Is Language Necessary For Human Thinking?

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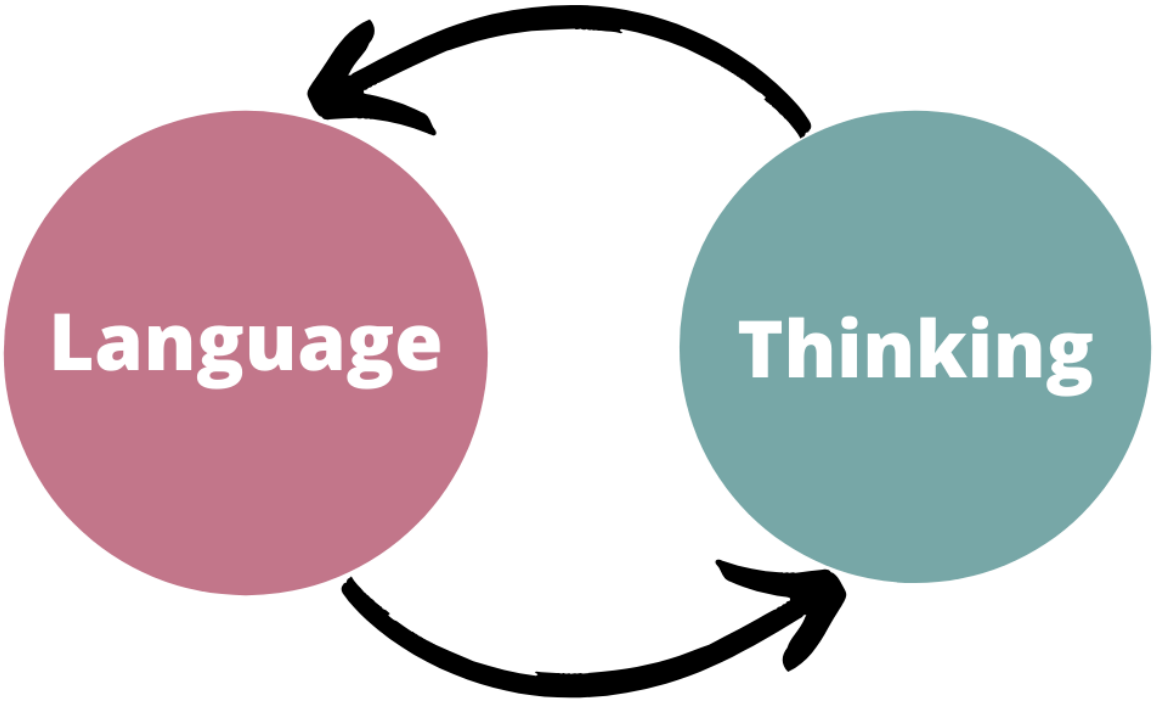

(Beckett, 2020)

It seems self-evident that language requires human thinking, at least in order to be spoken, written, read, and understood. But does human thinking require language? Noam Chomsky says yes, but Evelina Fedorenko, a former students of Chomsky, says no.

> For thousands of years, philosophers have argued about the purpose of language. Plato believed it was essential for thinking. Thought "is a silent inner conversation of the soul with itself," he wrote.
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> Many modern scholars have advanced similar views. Starting in the 1960s, Noam Chomsky, a linguist at M.I.T., argued that we use language for reasoning and other forms of thought. "If there is a severe deficit of language, there will be severe deficit of thought," he wrote.
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> As an undergraduate, Evelina Fedorenko took Dr. Chomsky's class and heard him describe his theory. "I really liked the idea," she recalled. But she was puzzled by the lack

> of evidence. "A lot of things he was saying were just stated as if they were facts—the truth," she said.
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> Dr. Fedorenko went on to become a cognitive neuroscientist at M.I.T., using brain scanning to investigate how the brain produces language. And after 15 years, her research has led her to a startling conclusion: We don't need language to think. (NYT, 2024; see also Fedorenko et al., 2024)

All things considered, I think that Chomsky and Federenko are each partially right and partially wrong.

More precisely, because human thinking is fundamentally not *monadic* but instead fundamentally *dyadic*, the correct answer to the question inherently depends on what you mean by "thinking." If by "thinking" you mean *discursive thinking*, then the answer is yes, but if by "thinking" you mean *essentially non-conceptual, non-discursive thinking*, then the answer is no. Let's call the thesis that discursive thinking requires language, **thesis 1**, let's call the thesis that essentially non-conceptual, non-discursive thinking requires language, **thesis 2**, and let's call the thesis that essentially non-conceptual, non-discursive thinking can be non-linguistic, **thesis 3**. In *Rationality and Logic* (Hanna, 2006), I argued for the truth of **thesis 1**, and in *Cognition, Content, and the A Priori* (Hanna, 2015), I argued for the falsity of **thesis 2** and the truth of thesis **thesis 3**. So if I'm right, then **thesis 1** is true, but **thesis 2** is false and **thesis 3** is true. Here's my rationale for that conclusion.

According to a classical view in the philosophy of mind, both human and non-human minded animals inherently or innately possess a capacity to produce mental representations of objects (whether those objects are actual or merely possible, existing or non-existing), locations, events, actions or performances, other minded animals, and themselves. This classical view runs from the 'faculty psychology' of the early 18th century up through Kant's "transcendental psychology," and then forward again through the phenomenological, introspectivist, Gestalt, and Chomskyan/cognitivist movements in 19th and 20th century psychology, and right into mainstream contemporary cognitive science and philosophical psychology. Whatever its particular incarnation, the classical view holds that minded animals are not only conscious or sentient but also inherently or innately possess a capacity to be *directed* to targets of all kinds; that is, they have the capacity for *intentionality*. In turn, mental representations have mental content, also known as "intentional content," where such content is (i) the cognitive or practical information that is internally carried by or contained in a mental representation, (ii) what individuates the mental act, state, or process that has this content, and (iii) what normatively guides this mental act, state, or process by providing its truth-conditions, its accuracy-of-reference conditions, and its intentional performance success-conditions.

Mental or intentional content is shareable across minded animals, but also directly grasped on particular occasions and in particular contexts by individual minded animals. So, at least implicitly, according to the classical view, mental contents are *mental representation-types*. This means they are information-structures tokened in space and time with the following qualities: they are multiply realizable or repeatable (for example, the same information structure, "my favorite San Francisco coffee mug," is repeated each time I represent some real-world item as such, say in sense-perception, memory, or imagination), consciously-accessible, individuating, and normatively-guiding (for example, I represent various real-world items correctly or incorrectly as my favorite blue coffee cup, and track it more or less accurately in space and time under varying contextual conditions as I reach out for it). Correspondingly, the inherent psychological function of mental contents, insofar as they occur as *mental representation-tokens* directly grasped by individual minded animals on particular occasions and in particular contexts, is to individuate the very mental acts, states, or processes in which those tokens occur, to provide normative guidance for the cognition and practical agency that occurs via those self-same mental acts, states, or processes, and to provide the information that mediates their directedness to their intentional targets.

In turn, there are two fundamentally different, basic kinds of mental contents: (i) *concepts*, and (ii) *essentially non-conceptual contents*. The dual-content cognitive semantics I'm affirming is closely related to a philosophical controversy that saliently emerged in philosophy of mind in the mid-1990s, but in fact stretches all the way back to Kant: the so-called *debate about non-conceptual content* (Hanna, 2021). More specifically, there are two basic questions at issue between the contrary theses of *conceptualism* and *strong non-conceptualism* in the philosophy of cognition and cognitive semantics: (i) whether human cognition is necessarily, solely, and wholly determined by our concepts and our conceptual capacities, yes or no, and (ii) whether human cognizers share a fundamental pre-conceptual/pre-intellectual or "essentially sensible" capacity—or a set of such capacities—with non-rational or non-human animals, that operates in some substantive way independently of our intellectual/logical capacity for conceptualization, believing, judging, etc., while still also being able to combine substantively with those latter capacities for the purposes of socially and linguistically-mediated rational cognition, yes or no. Conceptualists, i.e., *intellectualists* about human cognition, say *yes* to (i) and *no* to (ii); but strong non-conceptualists, i.e., *non-intellectualists* about human cognition, say *no* to (i) and *yes* to (ii). In short, for intellectualists, self-conscious rational, conceptual, and inferential thinking—discursivity—determines the content and specific character of all human cognition, whereas for non-intellectualists, discursivity is just one cognitive capacity that's categorically distinct from, but also interactive with, a set of inherently non-discursive *sensible* capacities, including essentially non-conceptual perception, essentially non-conceptual memory, pre-reflective consciousness, essentially non-

conceptual imagination, emotion, and intentional agency. The cognitive capacities generating and supporting non-conceptual content are consciousness-based, perceptual, imaginational, and more generally characteristic of human sensibility. On the other hand, the cognitive capacities generating and supporting conceptual content are self-consciousness-based, judgmental or propositional, logical, and more generally characteristic of human discursivity (i.e., human linguistic and intellectual activity). Here, then, is the fundamental philosophical question that is being asked in the debate about non-conceptual content: Can we, do we, and must we, at least sometimes, and in a minimally basic way, cognitively encounter other things and ourselves directly and non-discursively, hence nonintellectually or sensibly (strong non-conceptualism), or must we always cognitively encounter them only within the framework of discursive rationality, hence only intellectually or discursively (conceptualism)? Are we, as rational animals, essentially different from other kinds of animals (conceptualism), or do we share at least some minimally basic mental capacities with all minded animals (strong non-conceptualism)? Or even more simply put: Is a thoroughly intellectualist and "discursivity first" view of the rational human mind (conceptualism) correct; or by sharp contrast is a non-intellectualist and "sensibility first" view of the rational human mind (strong non-conceptualism) correct?

In defense of strong non-conceptualism and the "sensibility first" view, I've worked out a detailed, systematic version of this dual-content cognitive semantics, which deploys a basic distinction between (i) *conceptual* capacities and *conceptual* content, and (ii*) essentially non-conceptual* capacities and *essentially non-conceptual* content, along with a basic sub-distinction between: (iii) *formal* content (i.e., non-empirical or *a priori* content, i.e., content that's necessarily *underdetermined* in its specific character by all actual and possible contingent, sensory facts) whether conceptual or essentially non-conceptual, and (iv) *material* content (i.e., empirical or *a posteriori* content, i.e., content that's necessarily *determined* in its specific character by all or some actual or possible contingent, sensory facts), whether conceptual or essentially non-conceptual (Hanna, 2005, 2008, 2015: ch. 2, 2020, 2021; Russell and Hanna, 2012).

I'll take those distinctions as starting points. Then, according to the dual-content cognitive semantics I'm affirming, by *conceptual content*, I mean the inherently general, descriptive information that's expressed by (i) one-place predicates in natural language, picking out properties and ranging over domains of individual objects, (ii) n-place relational predicates in natural language, picking out relations and ranging over domains of ordered n-tuples of individual objects, or (iii) syncategorematic terms in natural language, picking out logical constants and other logical forms that unify individual propositions (judgments, predications, statements, etc.) and also capture truth-functional or other relations between complexes of propositions. In this way, conceptual content is

semantic content that's *propositional*, since all propositions are built out of concepts, *inferential* (Hanna, 2014), since all propositions correspondingly can enter into strict or non-strict inferences, and *logico-linguistic*, since all propositions and inferences are governed by laws of logic and formal rules of natural language (Hanna, 2006: esp. chs. 4 and 7). Contrariwise, essentially non-conceptual content is *sub*-propositional, and therefore *non*-inferential, and *non*-logico-linguistic semantic content. Moreover, according to my dual-content cognitive semantics, conceptual content and essentially non-conceptual content alike can be either *formal* (i.e., non-empirical or a priori) or *material* (i.e., empirical or a posteriori). But whether they're formal or material, sharply unlike conceptual contents, which are normally cognized self-consciously, logically, theoretically, and rationally, essentially non-conceptual contents are instead normally cognized in a *pre-reflectively* conscious, *emotive* (where "emotion" includes desires, feelings, and passions, and our affective capacities more generally), *practical*, and *proto*-rational way that's poised for intentional action of various kinds.

Assuming those distinctions and working definitions, and according to my formulations in *Cognition, Content, and the A Priori*, here's a brief summary of the theory of essentially non-conceptual content:

> The theory of rational human cognition, content, and knowledge that I am proposing … is, in part, a "bottom-up" theory about the nature of minded animals that anchors conceptual content in the primitive fact of essentially non-conceptual content. Essentially non-conceptual content … is a kind of mental content that is categorically different from conceptual content, in the sense that both its underlying semantic structure and also its characteristic psychological function or role are inherently distinct from those of conceptual content. Furthermore, essentially non-conceptual content is a kind of mental content that rational human animals or real human persons share with non-rational minded animals, whether non-human (e.g., cats) or human (e.g., infants), who, it seems, do not possess conceptual capacities. So essentially non-conceptual content epitomizes the specifically non-intellectual or *sensible*, embodied, perception-based, phenomenally conscious side of human mindedness, whereas conceptual content epitomizes the specifically *intellectual* or discursive, reflective, judgment-based, self-conscious side of human mindedness…. [B]y way of a preliminary or working characterization to have in front of us, I will say that <u>essentially non-conceptual content is mental content that necessarily includes essentially indexical formal spatiotemporal and dynamic representations that are fully sensitive to complex thermodynamic asymmetries in perceptually manifest natural objects and processes, and also that the primary psychological function or role of essentially non-conceptual content is to account for directly referential cognition, and to guide and mediate the sensorimotor processes constitutive of finegrained intentional body movements in rational minded [human] animals</u>. (Hanna, 2015: p. 25, underlining added)

In the relevant "philosophical literature," as they say, there are at least seven arguments for strong non-conceptualism, all of which I endorse:

(I) The argument from phenomenological richness: Our normal human perceptual experience is so replete with phenomenal characters and qualities that we could not possibly possess a conceptual repertoire extensive enough to capture them. Therefore normal human perceptual experience is always to some extent non-conceptual and has non-conceptual content.

(II) The argument from perceptual discrimination: It is possible for normal human cognizers to be capable of perceptual discriminations without also being capable of re-identifying the objects discriminated. But re-identification is a necessary condition of concept-possession. Therefore normal human cognizers are capable of non-conceptual cognitions with non-conceptual content.

(III) The argument from the distinction between perception (or experience) and judgment (or thought): It is possible for normal human cognizers to perceive something without also making a judgment about it. But non-judgmental cognition is non-conceptual. Therefore normal human cognizers are capable of non-conceptual perceptions with non-conceptual content.

(IV) The argument from the knowing-how vs. knowing-that (or knowing-what) distinction: It is possible for normal human subjects to know *how* to do something without being able to know *that* one is doing it and also without knowing precisely *what* it is one is doing. But cognition which lacks knowing-that and knowing-what is non-conceptual. Therefore normal human subjects are capable of non-conceptual knowledge-how with non-conceptual content.

(V) The argument from the theory of concept-acquisition: The best overall theory of concept-acquisition includes the thesis that simple concepts are acquired by normal human cognizers on the basis of non-conceptual perceptions of the objects falling under these concepts. Therefore normal human cognizers are capable of non-conceptual perception with non-conceptual content.

(VI) The argument from the theory of demonstratives: The best overall theory of the demonstratives "this" and "that" includes the thesis that demonstrative reference is fixed perceptually, essentially indexically, and therefore non-descriptively by normal human speakers. But essentially indexical, non-descriptive perception is non-conceptual. Therefore normal human speakers are capable of non-conceptual perception with non-conceptual content.

(VII) The argument from the "cognitive impenetrability" of subpersonal or subdoxastic representations: Some representational states, for example, early vision, are not only subpersonal or sub-doxastic, but also "cognitively impenetrable," in the sense that the information represented by these states is not available to conscious or self-conscious mental processing. But nonconscious or non-self-conscious mental representation is non-conceptual. Therefore normal human cognizers are capable of non-conceptual perception with non-conceptual content.

And here are the two arguments that I regard as philosophically decisive, as a pair.

(VIII) The argument from babes-&-beasts: Some healthy, normal human animals (for example, healthy, normal human infants), and many healthy, normal non-human animals (for example, healthy, normal cats) are capable of cognizing themselves, other animals, and the world, yet *lack* any concepts, conceptual contents, or (minimally developed) capacity for conceptualization. And when healthy, normal human infants mature and acquire a capacity for conceptualization, they retain the capacity for cognition that they share with non-human animals. Therefore, human cognition is really possible *without* any concepts, conceptual content, or (minimally developed) conceptual capacity whatsoever: that is, concepts are *not necessary* for human (or for that matter, non-human) cognition.

(IX) The argument from enantiomorphy: Consider any object whatsoever, and *all* the concepts that correctly describe it. By hypothesis, we have a *complete* conceptual account of that object. Now consider that very object's *mirror-reflected counterpart* (aka its "enantiomorph"). By hypothesis, concepts alone cannot differentiate between the object and its mirror-reflected counterpart, hence no human cognizer *using concepts alone* could discriminate between the object and its enantiomorph. Then consider a conscious human subject embedded within an orientable space (that is, a space with intrinsic directions, for example, up-down, right-left, back-front, inside-outside, north-south-east-west, etc.) *exactly between the two counterparts, occupying the position of the mirror.* Thus one of the counterparts is on the subject's right-hand side, and one of the counterparts is on the subject's left-hand side. Therefore, the conscious human subject can tell the counterparts apart by essentially non-conceptual spatial representation, but by hypothesis, concepts alone are insufficient to do this: that is, concepts are *not sufficient for human cognition.*

To be sure, there are many attempts by conceptualists to answer and resist these arguments, to offer independent arguments for conceptualism, and to finesse the impact of the pro-strong-or-essentialist-content-non-conceptualist arguments by forming

philosophical alliances with etiolated, weaker forms of non-conceptualism, for example, ones that focus exclusively on failures or lack of concept-possession (aka "state non-conceptualism"). But rather than boring you senseless with all the moves in *that* dialectical glass bead game, I will simply point you to *Cognition, Content, and the A Priori*, where I have dealt with all those moves in loving critical detail (Hanna, 2015: ch. 2). I'll conclude then, by asserting that strong or essentialist content non-conceptualism is true, whereas any version of conceptualism is false; and correspondingly, that the non-intellectualist and "sensibility first" view of the rational human mind is correct, whereas the thoroughly intellectualist and "discursivity first" view of the rational human mind is incorrect. Therefore, for all real philosophical intents and purposes, the debate about non-conceptual is done-&-dusted: game, set, and match go to strong or essentialist non-conceptualism.

So, does human thinking require language? From the foregoing, it follows that in one sense, i.e., the discursive sense, yes, human thinking *does* require language, *and also* that in another sense, i.e., the essentially non-conceptual, non-discursive sense, no, human thinking *does not* require language.[1]

[1] I'm grateful to Martha Hanna for drawing my attention to (NYT, 2024).

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