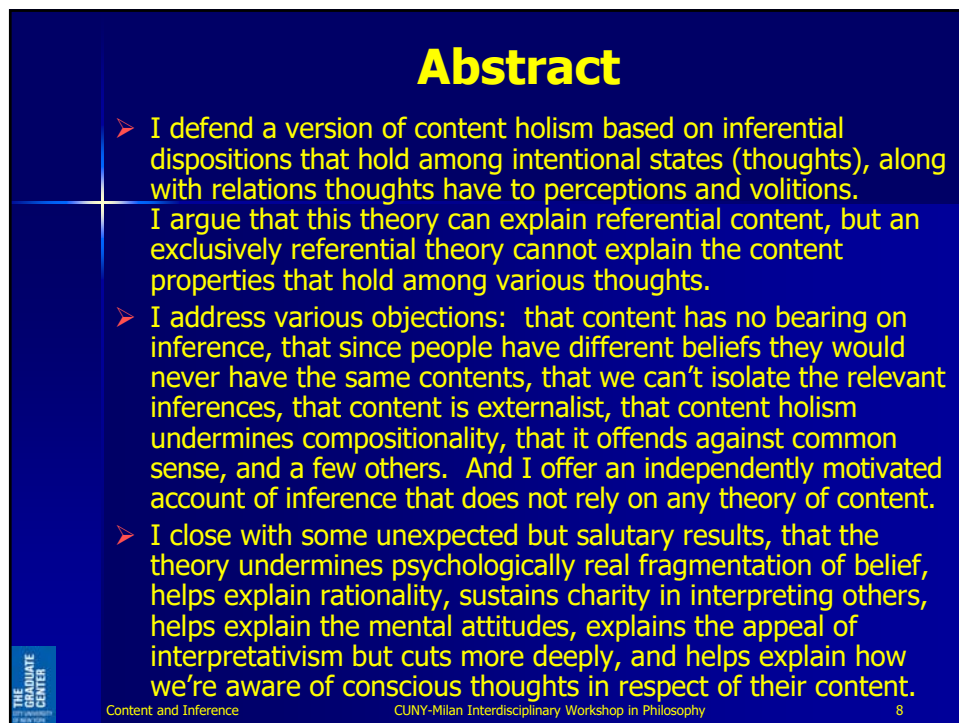




# Content and Inference

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## Abstract

- I defend a version of content holism based on inferential dispositions that hold among intentional states (thoughts), along with relations thoughts have to perceptions and volitions. I argue that this theory can explain referential content, but an exclusively referential theory cannot explain the content properties that hold among various thoughts.
- I address various objections: that content has no bearing on inference, that since people have different beliefs they would never have the same contents, that we can't isolate the relevant inferences, that content is externalist, that content holism undermines compositionality, that it offends against common sense, and a few others. And I offer an independently motivated account of inference that does not rely on any theory of content.
- I close with some unexpected but salutary results, that the theory undermines psychologically real fragmentation of belief, helps explain rationality, sustains charity in interpreting others, helps explain the mental attitudes, explains the appeal of interpretativism but cuts more deeply, and helps explain how we're aware of conscious thoughts in respect of their content.

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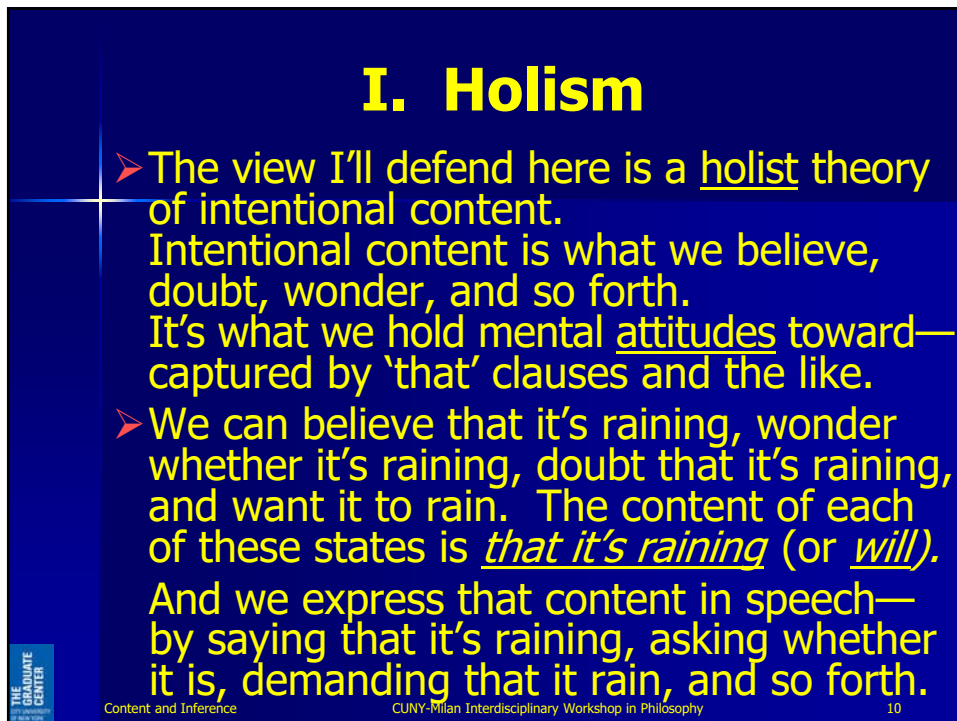


# Overview

- I. Holism
- II. Inference
- III. Applications

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## I. Holism

- The view I'll defend here is a holist theory of intentional content. Intentional content is what we believe, doubt, wonder, and so forth. It's what we hold mental attitudes toward—captured by 'that' clauses and the like.
- We can believe that it's raining, wonder whether it's raining, doubt that it's raining, and want it to rain. The content of each of these states is that it's raining (or will). And we express that content in speech—by saying that it's raining, asking whether it is, demanding that it rain, and so forth.

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- Any theory of content must reflect two properties of content: the ties intentional states (what I'll call thoughts) have with the things they're about (mind-world), and the ties each thought has with others—e.g., implication relations—and also with perceptions and volitions (mind-mind).
- But these two factors pull toward opposing theoretical accounts.
- A focus on mind-world relations suggests explaining content solely in terms of what each thought is about. Our explanation would then operate one thought at a time. Such a theory would treat each thought independently of every other—an atomistic account.

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- Two immediate concerns: what a thought is about need not exist, and different thoughts may be about the same thing. But the more general and basic worry is that such an account cannot accommodate the other factor—relations among thoughts. Some supplement would be needed.
- And since content involves both types of relation, we must do justice to both.
- So we'll be more successful with an account that instead primarily on relations among thoughts. We then explain content by appeal to the relations thoughts have to one another—as well as relations they have to perceptual inputs and to volitional outputs.

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- We can explain what it is for a state to have the content *that's a cat*, e.g., by appeal to relations that state has with other states, states with the content *that's an animal* but many others as well
- And we can also capture that a state is about or refers to a cat descriptively: The purely descriptive content of a thought will typically fix what that state refers to—cats in general or even a particular cat. More in a moment.
- As a backup, many intentional states have ties to perceptions of cats—perhaps even to a particular cat—as well as to volitional behavior characteristic of being around a cat will be a backup in fixing reference.

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- But if a reference-fixing description were erroneous, descriptivism would deliver the wrong result—as with Schmidt's having proved the Gödel theorem (Kripke 1980).
- But descriptivism won't rely on just one—or even a few—descriptions. If information were so limited, one would be deferring to others for the reference of, say, 'Gödel'.
- Descriptivism must instead invoke clusters of descriptions to fix reference. And each member of such a cluster would in turn have dispositional ties to many others. So one can count on all that additional information to untangle any Gödel-Schmidt difficulties that might arise because a few descriptions in a cluster are erroneous.

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- Since we must explain both relational and referential aspects of content, and a theory based on aboutness won't do the job, we should seek a theory that takes relational factors as basic.
- And the main relations will be inferential: The content of each state is a matter of inferences we might make both to that state and from that state. That's the holism: Explaining content in terms of inferential relations that each state has with other contentful states.
- The basic argument for holism is: A theory that relies on inference can accommodate aboutness, but not conversely. It's hard to see any way around that.

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- An atomist might simply deny that content does involve any relations among thoughts, and insist that mind-world relations alone exhaust all the properties of content.
- But we think about things in different ways—under different descriptions. And that's a matter of inferential potential, what we would infer from thinking about something as evening star or morning star. Or as Hesperus vs. as Phosphorus—names too will underwrite different inferences. So content has an intimate tie to inference.
- An atomist might urge that we can make do with no more than mind-world relations if we can understand thoughts as having different relations to the same thing.

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- But it's far from clear how to make that work without relying on inferential ties among thoughts with different content.
- Relations that thoughts have to the world can't (by themselves!) explain how thoughts distinct in content refer to the same thing—nor thoughts' being about things that don't exist. We need relations among thoughts that hold independently of aboutness.
- Also, we must explain how thoughts can be more or less close in content to other thoughts. Perhaps some of that is a matter of just what the thoughts are about.  
But for thoughts of any complexity we'll likely need implication relations to explain degrees of closeness of content.

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- The inferential relations that figure here are dispositional: States have content even when there's no actual inferring.
- Having a thought with the content *that's a cat* disposes one to think that it's an animal, that it's furry, not all that big, and a great many other such things, but not that it's made of granite—nor that it's a Martian-controlled robot (Putnam 1962).<sup>D57</sup>
- And the thought that something is a typical domesticated mammalian pet but not canine disposes one to think that it's a cat.  
A state's having the content *that's a cat* is a matter of what other states the target state disposes one to infer—and of what states dispose one to infer the target state.

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**D57** Hilary Putnam, "It Ain't Necessarily So," *The Journal of Philosophy* 59 (22):658-671 (1962)  
David Rosenthal, 1/28/2018

- Specifying all the inferential dispositions—even just salient dispositions—that figure in a particular content would be difficult if possible at all; the list would be gigantic.
- But that's not a downside: Inferential-role holism says what content consists in; actual applications will perforce be sketchy. Compare: Newtonian mechanics governs everyday situations, but applications to most situations are also highly sketchy.
- Some relevant inferences will be obvious—from thinking that's a cat to thinking it's an animal and from thinking it's raining to thinking it's wet outside. But most of the inferences by far will be a lot more distant, and correspondingly less obvious.

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- Still, We can often fix content well enough for most purposes with just a few of the obvious inferential dispositions—though a full account would require all of them. And a surprising inference or lack of one may make a big difference to content.
- This is a theory of content. One needn't know the dispositions for one's states to have content—or to have first-person access to their content. It's enough that the inferential dispositions are in place.
- It might seem that this makes holism subjectively implausible (Glymour 1985).<sup>D53</sup> How can we know—very precisely—what the content is of our own thoughts with no apparent appeal to any inferences?

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- D53** Clark Glymour, "Fodor's Holism," commentary on "Precis of The Modularity of Mind," *Behavioral and Brain Sciences* 8 (1):1-42 (March 1985): 15-16.  
David Rosenthal, 1/24/2018

➤ When our thoughts are conscious, we are indeed aware of them in respect of their content, and typically fairly accurately.

➤ But that awareness need not tell us what the underlying nature of content is, any more than awareness of water tells us about its molecular composition.

First-person access readily tells us what the content is of our thoughts. It doesn't provide a theory of what content consists in—and so won't describe them in respect of the underlying nature of that content.

➤ And it's arguable that we're aware in a first-person way of our own thoughts only in respect of speech acts that could express those thoughts. (I'll come back to this in §III.)

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➤ Indeed, content atomism trades on the unlikely idea that first-person access does tell us what content consists in.

➤ The issue about subjective plausibility is a cousin to an appeal to intuitions. But intuitions help at most with descriptive questions, not with explanation or theory. Moreover, intuitions tend to encapsulate tacit theoretical assumptions—in this case atomist views. To adapt Daniel Dennett's (1991) trope, intuitions are theory pumps.

➤ Content is arguably occurrent—since it's a property of occurrent states. But it can still consist in dispositional properties. Compare anger—an occurrent state that consists in part in a cluster of dispositions.

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- And dispositional properties always reflect some occurrent condition or state. Being flammable or soluble or allergic, e.g., are matters of some underlying occurrent condition—as W. V. Quine nicely puts it, of “enduring structural traits” (1960, p. 222).
- Describing a property dispositionally is a kind of shorthand for the underlying trait.
- An objection to holism is that since no two people ever have exactly the same beliefs, no two people will have exactly the same inferential dispositions. So different people’s speech acts would always express thoughts with different content—and we’d always misunderstand one another! (Fodor and Lepore 1992)

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- This objection rests on an unrealistic absolutism about content—as though modeled on abstract propositions. Your contents and mine will always differ—but in ways so slight as to make no noticeable difference to communication or to thinking.
- Indeed, when the difference is big enough to matter, it’s often detected—e.g., when somebody makes an unexpected inference or fails to make one that’s expected. One then revises what one takes the other person to think—or even oneself!
- Also: Nonholist accounts can do no better. We can’t expect asymmetric dependencies (Fodor 1987, ch. 4)—or any other mind-world relations—to be exactly the same.

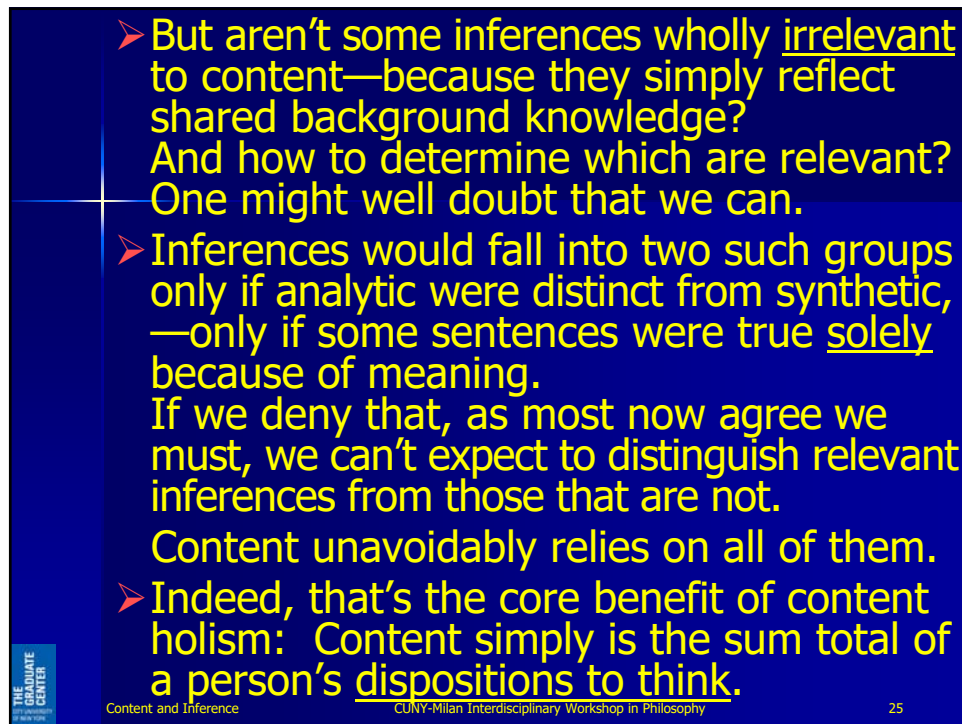
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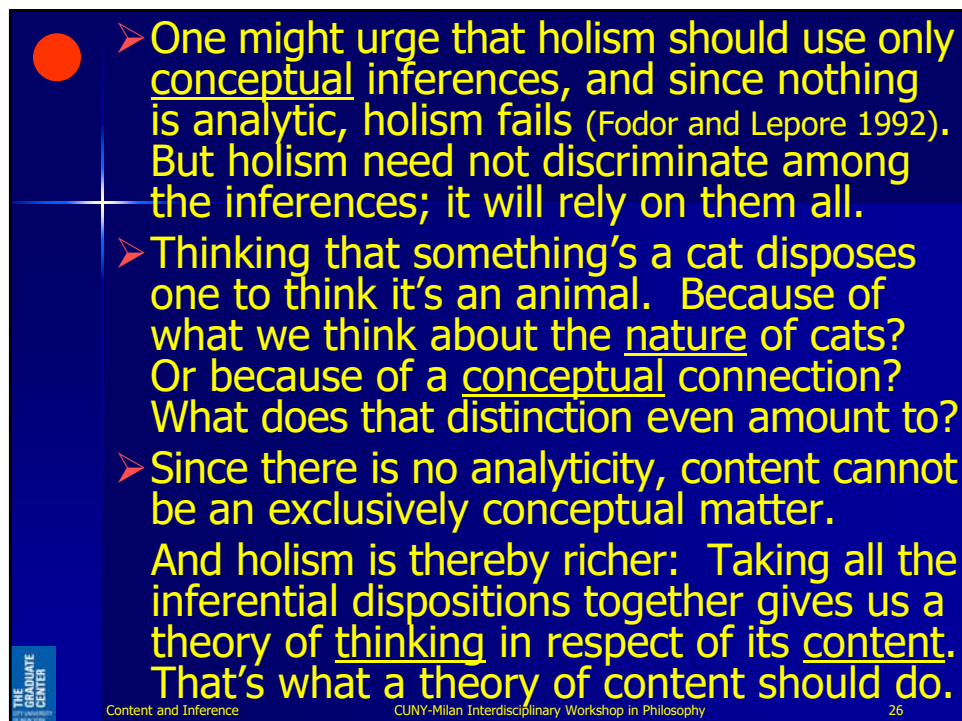
**D58** Psychosemantics, MIT 1987; chapter 4.  
David Rosenthal, 1/28/2018



- But aren't some inferences wholly irrelevant to content—because they simply reflect shared background knowledge? And how to determine which are relevant? One might well doubt that we can.
- Inferences would fall into two such groups only if analytic were distinct from synthetic, —only if some sentences were true solely because of meaning. If we deny that, as most now agree we must, we can't expect to distinguish relevant inferences from those that are not. Content unavoidably relies on all of them.
- Indeed, that's the core benefit of content holism: Content simply is the sum total of a person's dispositions to think.

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- One might urge that holism should use only conceptual inferences, and since nothing is analytic, holism fails (Fodor and Lepore 1992). But holism need not discriminate among the inferences; it will rely on them all.
- Thinking that something's a cat disposes one to think it's an animal. Because of what we think about the nature of cats? Or because of a conceptual connection? What does that distinction even amount to?
- Since there is no analyticity, content cannot be an exclusively conceptual matter. And holism is thereby richer: Taking all the inferential dispositions together gives us a theory of thinking in respect of its content. That's what a theory of content should do.

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➤ One might seek to have restricted theories of content for specific topics, and for each theory use only the inferential dispositions relevant to that topic, thereby sidestepping the need to use all inferential dispositions.

➤ But absent analyticity, we can't demarcate suitable groups of inferential dispositions. For any boundary among topics that one might propose, some inferences would inevitably cross over.

Nor can we insulate the topics themselves; thoughts will bleed from one to the others.

➤ This simply reflects the nature of content, which is impervious to boundaries among topics, seamlessly forging ties across and among them. Hence the virtue of holism.

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➤ Critics of holism sometimes claim it requires analyticity. But holism resists any analytic connections (Quine 1961, p. 41). D74

➤ Inferential dispositions change with changes in belief. If content is inferential potential, any equivalence of content that occurred would be happenstance and transitory, undone by the next adjustment of belief. Analyticity, by contrast, is totally inflexible.

➤ That's for thought contents of one person. But abstracting to semantic meanings of a language, independent of idiolects, still wouldn't yield stable analytic ties, since routine belief revision by a number of individuals would undermine even that.

Analyticity requires content atomism.

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**D74** "The two dogmas are, indeed, at root identical."  
David Rosenthal, 2/24/2018

➤ But what about content externalism? Hilary Putnam imagines our discovering that the things we apply 'cat' to are actually robots. And he urges that we wouldn't withhold 'cat' from those things, but would just accept that cats turn out to be robots.

➤ Reference, he urges, is primary; the things that thoughts are about overrides internal factors, such as relations among thoughts.

➤ But the response Putnam imagines to that discovery wouldn't establish externalism. We could explain that response instead by differential strength of inferential ties. And that response would lead to inferential changes—and so in content. Robot cats help only if one is already an externalist.

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D73 ➤ But isn't holism just "crazy"? (Fodor 1987, p. 60)

➤ Well, that indeed is how atomists see it! But holism has considerable commonsense appeal—independent of any theory. As noted earlier, when we take a person's thought to have a particular content—relying on speech and nonverbal behavior—we adjust our construal if the person's inferences are unexpected.

➤ We partly hold the content of a person's thought hostage to those inferences, and reconstrue that content in the light of inferences that don't fit with an earlier assessment. We pretheoretically treat inference and content as going together in this way.

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**D73** "Meaning Holism really is a crazy doctrine ."  
David Rosenthal, 2/10/2018

➤ Also: We use ties with words we already know to learn words that are new to us. The new words inherit inferential ties from the words we already knew. And we use such ties to explain new words to others.

➤ And even when we learn new words solely by what they refer to, doing so relies on inferential ties that reflect background beliefs about the things referred to.

➤ So the pivotal role of inference in meaning and content is plain from commonsense considerations. Though holism somewhat may seem extravagant in the abstract, the role of inference in the way we think about and operate with content and meaning is evident and unexceptionable.

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## II. Inference

➤ I've focused mainly on inferences among thoughts—and not their ties with perceptual inputs and volitional outputs. That's because inference proper is the most controversial aspect of holism.

➤ Still, it's worth noting that those inputs and outputs also don't operate atomistically. Actions result from a cluster of states—at least one belief and one desire but typically many of each. Perceptions also operate in clusters and against the background of relevant beliefs, and each often affects many other thoughts and desires.

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➤ Still, inference looms large; so we need an account of what it consists in. And some have urged that problems arise here.

➤ Inferences hold among states with content. So perhaps we can explain inference only if we already know what content is. If so, perhaps that undermines an account of content based on inferential potential (e.g., <sup>D56</sup>Doghossian 1994, 2014, <sup>D65</sup>Peregrin 2014, 2017)—and hence the holist picture I've sketched.

➤ But that misses the point of a holism based on inferential role. Such a theory takes neither content nor inferential role as basic by itself. Rather, it treats the two together, fixing them as a single package.

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➤ We adjust what we take content to be in a particular case in the light of what we find about tendencies to infer. And we also adjust what we take a person's inferential dispositions to be in the light of how we construe that person's content.

➤ The holist package deal is for content and inferential role taken together, not just for one—taking the other as somehow given.

➤ It helps to appreciate the joint holism of content and inference if we note that the inferential dispositions that fix content are themselves interdependent. Each significantly affects all the others. The nature of each inferential disposition depends in part on others that are nearby.

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**D56** Boghossian, "Inferential Role Semantics and the Analytic/Synthetic Distinction," *Philosophical Studies*, 73, 2/3, Papers Presented at the American Philosophical Association Pacific Division Meeting 1993 (March 1994): 109-122

'What Is Inference?', *Philosophical Studies* 169, (2014): 1–18.

David Rosenthal, 1/28/2018

**D65** Jaroslav Peregrin, *Inferentialism: Why Rules Matter*, London: Palgrave Macmillan, 2014

Jaroslav Peregrin, "Is Inferentialism Circular?", *Analysis*, Advance Online 10 November 201, <https://doi-org.ezproxy.gc.cuny.edu/10.1093/analys/anx130>

David Rosenthal, 2/7/2018

- The inferences that figure in inferential dispositions do themselves have content. The objection is right about that much. But the inferential dispositions that fix a particular content also fix the contents that figure in the other inferences in that bunch.
- So we shouldn't think that "inference and concepts arise simultaneously out of some pre-cognitive operations" (Boghossian 2014, 17). They arise together from the way they jointly operate. Nor need we rely on some independent notion of an inference's being correct or rule governed (Peregrin 2014).<sup>D66</sup>
- Nothing is "given" in inferential-role holism. Such holism is in that way more radical than is often appreciated (Zangwell 2015).<sup>D67</sup>

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- An inference occurs when one contentful state, or more than one, leads to another. So it's natural at a minimum to take the state(s) one infers from to cause the state inferred to. That's a necessary condition.
- But there must be more; not every causal relation among contentful states yields an inference. What more is needed?
- A first shot: It's an inference only if one is aware of it as such. But that precludes unconscious inferring, which doubtless occurs often, as, e.g., when the solution to a problem just "comes to us." Also, we're rarely, indeed probably never, aware of mental processes at all; we're aware only of individual states (Lashley 1958).<sup>D61</sup><sup>D60</sup>

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- D66** E.g., p. 13  
David Rosenthal, 2/7/2018
- D67** Nick Zangwell, "Logic as Metaphysics," *The Journal of Philosophy*, 112, 10 (October 2015): 517–550.  
  
"There is a one-way dependence of the inferential norms on the thoughts we have" (518–9).  
David Rosenthal, 2/7/2018

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- D60** Lashley, Karl. 1956. "Cerebral organization and behavior." In *The Brain and Human Behavior*, edited by H. Solomon, S. Cobb and W. Penfield. Baltimore: Williams and Wilkins  
David Rosenthal, 1/28/2018
- D61** No activity of mind is ever conscious. [Lashley's italics] This sounds like a paradox, but it is nonetheless true. There are order and arrangement, but there is no experience of the creation of that order. I could give numberless examples, for there is no exception to the rule. A couple of illustrations should suffice. Look at a complicated scene. It consists of a number of objects standing out against an indistinct background: desk, chairs, faces. Each consists of a number of lesser sensations combined in the object, but there is no experience of putting them together. The objects are immediately present. When we think in words, the thoughts come in grammatical form with subject, verb, object, and modifying clauses falling into place without our having the slightest perception of how the sentence structure is produced .... Experience clearly gives no clue as to the means by which it is organized. (Lashley 1956, 4)  
David Rosenthal, 1/28/2018

- A second shot: It's inferring only if one is disposed not to mentally affirm the first thought and mentally reject the second. Inferring occurs when, but only when, the first thought causes the second, and that dispositional condition is also satisfied.
- This is significantly more modest than Paul Boghossian's "Taking Condition," on which inferring requires one to take premises to support a conclusion and to draw one's conclusion because of that (2014, 5).<sup>D72</sup>
- Such taking may occur when inferring is slow, careful, and reflective. But inferring is often relatively automatic, and need not be conscious. And there is no such taking in the unconscious and automatic cases.

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- This dispositional account saves what's appealing about the Taking Condition. A disposition not to affirm mentally the first thought and mentally reject the second will underlie any case of consciously taking the first to support the second—and drawing a conclusion because of that.
- Arbitrary or random sequences plainly are not inferences. And they don't satisfy the dispositional condition. In such cases there is no disposition not to mentally affirm the first content while rejecting the second.
- The dispositional condition screens out such cases as well as the Taking Condition. So it's no less effective—and it accommodates both unconscious and automatic cases.

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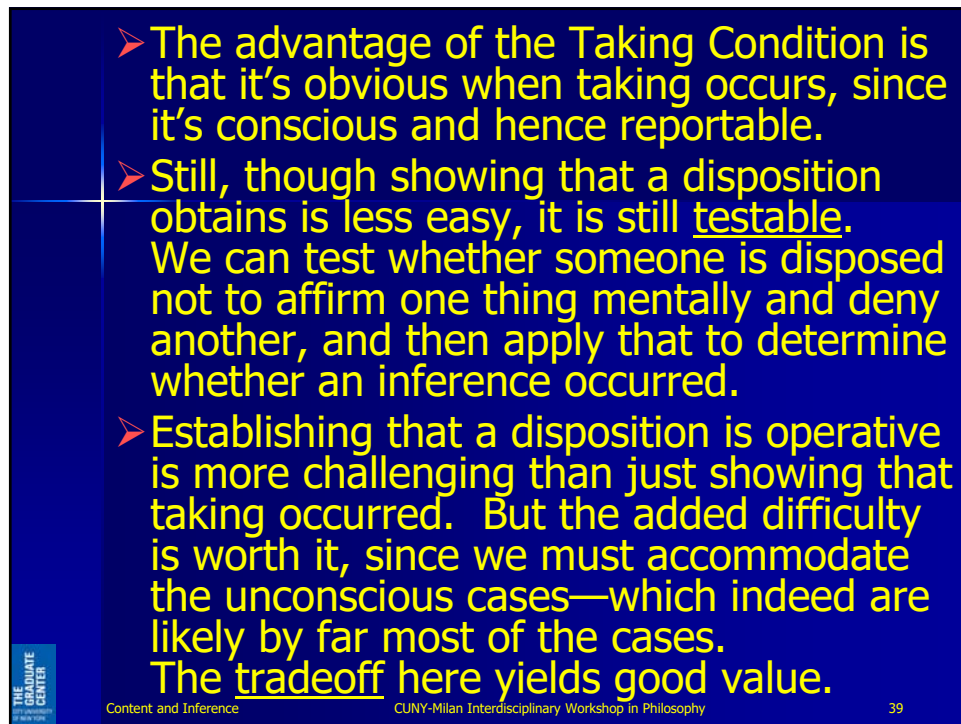
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**D72** (Taking Condition): Inferring necessarily involves the thinker taking his premises to support his conclusion and drawing his conclusion because of that fact.

David Rosenthal, 2/8/2018

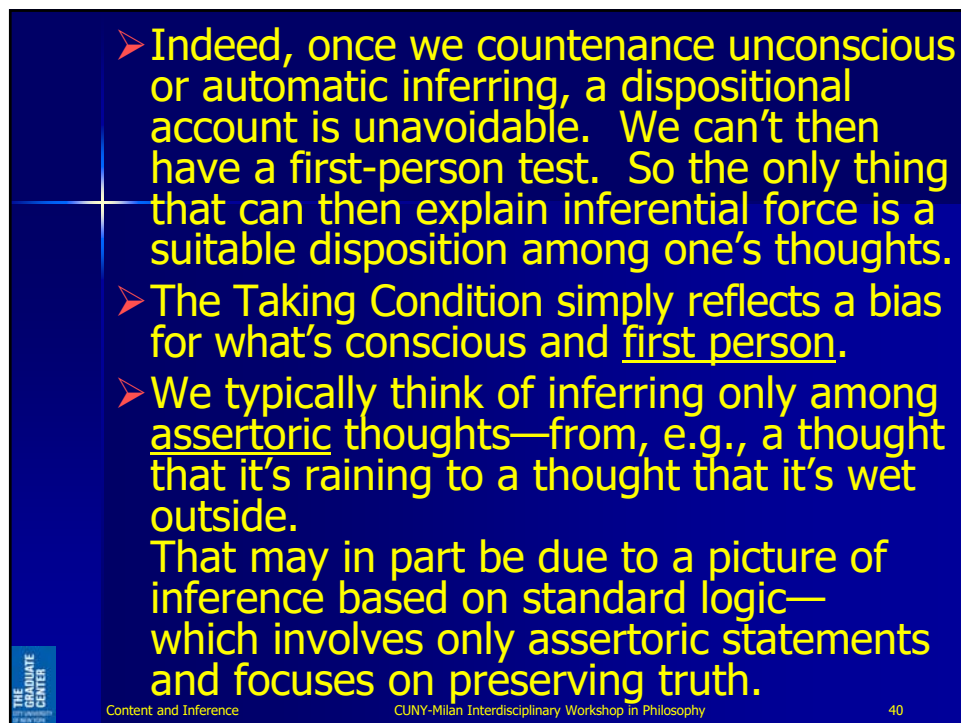




- The advantage of the Taking Condition is that it's obvious when taking occurs, since it's conscious and hence reportable.
- Still, though showing that a disposition obtains is less easy, it is still testable. We can test whether someone is disposed not to affirm one thing mentally and deny another, and then apply that to determine whether an inference occurred.
- Establishing that a disposition is operative is more challenging than just showing that taking occurred. But the added difficulty is worth it, since we must accommodate the unconscious cases—which indeed are likely by far most of the cases. The tradeoff here yields good value.

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- Indeed, once we countenance unconscious or automatic inferring, a dispositional account is unavoidable. We can't then have a first-person test. So the only thing that can then explain inferential force is a suitable disposition among one's thoughts.
- The Taking Condition simply reflects a bias for what's conscious and first person.
- We typically think of inferring only among assertoric thoughts—from, e.g., a thought that it's raining to a thought that it's wet outside. That may in part be due to a picture of inference based on standard logic—which involves only assertoric statements and focuses on preserving truth.

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➤ But the inferences that logic regiments reflect very a small range of the mental processes we count as inferences. And a holist account readily accommodates inferences among states of wondering, doubting, and any other mental attitudes.

➤ And that's as things are. If I doubt that it's wet outside and that causes me to doubt that it's raining, and I'm also disposed not both to doubt that it's wet and to affirm mentally that it's raining, that's inferring.

➤ And my assertoric thought that it isn't raining may cause and dispose me to doubt that it's wet outside or to wonder whether it's cloudy. These are inferences as well.

We also infer from perceptions to thoughts.

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➤ All mental attitudes—assertoric, mental denial, doubting, wondering, and others—are attitudes toward the truth of some content. That's what one mentally asserts or denies, doubts, wonders, and so forth.

➤ Dispositions to infer consist in dispositions to hold attitudes jointly towards truth values for the several components of an inference. Those dispositions determine the contents of the inferential components.

➤ The components are mental attitudes one is disposed to hold toward a truth value. Their specific content is determined by dispositions to infer, i.e., by dispositions to jointly hold attitudes towards truth values of the various components.

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- Our holist account explains both inference and content by appeal to dispositions to hold attitudes toward truth values.
- Dispositions to hold such attitudes one by one are interdependent with dispositions to hold attitudes jointly to inferential groups of sentence-sized items. Those dispositions become fine tuned and stabilize as they causally interact.
- This reliance on attitudes towards truth values explains why we can't isolate some inferences based on conceptual ties, as opposed to inferences based instead on beliefs about how things happen to be. Attitudes towards truth values cannot distinguish conceptual from empirical ties.

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- But even though truth values are basic, so that there are no conceptual ties, we can still draw all the distinctions that have traditionally been thought to require nonextensional apparatus.
- We can explain Frege cases as due simply to a refusal to infer, e.g., that a person thinks b is F simply because the person thinks that a is F and a = b. Similarly for other nonextensional cases. Inferential dispositions on their own can explain how those cases work.
- As noted in §I, Frege cases require appeal to relations among thoughts. Explaining content as inferential potential handles such cases with no need of additional resources.

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- Holism's reliance on dispositions does not make it a form of behaviorism. The dispositions posited to explain content and inference are all dispositions to be in various psychological states, and never dispositions to overt behavior.
- We describe content of a state by appeal to speech acts that would express that state. But it's psychological states that we use possible speech behavior to describe.
- Still, what determines the components of inferences—the thoughts themselves? Dispositions to hold attitudes towards individual truth values fix the individual states; dispositions to infer determine their content.

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- Inferential holism also suggests a way to explain the so-called fragmentation of belief. David Lewis (1982) describes himself as having once believed (wrongly) that Nassau St. in Princeton ran E-W and the railroad N-S, and that the two were roughly parallel.
- D55
- The first two beliefs, he urges, belonged to distinct fragments, fragments that were never activated at the same time. D70
- D69
- D68
- Such fragmentation is a metaphor—but for what? Likely just that Lewis was never disposed to activate both beliefs, and that each disposed the other not to be activated. We can explain all this simply in terms of dispositions to believe, with no need to posit fragments or other such structures.


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## Slide 47

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- D55** David Lewis, "Logic for Equivocators," *Noûs*, Vol. 16, No. 3 (Sep., 1982), pp. 431-441  
David Rosenthal, 1/26/2018
- D68** I think the same goes for other corpora in which inconsistencies are successfully quarantined. The corpus is fragmented. Something about the way it is stored, or something about the way it is used, keeps it from appearing all at once. It appears now as one consistent corpus, now as another. The disagreements between the fragments that appear are the inconsistencies of the corpus taken as a whole. We avoid trouble with such inconsistencies (and similar trouble with errors that do not destroy consistency) by not reasoning from mixtures of fragments. Something is true according to the corpus if and only if it is true according to some one fragment thereof. So we have no guarantee that implication preserves truth according to the corpus, unless all the premises come from a single fragment. What follows from two or more premises drawn from disagreeing fragments may be true according to no fragment, hence not true according to the corpus (435).  
David Rosenthal, 2/8/2018
- D69** Now, what about the blatantly inconsistent conjunction of the three sentences? I say that it was not true according to my beliefs. My system of beliefs was broken into (overlapping) fragments. Different fragments came into action in different situations, and the whole system of beliefs never manifested itself all at once. The first and second sentences in the inconsistent triple belonged to—were true according to—different fragments; the third belonged to both. The inconsistent conjunction of all three did not belong to, was in no way implied by, and was not true according to, any one fragment. That is why it was not true according to my system of beliefs taken as a whole. Once the fragmentation was healed, straightway my beliefs changed: now I think that Nassau Street and the railroad both run roughly northeast-southwest.(436).  
David Rosenthal, 2/8/2018
- D70** Something about the way it is stored, or something about the way it is used, keeps it from appearing all at once (436).  
David Rosenthal, 2/8/2018



- Fragments may seem appealing as a way to accommodate inconsistency: Beliefs are all consistent within a fragment, but not always across fragments. But without solid evidence of psychological reality, “fragments” are just bookkeeping—just a way to describe the phenomena.
- Also, Lewis stopped having all three beliefs—but why?<sup>D71</sup> The conflict among them must have played a role in revising.
- Though beliefs in distinct “fragments” tend not to be activated together—conflict across fragments still disposes us to revise. So it’s hard to see fragments as more than a metaphor for dispositions to activate, revise, and acquire the various beliefs.

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- Inferences hold among sentence-sized intentional states. So the content holism explains by appeal to inferential potential is sentence-sized content.
- How then to deal with term-sized units of content, i.e., concepts? And mustn’t we explain concepts in order to accommodate the compositionality of the sentence-sized contents?
- Language is presumably compositional in respect of semantic meaning. So the speech acts that express thoughts have syntactic parts. But that doesn’t show that thoughts have corresponding subsentential syntax. Nor is it clear what could help show that.

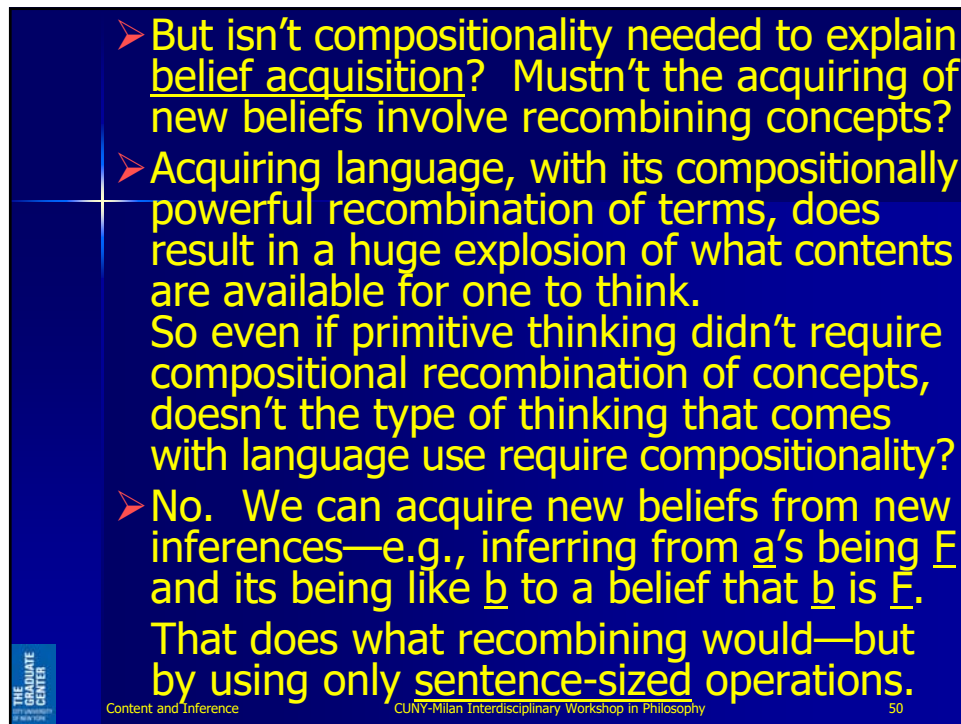
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**Slide 48**

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**D71** "Once the fragmentation was healed, straightway my beliefs changed" (436).  
David Rosenthal, 2/8/2018



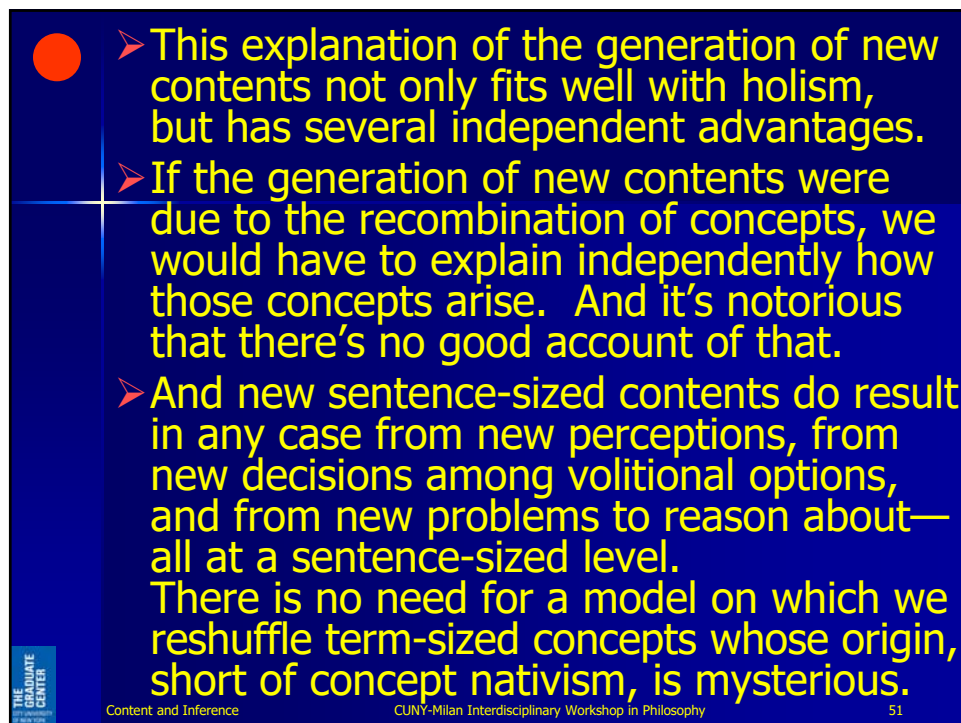
➤ But isn't compositionality needed to explain belief acquisition? Mustn't the acquiring of new beliefs involve recombining concepts?

➤ Acquiring language, with its compositionally powerful recombination of terms, does result in a huge explosion of what contents are available for one to think. So even if primitive thinking didn't require compositional recombination of concepts, doesn't the type of thinking that comes with language use require compositionality?

➤ No. We can acquire new beliefs from new inferences—e.g., inferring from a's being F and its being like b to a belief that b is F. That does what recombining would—but by using only sentence-sized operations.

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➤ This explanation of the generation of new contents not only fits well with holism, but has several independent advantages.

➤ If the generation of new contents were due to the recombination of concepts, we would have to explain independently how those concepts arise. And it's notorious that there's no good account of that.

➤ And new sentence-sized contents do result in any case from new perceptions, from new decisions among volitional options, and from new problems to reason about—all at a sentence-sized level. There is no need for a model on which we reshuffle term-sized concepts whose origin, short of concept nativism, is mysterious.

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➤ But aren't sentence-sized contents built up from concepts—term-sized contents?

➤ A syntactic analogy with language does suggest that. And we do tend to describe the contents of thoughts—their semantic character—by appeal to speech acts that could express them.  
But describing the contents of thoughts by the content of speech acts that could express them doesn't warrant extrapolating the syntax of sentences to thoughts.

➤ It's better to see concepts as abstracted from sentence-sized contents—e.g., the concept HORSE as what all sentence-sized contents about horses have in common.  
We get concepts, just not as building blocks.

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### III. Applications

➤ Many factors lead us to revise our beliefs. Some revising results from inferring to a new thought whose content conflicts with one we previously held.  
But not all; perceptual input can also lead to revising our beliefs, as can sudden thoughts that result from a variety of unconscious considerations.

➤ But what about rationality?  
When are inferences and belief revisions rational? And what makes them rational?  
What keeps inferences from varying wildly?

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➤ There are two constraints. One is internal: Believing things that don't fit well together can lead to dead ends, indecision, and the like. That disposes us to avoid such beliefs—and that's pressure for rationality.

Even when we're disposed not to activate two beliefs together, we may still be disposed to revise—as in the Lewis case—and so to generate apparent rationality.

➤ The lack of fit need not be conceptual or logical; it can be substantive—e.g., thinking that something is a cat and also a robot.

➤ The other constraint is social. My thoughts may lead me to say or do things that elicit a negative reaction from others—and that prompts me to adjust my beliefs.

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➤ These factors provide constraints—but why think they yield rational belief adjustments? Where does the rationality come from?

➤ Rationality simply consists in the best we can do in adjusting our thoughts—internally and with input from others. Rationality is when beliefs fit well with one another and with one's goals, and also with interactions with others and with the world.

➤ On this pragmatism about rationality, that's what rationality is: success in thinking and interacting with the world and with others. Logic and probability theory—and some philosophy—articulate abstract constraints that apply in special cases. But rationality simply is those successes.

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➤ The foregoing considerations point to—and indeed support—the use of charity in interpreting others' speech acts and the thoughts those speech acts express.

➤ Charity is often cast as construing others' statements as true as often as possible. But it must also involve construing others' inferences as rational as often as possible.

➤ Indeed, rationality is pivotal: Maximizing the truth for others' remarks requires construing speaker's meaning, and that depends on inferential dispositions.

And the only way to gauge the inferential dispositions of others is by what's rational. We impute inferential dispositions that are as successful as their remarks allow.

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➤ That's the pragmatism about rationality. Others' inferences are rarely explicit; given people's remarks, we impute inferential dispositions. And it's rationality and truth as we see them; there's no other standard.

➤ Also: It's not rationality and truth for all remarks and inferences, but on balance. We must often find a tradeoff between truth and rationality, and there may be alternatives we can't decide among. That doesn't tell against charity; construing others is always imperfect.

➤ This inferential charity follows from seeing content as due to inferential dispositions. Construing content on that account simply is the imputing of such dispositions.

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- But there is an interpretivist view on which the contents of others' thoughts is a matter of the best sense we can make of their remarks and behavior (e.g., Dennett 1987).
- On such an interpretivist view, content simply consists in what charitable construal delivers—for ourselves as well as others.
- Inferential-role holism cuts more deeply. Holism says that content consists not in how we charitably construe others, but in their inferential dispositions. Charitable construal is just good methodology to get at what those inferential disposition are. And inferential dispositions are objectively testable, unlike charitable construal. The dispositions are what content consists in.

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- There's also charity for words: construing others as using words as we do. That must be balanced against truth and inference.
- A fourth kind—Quine's pushing from above (1970, 183)—is reasonably seen as charity for whole theories: We construe others as holding theories we take for granted—e.g., folk psychology and folk physics. And that too must be balanced against the others.
- Quine says that "radical translation begins at home" (1969, 46): We need to construe ourselves no less than others. So we must apply all the types of charity to ourselves, which we do tacitly and without noticing—though it can become evident in problem cases. More on this shortly.

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➤ In charitably construing, one takes the speaker to be saying what one would be saying if one used those words to perform a speech act, i.e., to express the thought one would express if one used the words.

➤ Sometimes you say something I agree with. I construe you as expressing a thought I already have or that fits well with those I already have.  
Understanding you is then just matching what you say with my own thoughts.

➤ But often I understand you even though I reject the thought I take you to express.  
My understanding must then consist not in matching what you say with a thought I have—but with one I'm disposed to reject.

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➤ Construing charitably is second nature for us. It's the way we routinely understand the speech acts of others.  
BWe don't do it deliberately or even consciously—save in difficult cases.

➤ Why then do we do it at all? How to explain this routine use of inferential charity in construing of others' remarks?

➤ Speech acts express thoughts whose content is fixed by inferential dispositions.  
Since the speaker's meaning of speech acts reflects those inferential dispositions, it's second nature for us to construe what speakers mean in terms of the inferential dispositions we impute to them.  
That's what it is to understand somebody.

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- That's so far about understanding others' intentional contents. Doing so plainly does require us to interpret.
- That's traditionally been seen as very different from the access we have to our own thoughts in respect of their content. It's traditionally held that no interpreting is needed there, that such access is somehow direct—and perhaps even infallible.
- Our access to the content of our own thoughts does subjectively seem direct, and perhaps often infallible. But subjective appearances aren't always accurate; we're sometimes confused about our thoughts. So access to our own thoughts may well be a kind of self-interpretation. (More shortly.)

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- An inference-based holism helps explain what the various mental attitudes are. Holding an assertoric attitude towards a content disposes one to back that attitude up by appeal to contents from which one might infer the relevant content, and perhaps contents one might infer from it.
- So an assertoric attitude is in that way a kind of default, since holding it consists in at least part of the inferential role that figures in fixing the relevant content.
- Things are a bit more complicated with the other attitudes. Mental denial consists in being disposed to reject a content, and to appeal to reasons to deny it, i.e., contents from which one would infer its negation.

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- That explains how one understands things that one disagrees with. Understanding is grasping content—i.e., inferential potential. So understanding what somebody says when one agrees with it consists in locating it relative to inferences one is disposed to make that support it and that follow from it.
- But one is not disposed to make supporting inferences for a content one rejects. So understanding what somebody says when one disagrees with it consists in locating it instead relative to reasons for rejecting it—i.e., inferences that support its negation.
- In both cases, understanding what is said is locating it relative to inferences one is disposed to make—whether pro or con.

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- Wondering occurs when one's inferential dispositions leave open whether something is true, and one is also disposed to settle it.
- Doubting whether something is so occurs when one's inferential dispositions lightly support denying it, doubting that it's so when those dispositions support denial more strongly, though still not decisively. Similarly for the other mental attitudes.
- Volitional states, such as desiring that something be so, likely include some causal factor in addition to their inferential aspects. Affective states, such as being angry, sad, or happy that something is so, likely have inferential aspects as well, in particular with dispositions to evaluate things.

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➤ We have access to our own thoughts only when they're conscious—i.e., when we're aware of them.

But what does such awareness rely on to be right about what thoughts one has?

➤ It's reasonable to hypothesize that when we are aware of our thoughts, the inferential dispositions that fix the content of our thoughts also determine how we're aware of them—i.e., what content we're aware of our thoughts as having.

➤ Our awareness about the content of our thoughts are typically accurate because that awareness results from the same inferential dispositions that fix that content.

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➤ The awareness in virtue of which our thoughts are conscious has input from the very factors that determine their content.

➤ Having a thought often disposes one to perform a speech act that expresses that thought.

And that disposition must itself reflect the inferential dispositions that fix content.

➤ As noted earlier, when our thoughts are conscious, we're aware of them in respect of speech acts that could express them.

When I'm aware of myself as thinking that it's raining, I'm relying on my sense that I have a thought that I could express by saying that it's raining. That's the way we're aware of what we consciously think.

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- So the disposition to express our thoughts in speech also fixes how we're aware of our conscious thoughts. And since that disposition relies on relevant inferential dispositions, the dispositions that determine content also fix how we're aware of our conscious thoughts.
- A thought can be expressed by any speech act whose speaker's meaning is roughly the same as the content of that thought. But speech acts that meet that semantic condition will often differ syntactically.
- So being aware of a thought by way of a speech act that could express the thought can't entitle one to read the syntax of the speech act back onto the thought.

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- Indeed, since thoughts are expressible by speech acts with different syntax, it's not credible that thoughts themselves have any unique subsentential syntactic structure. And that again undermines the idea that compositionality applies to thoughts, as against the speech acts that express them.
- I've taken up a number of topics—some all too briefly. I've wanted to explore how inference-based content holism works—and to explore the implications for various issues about intentionality.
- Theories should explain target phenomena, but also offer unexpected explanatory ties. I've argued that inference-based holism does well by both those measures.

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**Thanks for your attention**

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