PHENOMENAL COMPOSITIONALITY AND CONTEXT EFFECTS

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In previous work (Pitt 2004, 2009, 2011) I have argued that conscious thinking is a kind of experience, characterized by its own kind of phenomenology. This phenomenology – *cognitive* or *conceptual* or *propositional* phenomenology – differentiates conscious thinking from other kinds of conscious experience, just as their kinds of phenomenology differentiate them from each other. Thoughts with different contents have different phenomenologies of this kind, which constitute their contents. Thoughts, qua conscious experiences, are individuated in the way that *all* conscious experiences are differentiated – *phenomenally*. For each experiential modality there is a determinable kind of phenomenology – visual, auditory, olfactory, gustatory, proprioceptive, etc. – and token states of these various kinds are individuated by maximally specific determinates of these determinables. What makes them the particular states they are is their phenomenology; and what makes a thought the thought that it is is its cognitive phenomenal character.

One feature that thought is usually taken to have in common with language is *compositionality*. Indeed, the Language of Thought Hypothesis has it that thought, being language-like in certain essential respects, *is* a language. (I prefer to think of language as being thought-like. Thought comes first.) In order to explain the creativity, systematicity and productivity of thought, it seems that we must take the contents of thoughts or complex concepts to be determined by the contents of their constituents (and their structural relations) – just as we do in explaining the creativity, systematicity and productivity, as well as comprehensibility of novel utterances and learnability, of language. Even more so if the semantics of language is

grounded in the semantics of thought. If the meanings of words and sentences are identical to the contents of concepts and thoughts, then if linguistic meaning is compositional, mental content must be compositional as well.

One might worry, however, that complex cognitive phenomenology (the phenomenology of a complex concept or thought) cannot in general be compositional, since phenomenology seems to be subject to contextual variation, or contrast effects. For example, a particular color may look different when seen with other colors. A wine may taste different when tasted with food, and with different kinds of food. A particular chord may sound different depending upon which chords precede it or follow it. And so on. But if phenomenal character can change with context, and a change in phenomenal character entails a change of experience (I consider this non-negotiable), then it will not be true in general that experiences can be combined to form more complex experiences whose constituents are *those very same* experiences. If, when phenomenally individuated experiences combine, their phenomenology changes, they become different experiences. (More precisely, they cease to exist and are replaced by different experiences.) And if this is true of cognitive phenomenology, then the content of a thought or complex concept will not in general be factorable into the contents its constituents have in isolation.

The experienced color of the small square on the left and that of the small square on the right are different.



The one on the right is the same color as the one on the left, but it looks different when embedded in the larger square. Hence, though the look of the combined squares can be factored into the look of the pink square and the grey square embedded in it, it cannot be factored into the look of the pink square and the grey square in isolation (the one on the left).

If there are similar effects for cognitive phenomenology, then we might find ourselves having to say that a complex thought or concept does not include the contents of its constituents. For example, if the thought contents *p* and *q* are phenomenally constituted, there would be no guarantee that there is a complex conscious thought whose content is composed of the contents *p* and *q*. If cognitive phenomenology is subject to contexts effects, it is possible that when the thoughts that *p* and *q* are experienced together their phenomenologies, and, hence, their content, change. But if thoughts are individuated by their content, then the original thoughts cease to be thought when one attempts to think them together. In which case when one is thinking the thought *p and q* one is not thinking its constituent thoughts *p* and *q*. This hardly seems coherent. So if it does happen, it seems there is very good reason to reject a phenomenalist account of thought content.

Before addressing this worry, it will be helpful to distinguish two kinds of phenomenal compositionality. A complex experience or phenomenal state (I use the terms interchangeably) is

post hoc compositional if its phenomenology is factorable into constituent phenomenologies, but these constituents are not the phenomenologies of the experiences that came together to form it (*they* had different phenomenal characters). So, though we could say that the phenomenology of the complex is composed of the phenomenology its constituents have in context, we could not say that it is composed of the phenomenologies its constituents have out of context. Let us call this latter kind of compositionality *ante hoc compositionality*. Phenomenology in general, it seems, cannot be assumed to be compositional in this sense. The experience of the squares on the right is not composed of the experience of the square on the left and the experience of the embedding square on the right. But *ante hoc* compositionality is what is required to explain phenomena like the systematicity, comprehension and learnability of thought. If cognitive phenomenology is not *ante hoc* compositional, there would be serious pressure to abandon the idea that it is content-constitutive.

One way to respond would be to deny that linguistic compositionality itself is (or is always) *ante hoc*. If this were the case, then – at least on the assumption that linguistic meaning is conceptual content – *post hoc* phenomenal compositionality would cease to be a problem. Here one might cite here the phenomena of *topicalization* and *focus*, which involve surface relocation or phonetic stress of a sentential component (without changing its underlying structural relations), as in the following examples:

(1) You can't trust him.

(2) *Him* you can't trust.

(3) *You* can't trust him.

(4) You *can't* trust him.

Some linguists claim that these operations have an effect on the meaning of the sentence. If this is correct, then linguistic meaning cannot be taken to be in general *ante hoc* compositional. Hence, the failure of such compositionality for cognitive phenomenology would cease to be a problem.

However, the effects that topicalization and focus have on meaning do not (as far as I am aware), involve change in the meanings of constituent expressions. So they are not analogous to phenomenal contextual effects.

Another way to deny that linguistic compositionality is *ante hoc* would be to adopt Frege's context principle – viz., "it is only in the context of a proposition that words have any meaning" (Frege 1884, §62). If words only have meanings in the context of a complete sentence, then one could argue that linguistic compositionality is always *post hoc*, and – again on the assumption that linguistic meaning is conceptual content – there would be no problem for the phenomenal intentionality of thought thesis. I will not pursue this response. I think Frege's motivation for adopting the principle is *ad hoc*. Moreover, it seems phenomenally manifest that a simple experience (e.g., that of the color of a Terrell ganzfeld) has phenomenal content even if it has no experiential context – even if it is the *only* experience one is having. Finally, one might insist that even if linguistic meaning is not (or not always) *ante hoc* compositional, thought content is. (One could respond to the previous proposal in the same way.)

A more promising route would be to argue that we do not in fact need *ante hoc* compositionality to have a theory of thought content that can explain phenomena like creativity, productivity and systematicity. For, if context effects are not arbitrary – if, that is, there are principles determining when and why phenomenal contents change the way they do in different

contexts (as I assume there is for, e.g., colors), then such principles could simply be added to the instructions for composing complex thought contents. And we would have a useful kind of compositionality after all: the content of a complex concept (or term) or a thought (or sentence) is a function of the contents of its constituent concepts, their structural arrangement, and the relevant features of the experiential context in which it occurs. On such a view meaning and cognitive content are in part contextually determined. (Not exactly an unheard of idea!)

Adding a context clause to a definition of compositionality would be like adding the clause 'and their structural relations' to the simple mereological rule that the content of a complex expression is determined by the contents of its constituents. Just as certain semantic evidence (e.g., that 'Lilla loves István' does not mean the same as 'István loves Lilla') would lead one to modify a principle of *mereological* compositionality to get *structural* compositionality, some such evidence could lead one to modify the structural principle of compositionality to get *contextual* compositionality.

However, this approach would not remove the specter of the possibility of thinking *that p and q* without thinking *that p* or *that q*.

The way to handle the compositionality worry is simply to *deny* that there is contextual variation of meaning experience. This is perhaps an empirical question. But I do not think there is any introspective evidence of such variation. Just as it is manifest to linguistic intuition that the meaning of 'chiliagon' (thousand-sided plane figure) is the same in the sentences 'chiliagons have one thousand sides' and 'chiliagons are plane figures', it is manifest to introspection (which is probably what linguistic intuition is) that the phenomenal cognitive content of the concept CHILIAGON is the same in corresponding thoughts. We are directly aware of the contents of our

thoughts, and, hence, directly aware of their sameness and difference. We can know, directly, whether or not our CHILIAGON experience changes with change of cognitive context. Indeed, it is most likely this that allows us to know that ‘chiliagon’ means the same thing regardless of its linguistic context.

This house is clean.

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