S	*S**	I would have realized, if...
It's a zebra	*It's a zebra & not a cleverly disguised mule*	it wasn't a zebra, or was a cleverly disguised mule
I locked the door	*I locked it & contrary evidence is misleading*	I hadn't locked it, or had there been evidence showing I had
She appreciates she is lost	*She is right to think she is lost.*	she was ignorant/lost
CLAIRE stole the diamonds	*Claire stole the DIAMONDS*	had it not been Claire
This report is true	*It's true and self-consistent.*	had it contradicted the facts, or itself.
My dreams are not actually this lifelike	*My this-lifelike episodes are not dreams.*	this, lifelike as it is, had been a dream
There are no cities as high as 17.000'	*Nothing that high is a city*	Lhasa had been higher/Zermatt had been a city (Andorra)
You don't have pneumonia	*You don't have bacterial or viral pneumonia*	you contracted bacterial or viral pneumonia
It was a Rolex	*It was a real Rolex*	it had not been a real Rolex

DEDUCING CONSEQUENCES Two big problems. The first is that deduction is supposed to be knowledge-preserving *in general*, not only with parts. Immanent closure doesn't account for this. The second, which we may not get to, is that prima facie closure violations are not limited to mere consequences. *The number of Martian moons* plausibly includes *The number of Martian moons exists*. *The number of sprocket teeth is always coprime with the number of chainwheel teeth* includes *Coprime numbers exist.*

Austin et al. [1979], Dretske [1972], Hawthorne [2004], Glanzberg [2005]

Thanks to Alan Baker.

Conjecture: try as we might to deduce a mere consequence, we wind up deducing a part. Is that to say *I'm not a BIV* is part of *I am standing*? It could be. What a hypoth-

esis includes depends on its subject matter; its subject matter depends on the context; so P's parts depend on the context. Context extends to the *uses* P is put to, in particular the deductive uses. P's subject matter *expands* when a previously unincluded Q is inferred. The conclusion's vulnerabilities are taken on by the premise, leading perhaps to a reconsideration of that premise.

I am standing starts out addressing itself to **my posture**. It is false if I'm sitting, lying down, doing a handstand, or "other." BIV worlds are mixed in with the "other"s. When I conclude I'm not a BIV, they are pulled out as a separate sub-category.

Imagine a tourist map of Bel Air produced in a legal dispute about oil rights and property lines. The map is not *wrong*. But one has to be clear about its ambitions, the kind of information it considers itself answerable to. It's the same with *I am standing*. It is not wrong, just surprised to find itself directed at a skeptical subject matter.

Say $\mathcal{P}$ is the proposition ordinarily expressed by P. $\mathcal{P}+$ is the variant with the puffed up subject matter. $\mathcal{P}+$ is true/false in the same worlds as $\mathcal{P}$, but not the same ways. The new contour lines allow $\mathcal{P}+$ to contain Q where $\mathcal{P}$ did not. Question: We knew that $\mathcal{P}$, do we also know that $\mathcal{P}+$? It could go either way.

(Yes) We know what P comes to say ($\mathcal{P}+$), in addition to what it said initially ($\mathcal{P}$)
(No) The prop^n it did express ($\mathcal{P}$) is known, but not the one it expresses now ($\mathcal{P}+$)

Yes. If Q is part of $\mathcal{P}+$, and we know the latter, then immanent closure says we know Q as well. I infer that I have hands or claws from the premise that I have hands. I continue to know that I have hands, even when the thought grows to include neither-hands-nor-claws as a separately articulated counterpossibility. (Tentacles would be noticed too.) Immanent closure assures me of knowing that I have hands or claws.

No. Q is part of $\mathcal{P}+$. But we do not know $\mathcal{P}+$. Say I infer that I am not a BIV from the premise that I am standing. *I am standing* grows to address a subject matter $\mathbf{posture}+$ cognizant of the line between BIV-worlds and others. To know what it NOW says, I must be defended against the BIV scenario. Otherwise I cannot be said any longer to know that I am standing.

All of this is in keeping with the standard contextualist defense of (unrestricted) Closure. But "know" is invariant on this view. It is also (if we like) binary. A three-place relation between thinkers, coarse-grained propositions, and subject matters, can also be seen as a two-place relation between thinkers and thoughts.

ELUSIVE KNOWLEDGE "I cannot be said any longer to know that BLAH." This seems to concede too much to the skeptic. *Something* is left of my knowledge of standing, even if I have trouble putting it into words. I have a better grip somehow on the fact of my standing than the fact of not being a BIV. Lightweight propositions seem even in skeptical contexts better known than their heavyweight consequence.

Call it the "something left" feeling. Nozick explains it too well: *everything* is left. Contextualists don't explain it at all; we know neither hypothesis according to the higher standard, both according to the lower. A Carnapian account suggests itself. The "something left" feeling is awareness at some level of undefeated "internal" knowledge. The old proposition has been lying in wait the whole time.

I may not know what *I am standing* comes to express, when its sm expands under skeptical pressure. So what? The skeptic wants to deprive me of knowledge I supposedly *had*. He totally fails at this. I continue to know the proposition *I am standing* used to express, now characterizable as the part about **my posture**.

Proof: Let $\mathcal{Q}$- be the part of *I am not a BIV* that concerns my posture. $\mathcal{Q}$- is false in a world if Q is false-given-my-posture there—that is, *I am a BIV* is true-given-my-posture: standing, sitting, etc. None of these is a posture reserved to BIVs. The part of *I am not a BIV* that concerns my posture is thus trivial.

Lightweight propositions retain *even in skeptical contexts* a substantial known part. What about their heavyweight consequences? Immanent closure suggests I should know the part of *I am not a BIV* that concerns **my posture**. Does this give the skeptic an opening? No, the part about **my posture** is trivial. Nothing of a heavyweight proposition remains when we confine ourselves to the part about an everyday subject matter.

The seeming closure violations we began with are genuine in one sense. One can know P without knowing its mere consequence Q. But the window of possibility closes when one attempts to deduce Q from P. Now we either cease to know P, or know it together

with Q. Something is elusive here, but it's not knowledge. Knowledge is always the same relation, and we keep on knowing the proposition we did before. All that's lost is the possibility of *expressing* it with the once suitable sentence. Elusive expressibility-with-a-particular-that-clause is nothing new.

ADDITIONAL VIOLATIONS $Q \leq P$ is not a surefire defense against closure violations. The example given above was: The number of Martian moons is prime; numbers exist. Some others in the same neighborhood.

1. Schlitz is not Pam's favorite beer. Pam likes some beer more than any other.
2. It was Godel who refuted Hilbert's Program. Hilbert's Program is refuted.
3. It was cooler after the sun moved behind the elms. The sun moved behind the elms.
4. Jones always forgets that Columbus discovered America. He discovered America.
5. Our friend with the martini is a philosopher. It's a martini our friend is drinking,

The elms example is from van Inwagen. And Sheryl Crow: "All I want to do is have some fun, until the sun comes up on Santa Monica Boulevard."

Q may *strike* us as changing the subject. But it's not clear that's right. *Schlitz is not her favorite beer* does speak of her favorite beer. The question feels new because it was initially *backgrounded*, part of the frame not the content. The transition bothers us because casually made background assumptions are pulled into the limelight and made the point of contention.

I locked the door does not mention misleading evidence at all.

These examples have a Carnapian feel. Let's explore in that neighborhood. Here is his initial, unguarded statement of the internal/external distinction, before he decides that external questions are practical:

> there are, first, questions of the existence of certain entities ... within the framework; we call them internal questions; and second, questions concerning the existence or reality of the system of entities as a whole, called external questions (Carnap [1950])

This idea of standing back and pondering the system of numbers as a whole is enormously intuitive. But it plays no further role in Carnap's thinking. From here on, he takes concerns about the number system *qua system of entities* to be "really" about *the number system qua system of linguistic rules*.

That is a pretty dramatic reconstrual. It might have its place in a rational reconstruction of our ontological thinking, but not in a sympathetic assessment of it.

Why not take the initial statement at face value? Sometimes we wonder "about the existence or reality of the system of entities [the number system in this case] as a whole." Other times we *presume* the system is there and wonder about what is going on in it. Asking about numbers "within the framework" is asking about them presupposing the number system, that is, taking for granted that it exists. Asking about the system as a whole is asking whether the presupposition is correct.

An analogous contrast might be this: one can wonder whether a visually presented scene is "real" or just, say, moving images on a screen; but one can also, presuming the scene is real, wonder whether the cat is going to catch up to the mouse it is chasing.

QUESTIONS AND PRESUPPOSITIONS Call that the *presuppositional* account of internal/external. It preserves the part of his story that worked best, the part about why it is hard to hear *There are numbers* as addressing an internal question. Wondering internally about their existence would be wondering whether, on the supposition that there are numbers, there are numbers.

This brings us to the issue for next time: what is asserted when we utter a sentence P against the background of presupposition Q. I will gesture at an answer, details later. P's assertive or at-issue content is its *incremental* content vis a vis Q. Assertive content is what *total* content adds to relevant presuppositions.

Return with that in mind to *The number of Martian moons is prime*. It feels "safer" than its platonistic implication. It feels safe, arguably, because the controversial bits are presupposed, and presuppositions are pre-subtracted. What remains is the astronomical part, and that truly is uncontroversial. One might try to rescue *Numbers exist* the same way. It has no astronomical part to speak of. And so we are thrown back on the controversial whole. The perversity of the platonistic inference is the perversity of inferring Q from P, when P owes its knowabiility to the fact that Q was pre-subtracted.

~~closure~~	changing the subject	shifting the focus
P	It's a zebra.	The # of Martian moons = 2.
Q	It's not a cleverly painted mule.	The # of Martian moons exists.
problem	inclusion failure	implication failure
how it arises	Q introduces new subject matter	P loses old truth-conditional content
knowledge threatened because	Q fails in more ways than P	Q fails in more worlds than P-

Closure violations have been met with three main responses: counterfactualism (Nozick, Dretske), contextualism (Cohen, DeRose, Lewis), and safe-harbor-ism (Carnap, Clarke). Our picture combines elements of all three. It has *counterfactualism* in it through the sensitivity requirement. It has some *contextualism* in it, since the subject matter of *I am standing* changes in skeptical contexts, thereby "destroying my knowledge." It has some Carnap in it, too. When the doubters come round, we take refuge in the ordinary,"internal," part of our statement—the part that concerns its old, non-skeptical, subject matter. The ordinary part we do know.

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