A Kantian Theory of Cognition

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Introduction

Immanuel Kant's *Critique of Pure Reason* is nothing short of a monolith of philosophical discourse that attempts to reconcile concepts from modern empiricism and rationalism through arguments that address the foundation of the premiere mode of knowledge, namely, experience. In constructing his "critical philosophy", Kant argues not to extend or prove any form of rationalism or empiricism offered by the theories available to and preceding his thought, but rather to construct an alternative approach to the problem of knowledge that takes the form of "transcendental idealism," a theory that effectively accommodates important tenets from both the major modern schools, but is simultaneously more fundamental.

In his first *Critique*, Kant embarks on an extensive analysis of the logical structure of consciousness that emphasizes its formal organization with respect to the possibility of knowledge in general. Kant's project focuses on the formal aspects of the mind-world relation rather than psychological or phenomenological ones, and thus he articulates a robust logical schema by which we can think about the relation between subject and object as manifested in unified experience. Kant targets experience for transcendental philosophical analysis as a mode of knowledge to be analyzed with the goal of discovering the necessary conditions for its possibility. In essence, Kant builds the

foundation for a joining of empiricist and rationalist ideas through arguments that strive to discover the logically necessary conditions for the possibility of knowledge *qua* experience. Kant's project is valuable not only for its philosophical rigor, but also for its general approach and method, which involves thinking about the formal (i.e. logical) organization of the conditions for knowledge and the concept of "unity" in experience.

Bounds of Interpretation

Knowledge is most intimately associated with the mind, consciousness, the external world and the interrelations therein—concepts which can be thought under the overarching idea of "cognition," that is, the systematic process by which input from the external world obtained in perception is processed by the mind, related to existing mental content, arranged, and realized as knowledge in the form of experience. For Kant, experience is a type of knowledge. Thus, a large part of Kant's project in the *Critique* involves arguments that I interpret as preliminary foundations for a formal theory of cognition, for the nature of cognition is bound up with the conditions for the possibility of knowledge *qua* experience. (Note that by "formal theory" I mean a theoretical description of the relating of mind to world within a perceiving subject and the logical relations therein.) By my reading, this type of theoretical discussion is most evident in the B edition of the Transcendental Deduction, where Kant deduces the categories of pure understanding by articulating the necessary conditions for the possibility of empirical knowledge, i.e. experience. I claim that Kant, in articulating his theory for the *a priori* possibility of knowledge in the B Deduction, also simultaneously articulates the theoretical elements (i.e. faculties, formal aspects and logical relations) necessary for understanding the logic of cognition, or, alternatively phrased, the formal aspects of a general cognitive process.

This cognitive interpretation of Kant conflicts with from Kant scholars who assert that Kant's arguments in the B Deduction accompany a fruitless exposition of imaginary faculties of the mind. P.F. Strawson (1966) states that the analysis of the general functions of the understanding in abstraction is the business of formal logic, which offers us "analytic truths" about the logical relations of the forms of propositions. He offers that Kant raised the more general question of investigating the conditions for the applicability of these forms and their production of true judgments about objects (p. 30). This type of endeavor lends itself to postulating faculties that are involved in the process of formalizing experience, for without faculties to account for the application of logical forms, we cannot think about the mind as a processing unit that receives input, processes this input in an organized way and produces output. Such faculties allow us to think if the mind as an information processing system with a knowable structure. Kant's articulation of cognitive faculties involved in the possibility of knowledge serves as a central point of my analysis.

However, Strawson calls this aspect of the Transcendental Deduction "an essay in the imaginary subject of empirical psychology," and argues that, "Since Kant regards the necessary unity and connectedness of experience as being, like all transcendental necessities, the product of the mind's operations, he feels himself obliged to give some account of those operations" (1966, p32). Strawson claims that we can have no empirical knowledge of such truths about the mind, "for this would be a claim to empirical knowledge of the occurrence of that which is held to be the antecedent condition of empirical knowledge," regarding this aspect of Kant's theory as "one of the aberrations into which Kant's explanatory model inevitably let him" (ibid). However, modern advances in cognitive science suggest that we can legitimately theorize about these aspects of cognition and even investigate their neural basis, as demonstrated by the discovery of localized neuronal populations responsible for spatial cognition (Burgess 2008) and other cognitive phenomena. These observations suggest that thinking about cognition in terms of faculties is a

legitimate endeavor, and that Kant's need to describe such things was not a flight of fanciful psychological babble.

I claim that we can understand the formal dynamics and relations that are essential to cognitive systems through Kant's transcendental arguments and the faculties posited thereby. To argue this claim, I highlight the technique of transcendental deduction and sections of the B Deduction of Kant's *Critique of Pure Reason*, paying careful attention to the suggestions made about the logical structure of cognition in general to articulate for a Kantian formal theory of cognition and resist the idea that parts of Kant's theory in this section should be discarded.

Transcendental Deduction and Cognitive Theory

By attempting to articulate the logical structure of cognition by a reading of the B Deduction, I mean to discuss the elements of Kant's theory as a basis for formulating a theoretical understanding of cognitive processes that does not strive to be psychological or phenomenological, as this would be inconsistent with Kant's own project. Thus, I will keep to analyzing Kant's arguments as providing us the logical entities and theoretical constructs needed for understanding the nature of cognitive systems such as the human mind. On this point, brief elaboration is warranted to better frame what is meant by by "logical entities" and "theoretical constructs." Consider the investigation of the external world rigorously conducted by modern physics. Physicists describe light and sound "waves" as having particular properties such as amplitude, wavelength, frequency and so on. With respect to theory, there exists a necessary logical entity in this description if it is to make sense. That is, if light and sound take the form of waves, then these waves themselves must be made *of something*. There must be a logical/theoretical entity that accounts for wave material in order for wave theory to make sense. What this physical thing is may be

experimentally elusive, but it remains a logical necessity if we are to think about the world using wave theory.

In a similar fashion, a *formal* theory of cognition will necessarily involve these types of logical items in its articulation, for we are not necessarily describing a physical causal process (as this is the duty of neuroscientists), but rather the logical organization of the mind, which is distinct from any theories about neural function, psychological phenomena, or phenomenological descriptions of experience. A formal theory of cognition is more akin, in my view, to Chomsky's (1980, also referenced in Fodor 1983) propositional understanding of the mind in the sense that it strives to articulate logical relations under the heading of "mind" rather than physical ones. Physical correlates to these logical structures may exist, but the two remain nevertheless distinct insofar as how they contribute to understanding the relation between mind and world that is manifested in experience and essential to the structure of knowledge. It is this type of theoretical and formal understanding of the mind that we ought to be conscious of in my reading of Kant that strives to extract a formal theory of cognition. It aims to produce a theoretical understanding of cognition insofar as such an understanding is bound up with the *a priori* possibility of knowledge. If cognition is the way by which the mind reaches knowledge and Kant's arguments in the B Deduction show how it is possible that the categories of pure understanding can produce knowledge, we should be able to use Kant's explanation of these conditions for the possibility of knowledge as grounds for understanding the logical structure of cognition in general. To test this claim, I will first address the Kantian technique of transcendental deduction as articulated by Kant himself to show how articulating a cognitive theory from Kant's theory is itself plausible.

Concerning transcendental deduction in general, Kant offers an introduction in §13 and §14 of the Analytic of Concepts, Chapter II (Kemp Smith p120-128, A84/B117 – A94/B129), to prepare the reader for the transcendental deduction of the categories that will prove their "objective

validity," or their necessary relation to objects in experience. Namely, Kant's task is to discover how it is possible that we have any empirical knowledge whatsoever, and this, he asserts, requires a "transcendental deduction" of the categories and the possibility of their *a priori* employment:

> "Now among the manifold of concepts which form the highly complicated web of human knowledge, there are some which are marked for our pure *a priori* employment, in complete independence of all experience; and their right to be so employed demands a deduction. For since empirical proofs do not suffice to justify this [*a priori*] employment, we are faced by the problem [of] how [*a priori*] concepts can relate to objects which they yet do not obtain from any experience. The explanation of the manner in which concepts can thus relate *a priori* to objects I entitle their transcendental deduction[…]" (p121-122, A85)

In order to arrive at a conclusion about the nature of the possibility of our own knowledge, Kant offers that we must elucidate at *a priori* concepts, and that doing so is the essence of transcendental deduction, that is, it proves the necessity of *a priori* knowledge for experience. Thus, we can understand that the technique of the transcendental deduction is to show how knowledge is possible through a set of *a priori* concepts (i.e. Kant's categories of the understanding) that are independent from, but crucially related to, the external world through their relationship with intuition. The result of such a deduction then would be a proof that the categories are indeed pure *a priori* concepts that exist in the mind independently of experience itself and serve as necessary conditions for the possibility of experience in general. Kant states that these *a priori* concepts are the "*form* for the ordering of [the matter of knowledge] obtained from the inner source of pure intuition" (B119). As such, they will be paramount to any understanding of the logic of cognition. Without them, our experience would be nonsensical and absolutely confusing, a condition that

cognition serves to counteract. It is these *a priori* faculties that ground the structure of the mind and its relation to the external world and thus, the logical entities needed to articulate a formal theory of cognition.

Insofar as the pure concepts of the understanding are a form for the *ordering* of the matter of knowledge, we can also read this ordering as a structure for cognition, as cognition involves the ordering and processing of external input within a cognitive system, i.e. a mind, for the production of knowledge. Pressing this line, we can perceive the categories and the other faculties Kant describes also as logical cognitive structures, that is, as entities that function as the pieces of a theory that explains cognition. If we agree that the product of cognition or, alternatively, the activity of a cognitive system, is the production of knowledge, then we can claim that through his transcendental theory of knowledge, Kant is also implicitly offering a theory for the structure of a cognitive system that produces that knowledge for an experiencing subject. For how could a cognitive system produce knowledge if it did not function according to Kant's necessary *a priori* conditions *for* knowledge? Insofar as the *a priori* faculties primarily breed knowledge in the form of experience, they then also can constitute a theoretical structure for cognition as manifested in the mind of a perceiving subject whose primary mode of knowledge is experience.

A cognitive process principally involves input from the external world and Kant accommodates this theoretical necessity. Kant argues for space and time as *a priori* forms of intuition and thus the forms of knowledge derived from sensation. That is, all of our sensory experience of the external world is necessarily spatial and/or temporal. These spatiotemporal (or distinctly spatial or temporal) intuitions, for Kant, are a necessary component of our experience and, in combination with the pure *a priori* categories, make possible our knowledge of objects in general, for any sensation is necessarily subject to the pure forms of thought, i.e. the application of the categories.

Empirical *a posteriori* concepts also rest on this conformity to pure concepts, and rational concepts would require it for their possibility as well. As such, the deduction of these concepts is important to thinking about not only knowledge, but also in positing a theoretical account of how the mind arrives at this knowledge, or alternatively, produces experience—a process I claim to be definitive of cognition. With respect to a theory of cognition, intuition and the *a priori* concepts provide us with logical constructs for input and faculties to relate the content of this input, respectively, and knowledge provides us with output. The particular nature of content does not matter, just that there is spatial and/or temporal content suffices, for here we are considering a formal structure of cognition and its compatibility with the various faculties that Kant posits. This type of approach is, in my view, essential to a cognitive theoretical understanding of the B Deduction. With this, let us investigate the text of the B Deduction to articulate a formal theory of cognition from Kant's transcendental deduction. For purposes of this analysis we will concentrate on combination, synthetic unity of apperception and transcendental self-consciousness, highlighting how the descriptions of these faculties relate to the formal structure of cognition in general. (Note that the B Deduction contains an extensive enumeration of potential formal cognitive faculties that I choose not to fully analyze here.)

Cognitive Theoretical Analysis of the B Deduction

Kant begins the B Deduction by introducing the concept of *combination* or "the act of spontaneity of the faculty of representation" not arrived at through the senses (151, B130). This situates us in the domain of the *a priori* understanding that is independent of sensation, and provides us with a faculty that organizes/arranges representations contained within the mind (i.e. the material of knowledge) in a sensation-independent "act of the understanding" (ibid.). These representations,

which, according to the Transcendental Aesthetic, are distinct from the sensation and intuition by which they are made possible, serve to represent the external world in the understanding such that information about the world can be made available for relation within the mind and thus qualify as material for knowledge. Further, Kant defines combination as, "being an act of the self-activity of the subject, [that] cannot be executed save by the subject itself" (152). Thus, we can understand combination as an *act* of the understanding, its *object* being the manifold of sensible intuition in the form of representations distinct from sensation and intuition themselves. Given that any general cognitive process requires the relation of input from the external world to the understanding, here we have the first element of a Kantian theory of cognition. By Kant's faculty of combination, the external world is formally represented in the understanding. That is, it is made compatible with the *a priori* mind and distinguished from its antecedent sensation as a "representation." Kant adds that, in addition to arranging the manifold, combination is also "representation of the synthetic unity of the manifold," meaning that combination is also the act by which the manifold of sensible intuition is brought under a "unity" by its representation within the understanding (ibid.). In other words, the manifold is made intelligible to the understanding in representational form that is compatible with it. For Kant, the act of combination presupposes this unity, that is, unity is a condition for the possibility of combination. From the point of view of cognition, this act of combination aggregates representations given to the understanding by intuition in space and time and unifies them such that they are intelligible to the understanding and available for use in the formation of knowledge *qua* experience.

If combination presupposes unity as Kant suggests, then this unity is a fundamental component of a formal theory of cognition, for it is the first faculty by which the world is transformed from mere perceptual sensations into possible components of knowledge, i.e. "representations." This synthetic unity is manifested in the formal collection of information that

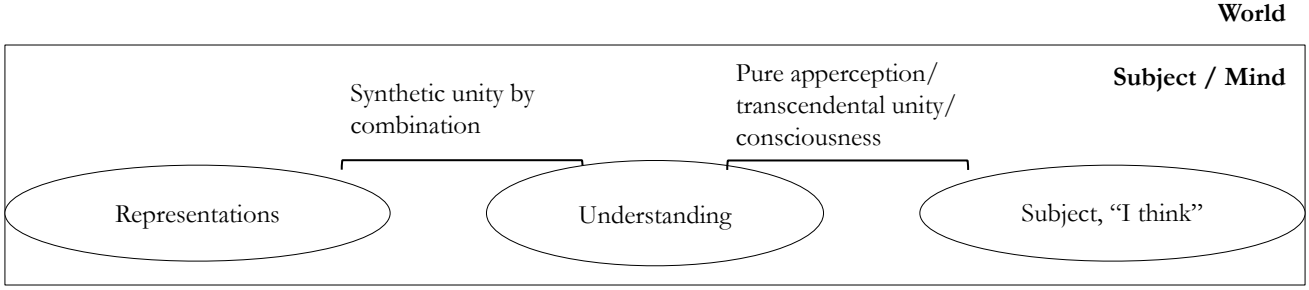
serves as the basis of all knowledge about the world, and thus, as that which makes possible any act of cognition in general. If there were no synthetic unity, the understanding would contain a tangled and divided mess of representations that could not be used to generate knowledge because of its formal incompatibility with the understanding. If, then, there exists a synthetic unity, then there must necessarily be an act of the understanding that formed it, and this act is combination. This relation represents the initial steps in forming the sea of information required to generate knowledge and thus represents the formal beginning of cognition in general.

Although the above has established the material for knowledge, cognition still requires a thinking subject and a form of self-consciousness. Kant calls this the "I think." (152, B132). The intuition, by its above-described relation to combination and synthetic unity, is always related to the "I think," i.e. the representation of the thinking subject that exists with in the understanding. For Kant, the "I think" accompanies *all* representations, for "otherwise something would be represented which could not be thought at all" (152-153). The "I think" can be understood as that which is represented in the statement, "I think that X." Here, we make a judgment about the world that involves a set of representations ("X") that is accompanied by, or combined with, a representation of the thinking subject, or self ("I think"). This illustrates that, for Kant, a type of self-consciousness or, at least, a representation of a self, is necessary for the formation of knowledge. Kant defines this self-representation, a spontaneous *a priori* act of the understanding, as *pure apperception.* Pure apperception, then, accompanies all representations and unifies them under one consciousness, formally speaking. That is, there is a pure *a priori* unity of information about the world and the self in the understanding in the form of representations. Kant describes this unity as the *transcendental unity of self-consciousness*, which, he claims, makes knowledge possible.

Transcendental unity is also important for a formal description of cognition. Just as we understood synthetic unity by combination as integral to cognition for its connecting the mind and

world, pure apperception and the transcendental unity of self-consciousness relate the thinking subject to the understanding in a similar fashion. That is, transcendental unity describes the relation between the mind and the experiencing subject in which it is contained. Kant suggests a formal distinction between subject and understanding that must be joined for knowledge as experience to be possible, for if the subject were not connected with the mind itself, the synthetic unity of the mind's representations would not have the property of belonging to the subject as an aggregate of information available as material for knowledge. From the perspective of cognition, this unity is also necessary, for a cognitive process takes place *within* a subject and produces experience *for* that subject. If the subject were disconnected from the representations contained within its understanding, knowledge would not be possible. Thus, we can also read transcendental unity as a formal component of cognition in general. In essence, the subject characterizes their representations as "belonging to them" in any cognitive process, which agrees with Kant's notion of transcendental self-consciousness. The relations Kant describes that we have read in terms of cognition lead us to a cognitive model for the mind of an experiencing subject that, up to this point, can be represented as follows:

Figure 1: Conceptual framework for a Kantian model of the mind



We now have at least two necessary relations from Kant's B deduction that that describe the formal aspects of cognition: (1) the relation between understanding and representations of the world in synthetic unity and (2) the relation between subject and understanding in transcendental self-consciousness, or transcendental unity. Through his deduction, Kant describes the necessary conditions for the possibility of experience, a possibility which itself is contingent (at least for human beings and many animals) on the existence and action of cognitive processes. It is through these formal conditions of knowledge that Kant describes that we can accordingly understand the formal aspects of cognition. In other words, the conditions for knowledge must relate to the conditions for, and perhaps the dynamics of, cognition. If this were not the case, we should investigate the relations within another process that is more closely related to the production of knowledge, but I cannot now think of such a process. If the perceiving subject has no formal self-consciousness and, in Kantian terms, no representations of the external world and no unity (synthetic and transcendental) in the understanding, the subject's world would be devoid of meaning and utterly unintelligible—a "blooming, buzzing confusion," so to speak (M. Kuehn 2012, verbally). Kant takes this line of argument as demonstrating how *a priori* knowledge is possible and necessary, and I maintain that his arguments can also be read as showing accordingly defining the formal aspects of cognition.

Also important to reading Kant's B Deduction as a formal theory of cognition is his distinction between analytic and synthetic propositions, for Kant's arguments pertaining to the formal ordering of these types of concepts speaks to aspects of cognition as well. Thus, let us recall Kant's analytic-synthetic distinction. In the Introduction to the *Critique:*

> Analytic judgments are therefore those in which the connection of the predicate with the subject is thought through identity; those in which this connection is thought without

> identity should be entitled synthetic. The former, adding nothing through the predicate through the concept of the subject…the latter [adding] to the concept of a subject a predicate which has not been in any wise thought in in, and which no analysis could possibly extract from it. (p. 48, A7/B11)

Analytic propositions are then characterized by concepts and information found in the subject of the proposition itself, i.e. it is explicative. By contrast, synthetic propositions move beyond the scope of the subject, adding new predicates to the existing subject that could not be formulated analytically – i.e. they are ampliative. Based on this distinction, Kant claims that synthetic knowledge is a necessary condition of the possibility of analytic knowledge. Accordingly, I hold that this formal order also applies to cognition. If we understand Figure 1 above as a representation of some formal structures necessary for the possibility of experience, it is evident that synthesis must take place before analysis in cognition. Pure apperception, transcendental consciousness and synthetic unity are possible by means of amplification from that which is inherent in the representations of a perceiving subject's mind. Alternatively put, we arrive at the condition of unity in experience by way of synthetic combination of representations that relate to both the subject (*qua* the "I think") and the world.

For Kant, if these representations are synthesized, the resulting unity then allows for relation to pure concepts (viz. Kant's categories) and the production of experience. Any analytic propositions are made *about* experience, and thus, for Kant, analysis presupposes synthesis. In order for us to make analytic judgments about experience, as we do when we say, "The sky is blue" or "I think the table is brown," synthesis *qua* synthetic and transcendental unity is absolutely necessary prior to the formation of these propositions. We need content to analyze, and this content is made available to the understanding by Kant's *a priori* syntheses of representations of the self and world. It is out of the *a priori* unification of the representations that, for Kant, makes analytic propositions

possible in the first place. I claim that the collective *a priori* unity in the understanding also underlies the possibility of a cognitive process, for if pure apperception were not attained and bound up with pure concepts, the subject would have neither consciousness of his or her own knowledge nor, logically prior to that, have a means to produce it from the sea of information about the world from which it must be derived. Thus, a synthetic cognition analogous to the *a priori* (perhaps unconscious) unification manifest in pure apperception is an antecedent to any analytic cognition that makes conscious judgments about experience. For either type of proposition (analytic or synthetic) to be valid, such unifying features must be formally present in some form across cognitive processes in general.

Kant's analytic-synthetic distinction and its relation to the deduction show that there is an *a priori* structure to knowledge that involves a necessary synthesis before any analytic propositions (or further synthetic ones, e.g. mathematical propositions) can be made about experience. Given the relationship between cognition and knowledge argued for above, this suggests that we can make a similar distinction when thinking about cognition. It seems that, like knowledge, cognition also involves a synthesis of available information that is made intelligible to the understanding and which must be related to the intuition through concepts to produce experience. Kant argues that knowledge itself has two components, concept and intuition. The former is "that through which an objet in general is thought" and is applicable to our discussion of *a priori* faculties thus far. The latter refers to "the intuition through which [an object] is given" and can be associated with pure (spatiotemporal) or empirical intuition (161-162). With respect to cognition in general, if we are to have knowledge, the *a priori* components of cognition discussed above must be related to intuition, for Kant states that the pure concepts of the understanding, "do not afford us any knowledge of things; they do so only through their possible application to empirical intuition. In other words, they serve only for the possibility of empirical knowledge, and such knowledge is what we entitle

experience" (162). We have discussed the pure components of Kant's theory above. Let us now investigate what the empirical aspects of his theory suggest for the logic of cognition.

Cognition must be *of* something in the sense that it needs information from the world in order to produce knowledge-laden experience. For Kant, this information comes from intuition and the concepts of the pure understanding must be applied to representations derived from intuition in order for them to yield any knowledge in the form of experience. I maintain that this holds for cognition as well, given that a cognitive process would produce a nonsensical or false experience if its content were not derived from external input. For Kant, this marriage of pure understanding and intuition is possible through the categories. This proves the "objective validity" of the categories, that is, their property of being applicable to all objects of possible experience through there logical relation to intuition. Kant states, "the categories, as yielding knowledge of things, have no kind of application, save only in regard to things which may be objects of possible experience" (B148). This major conclusion of the B Deduction is reflective of a fundamental property of cognition, namely that it involves an exchange or passage of information from world to mind that involves a characteristic formalization.

Thus, I suggest that Kant's categories and the associated *a priori* concepts discussed above provide a firm theoretical framework for thinking about cognition and I maintain this line of thinking out of the necessary relation between knowledge and cognition articulated above in addition to the following: Since the object of a cognitive process in subject that utilizes knowledge of the external world (i.e. beings with a perceptual apparatus), at a minimum, is to produce experience *qua* knowledge (or vice-versa), we have much reason to believe that the formal structure of knowledge is, at least, analogous to that of cognition, or more specifically, a general cognitive process. If we understand cognition as the process by which knowledge is formed, we can see that the categories (the pure, *a priori* concepts of the understanding), in conjunction to synthetic unity,

pure apperception and transcendental self consciousness, can be understood as formal components of any cognitive process, for if cognition does not involve a these mind-world, subject-mind and intra-mind relations, it would not produce intelligible experience. With the above, we may now augment our formal cognitive schema from earlier:

<u>Figure 2:</u> Model for a cognitive process using Kantian faculties and concepts

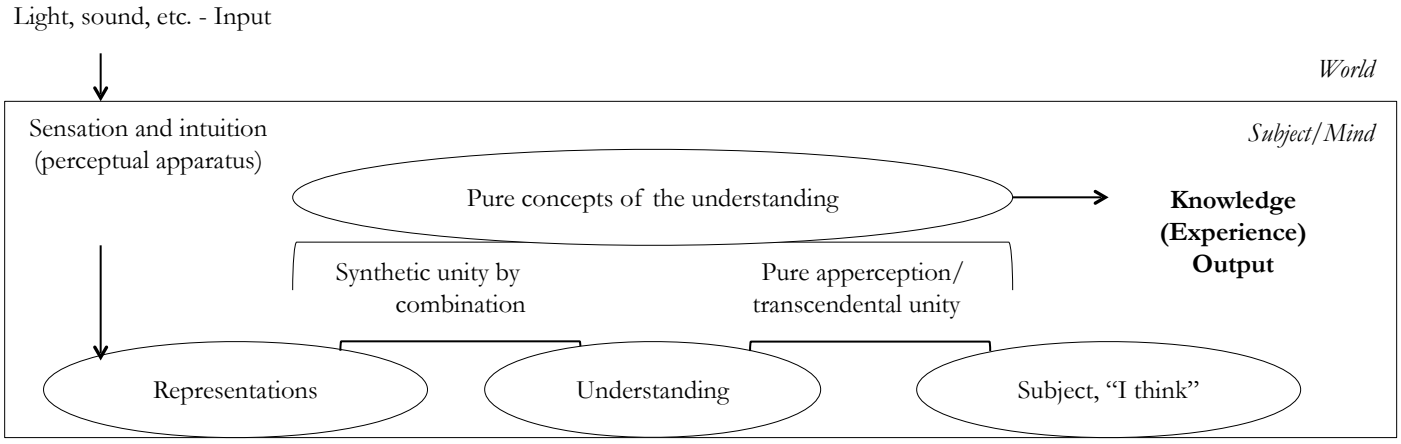


Figure 2 is a model for a cognitive process using faculties and concepts argued for by Kant in the B Deduction. We begin with input from the external world in the form of light, sound, and other phenomena that affect the perceptual apparatus of the subject, resulting in sensation and intuition of the external world. What is given in intuition is formalized as representations in the mind, which are then unified in the understanding via combination to produce synthetic unity. Parallel to this is the manifestation of transcendental unity through the unification of the subject's representation of itself (the "I think") with the unity of representations in the understanding. This transcendental self-consciousness and the unity of representations meets the pure concepts of the understanding such that information from the external world in the form of representations

accompanied by the "I think" can be made intelligible to the subject. The consequent is knowledge *qua* experience as it appears to the perceiving, thinking subject, i.e. you, I, or anyone else. I believe this formal articulation of cognition through use of the faculties, relations and concepts argued for by Kant in the B Deduction of *The Critique of Pure Reason* shows that transcendental idealism is a useful platform for thinking about the nature and logic of cognition in general.

Conclusion

Synthesizing Kant's theory and my assertions about its utility in cognitive theory, no cognition is possible without sensation and intuition. This makes intuitive sense because without input, how could a cognitive process produce knowledge? Like the *a priori* concepts, cognition would be empty and *of nothing* if sensation, intuition, and unity are not understood as formally prior. Sensation and intuition are the antecedents of representations derived from the external world, and these representations are related to the understanding by means of combination. The thinking subject is united to the understanding by means of the synthetic unity of apperception (viz. pure apperception) in the manifestation of transcendental self-consciousness. These unified components of the understanding are then brought to one another under pure concepts of the understanding (the categories) to produce knowledge of the external world. I maintain that this is a fundamental formal description of cognition in general, and that the logical description of a cognitive process is compatible with this schema, and it is for this reason that I have argued that Kant's B Deduction can be read as a formal theory of cognition.

If Kant's transcendental deduction is readable in this cognitive theoretical fashion as I have argued, we can postulate that many more of his arguments are as well, for the a main project in the *Critique* is to account for the possibility of knowledge, which we have here fundamentally linked to cognition in general through transcendental arguments. We could presumably integrate some of the

Kantian faculties not discussed here (e.g. imagination) into our cognitive model and analyze how their relation to knowledge relates to their importance in cognition. This technique should, in theory, work for many of Kant's transcendental arguments. Also, we can entertain the possibility of comparing Kant's theory with, for example, proposition-centric theories of mind that relate to language such as that advanced by Chomsky, modular theories of mind such as that advanced by Fodor, or arguments about modal propositions, possible worlds, or the structure of belief and decision. The compatibility between the cognitive interpretation of Kant's transcendental arguments and theories that make neurological arguments remains an open question. We should avoid armchair science in general, but it is nevertheless interesting to wonder if Kant's work can instruct cognitive science in novel ways. Nevertheless, contemporary philosophers of mind and those thinking about problems of perception and knowledge should certainly hold Kant's arguments in high regard, for, in my view he is responsible for a very early description of the logical bridge between perception and knowledge that we now call "cognition."

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