

KANT'S THEORY OF KNOWLEDGE

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The career of Immanuel Kant¹ was uneventful and his life was spent in the city of Königsberg in East Prussia. He seldom went traveling and never had love affairs; however, he was not eccentric like Rousseau. In fact, he was a model citizen. He was born of extremely poor parents. In his early youth², he was exposed to poverty and learned the meaning of industry and frugality. When he was sixteen, Kant³ went to the university of Königsberg, where he spent every moment of his *time* in useful work. He⁴ had no occasion for amusement and had to save every penny. The main goal of his life is the *summum bonum* of his existence. He not only taught of technical doctrines but showed how philosophy must be approached⁵.

In 1781 Kant published the *Kritik der reinen Vernunft (The Critique of Pure Reason)* which consists of "*Transcendental Aesthetic*" i.e. the conditions of *perception* or *empirical intuition* and the "*Transcendental Logic*" i.e. the conditions of *thought*. To correct some wrong interpretations in *The Critique of Pure Reason*, in 1783 he wrote the *Prolegomena to Any Future Metaphysics*. In 1788, Kant published the

¹ Mayer, F., 1951, "*A History of Modern Philosophy*", California: American Book Company, p. 293

² *Ibid.*p.293

³ *Ibid.*p.293

⁴ *Ibid.*p.293

⁵ *Ibid.*p.293

standard source book for his ethical doctrines *i.e.* *The Kritik der praktischen Vernunft* (*The Critique of Practical Reason*). In 1790, Kant published *The Kritik der Urteils kraft* (*The Critic of Judgment*) which analyzes the notion of *judgments* and *teleology*.

A.Kant's Basic Epistemological Question

Kant⁶ starts his thinking by asking three fundamental questions: (1) *What can I know?*, (2) *What should I do* and (3) *What may I hope for?* He tried to answer the first question in the *Critique of Pure Reason*, the second question in the *Critique of Practical Reason*, and the third question in the *Critique of Judgment*. In his critical philosophy, Kant⁷ wants to find a *synthesis* of knowledge; but, unlike the medieval saint, his basis was epistemological rather than metaphysical. Kant's purpose was, in the manner of reversing the tendency and the process of modern philosophy, to criticize the validity of knowledge itself, to examine its operations, and to determine its limits. The philosophy before Kant had been emphasizing on the knowledge of the objects of the external world, but Kant lays the stress on cognition and the way objects are determined by our understanding.

Kant⁸ states that if we want to understand the nature of the universe, we must look at man's mind. Due to the human mind is still the subject to limitations, it cannot

⁶ *Ibid.*p.294

⁷ *Ibid.* p.294

⁸ *Ibid.*p.295

be an absolute key of reality. Although the human mind cannot supply the content of experience, it can give us the forms in which we perceive it. Kant⁹ calls his philosophy *transcendental* viz. that he is concerned not so much about *phenomena* as with our *a priori* knowledge of them. However he prefers to find out in what way our minds deal with the objects of the external world. Above all, Kant¹⁰ wants to set forth the *a priori principles* which are fundamental in any epistemological investigation. Therefore, Kant's theory of knowledge is based on this *a priori principles* and on the *synthetical* judgment.

Kant¹¹ went into every aspect of all the relevant problems attempted by previous philosophers; and thus, Kant's works are found as repetitions of all earlier attempts to solve these problems. Kant's fundamental question concerning epistemology is: How are *synthetical* judgments *a priori* possible? According to Kant¹², the solution of the above problem is comprehended at the same *time* toward the possibility of the use of *pure* reason in the foundation and construction of all sciences, which contain theoretical knowledge *a priori* of objects; and upon the solution of this problem, depends on the existence or downfall of the science of metaphysics. Accordingly, a system of absolute, certain knowledge can be erected only on a foundation of judgments that are *synthetical* and acquired independently of all experiences.

⁹ *Ibid.*p.295

¹⁰ *Ibid.*p.295

¹¹ Steiner, R., 2004, "*Truth and Knowledge: Kant's Basic Epistemological Question*", The Rudolf Steiner Archive, Retrieved 2004<<http://www.elibrarian@elib.com>>

¹² *Ibid.*

By the use of simple illustrations, Kant¹³ shows that *synthetic* judgments *a priori* are fundamental in mathematics, physical science, and metaphysics. For example¹⁴, in mathematics we say that three plus four is seven. How do we know this? It's not by experience but by *a priori* knowledge. Moreover, we express a necessity in this judgment; past knowledge has shown that three plus four is seven, but we assert that the same case must hold true for the future. Kant¹⁵ calls a judgment as *synthetical* where the concept of the predicate brings to the concept of the subject of something which lies completely outside the subject. Although it stands in connection with the subject, however, in analytical judgment, the predicate merely expresses something which is already contained in the subject.

Kant¹⁶ claims that knowledge in the form of judgment can only be attained when the connection between predicate and subject is *synthetical* in this sense; and it demands that these judgments must be acquired *a priori*, that is independent of all experiences. Two *presuppositions*¹⁷ are thus found in Kant's formulation of the questions; first, is that we need other means of gaining knowledge besides experience, and second, is that all knowledge gained through experience is only approximately valid. It does not occur to Kant¹⁸ that the above principles need proof that is open to

¹³ Mayer, F., 1951, "A History of Modern Philosophy", California: American Book Company, p.296

¹⁴ *Ibid.* p. 296

¹⁵ Steiner, R., 1004, "Truth and Knowledge: Kant's Basic Epistemological Question", The Rudolf Steiner Archive, Retrieved 2004<elibrarian@elib.com>

¹⁶ Kant, I., 1787, "The Critique of Pure Reason: Preface To The Second Edition", Translated By J. M. D. Meiklejohn, Retrieved 2003<<http://www.encarta.msn.com/>>

¹⁷ Steiner, R., 1004, "Truth and Knowledge: Kant's Basic Epistemological Question", The Rudolf Steiner Archive, Retrieved 2004<elibrarian@elib.com>

¹⁸ *Ibid.*

doubt and they are prejudices which he simply takes over from dogmatic philosophy and then uses them as the basis of his critical investigations. He made the same assumptions and merely inquired under what conditions that they are valid or not valid.

Cohen and Stadler in Steiner R. attempted to prove that Kant has established *a priori* nature of mathematical and *purely* scientific principles. However¹⁹, Kant in the *Critique of Pure Reason* attempted to show that mathematics and *pure* natural science are *a priori* sciences, in which the form of all experiences must be inherent in the subject itself and the only thing left is the material of sensations. Kant²⁰ builds up the material of sensations into a system of experiences in the form of which is inherent in the subject. Kant²¹ claims that the formal truths of *a priori* theories have meaning and significance only as principles which regulate the material of sensation and they make experience possible, but do not go further than experience. Kant²² concludes that these formal truths are the *synthetical judgment a priori*, and they must, as condition necessary for experience, extend as far as the experience itself.

¹⁹ In Steiner, R., 2004, "*Truth and Knowledge: Kant's Basic Epistemological Question*", The Rudolf Steiner Archive, Retrieved 2004<elibrarian@elib.com>

²⁰ *Ibid.*

²¹ *Ibid.*

²² *Ibid.*

The capital feature²³ in *Kant's Criticism of the Judgment* is that in his giving a representation and a name to the idea. Such a representation²⁴, as an *intuitive understanding* or an *inner adaptation*, suggests a universal which is at the same *time* apprehended as essentially a concrete unity. The principle²⁵, by which the *reflective faculty of judgment* regulates and arranges the products of animated nature, is described as the *End* or *final* cause of the notion in action in which the universal at once determinates in itself. According to Kant²⁶, reason can know *phenomena* only, there would still have been an option for animated nature between two equally subjective modes of thought. Even, according to Kant's own exposition, there would have been an obligation to admit, in the case of natural productions, a knowledge is not confined to the *categories* of quality, cause and effect, composition, constituents, and so on.

The principle of inward adaptation or design²⁷ had been kept to and carried out in scientific application and would have led to a different and higher method of observing nature. Thus, Kant's epistemology did not seek to obtain knowledge of the object itself, but sought to clarify how objective truthfulness can be obtained. He names it the *transcendental* method. For Kant²⁸, cognition is judgment. Judgment is

²³ Hegel, G.W.F, 1873, "*The Critical Philosophy: from The Shorter Logic*", translated by William Wallace, Clarendon Press. Retrieved 2004 <<http://www.marxists.org/reference/subject/philosophy/index.htm>>

²⁴ *Ibid.*

²⁵ *Ibid.*

²⁶ *Ibid.*

²⁷ *Ibid.*

²⁸ Kant, I., 1787, "*The Critique of Pure Reason: Preface To The Second Edition*", Translated By J. M. D. Meiklejohn, Retrieved 2003 <<http://www.encyclopedia.com/>>

made in terms of a proposition, and in a proposition there are subject and predicate. Knowledge increases through a judgment, in which a new concept that is not contained in the subject appears in the predicate. Kant²⁹ calls such a judgment "*synthetic judgment*." In contrast, a judgment in which the concept of the predicate already contained in the concept of the subject is called "*analytical judgment*"; in the end, new knowledge can be obtained only through *synthetic judgments*.

Although new knowledge³⁰ can be obtained through *synthetic* judgment, it cannot become correct knowledge if it does not have *universal validity*. In order knowledge to have *universal validity*, it should not be merely *empirical* knowledge, but should have some *a priori* element independent of experience. In order a *synthetic* judgment to have *universal validity*, it must be an *a priori* cognition, namely, a *a priori synthetic* judgment. So, Kant³¹ had to cope with the question: How are *a priori synthetic judgments possible?*; and Kant solved this question in three fields: mathematics, physics, and metaphysics; and the three main divisions of the first part of the Critique deal respectively with these.

As for Kant³², the central problem of his philosophy is the *synthetic a priori* knowledge or judgment; Kant believes that all knowledge are *reducible* to the forms of judgment. Knowledge³³ is obtained by judgments. There are two judgments. First, *synthetic* judgments i.e. judgments which expand our knowledge of nature or *analytic*

²⁹ *Ibid.*

³⁰ *Ibid.*

³¹ *Ibid.*

³² *Ibid.*

³³ *Ibid.*

judgments i.e. mere explications or explanations of what we already know. Second, *a priori* judgments i.e. knowledge which are universally and necessarily valid or *a posteriori* judgments i.e. judgments which are merely subjective and do not possess the *apodeicticity*. Kant³⁴ advocates that de facto there are *synthetic a priori* judgments in arithmetic, geometry, physics and metaphysics. These sciences are not only possible, but also actual as our universal and necessary knowledge.

According to Kant³⁵, in its *synthetic a priori* form all the laws and knowledge of those sciences are explicitly stated; however, there are differences between the *pure* mathematics, *pure* natural sciences and metaphysics. Seeing the former, we can ask only how they are possible at all. For we have evidence³⁶ while in the latter, we must ask how *synthetic a priori* knowledge is possible at all. How is *pure* mathematics possible? Kant claims it is possible because it is *pure a priori intuition*. How is *pure* physics possible? He claims it is possible because there are *categories*. How is metaphysics as natural faculty possible? He claims it is possible because there are *concepts of reason*. How is metaphysics as a science possible? He claims it is possible as *Practical Sciences*.³⁷

³⁴ *Ibid.*

³⁵ *Ibid.*

³⁶ *Ibid.*

³⁷ *Ibid.*

B. Kant's Transcendental Analytic

In the *Critique of Pure Reason*, Kant, claims that *pure* understanding is the source of all principles, rules in respect of that which happens, and principles according to everything that can be presented to us as an object must conform to rules. Accordingly, Mathematics is made up of *pure a priori principles* that we may not ascribe to the *pure* understanding which is the faculty of concepts. Kant³⁸ claims that not every kind of knowledge *a priori* should be called *transcendental* ; only that by which we know that certain representations can be employed or are possible *a priori*; and *space* is the knowledge that the representations are not *empirical*. Kant³⁹ notes that the distinction between *transcendental* and *empirical* belongs only to the critique of knowledge, not to the relation of that knowledge to its objects.

1. Discovery of all Pure Concepts of the Understanding

Kant⁴⁰ perceives truth as agreement of knowledge with its object and the general criterion must be valid in each instance regardless of how objects vary. Since truth concerns the content, a sufficient and general criterion cannot be given. Wallis⁴¹ explores the progressive stages of Kant's analysis of the faculties of the mind which

³⁸ Kant, I., 1787, "*The Critique of Pure Reason: Preface To The Second Edition*", Translated By J. M. D. Meiklejohn, Retrieved 2003<<http://www.encyclopedia.com/>>

³⁹ *Ibid.*

⁴⁰ *Ibid.*

⁴¹ Wallis, S.F, 2004, "*Immanuel Kant (1724-1804)*", New York: Media & Communication, The European Graduate School. Retrieved 2004 <<http://www.uni.scrf.ucam.org/ccps/Kantian.pdf>>

reveals the *transcendental* structuring of experience. First, in the analysis of *sensibility*, Kant argues for the necessarily spatiotemporal character of sensation; and then Kant analyzes the understanding, the faculty that applies concepts to sensory experience. Kant⁴² concludes that the “*categories*” provide a necessary, foundational template for our concepts to map onto our experience. In addition to providing these *transcendental* concepts, the understanding is also the source of ordinary *empirical* concepts that make judgments about objects possible. The understanding provides concepts as the rules for identifying the properties in our representations.

According to Kant⁴³, all combination of an act of the understanding is called *synthesis* because we cannot apply a concept until we have formed it; and therefore, '*I think*' must accompany all my representations. Intuition⁴⁴ in which representation can be given prior to all thought, has a necessary relation to '*I think*' and is an act of *spontaneity* that cannot belong to *sensibility*. The identity⁴⁵ of the apperception of a *manifold* which is given in intuition contains a *synthesis* of representations, and is possible only through the consciousness of this *synthesis*. The analytic unity of apperception⁴⁶ is possible only under the presupposition of a certain *synthetic unity* of the *manifold of intuition*. Kant⁴⁷ claims that through the '*I*' as simple representation, no

⁴² *Ibid.*

⁴³ Kant, I., 1787, “*The Critique of Pure Reason: Preface To The Second Edition*”, Translated By J. M. D. Meiklejohn, Retrieved 2003 <<http://www.encyclopedia.com/>>

⁴⁴ *Ibid.*

⁴⁵ *Ibid.*

⁴⁶ *Ibid.*

⁴⁷ *Ibid.*

manifold is given; for a *manifold* is given in intuition which is distinct from the 'I' and only through combination in one consciousness it can be thought.

Kant⁴⁸ insists that the supreme principle of the possibility of all intuition in relation to *sensibility* is that all the *manifold* of intuition should be subject to the formal conditions of *time* and *space*; while, the supreme principle of the same possibility in its relation to the understanding is that the *manifold* of intuition should be subject to the conditions of the original *synthetic* unity of apperception. Ross, K.L. (2001) exposes that Kant proposes that *space* and *time* do not really exist outside of us but are "*forms of intuition*," i.e. conditions of perception, imposed by our own minds. While Gottfried, P (1987) notes from Kant that although the forms of *time* and *space* are *subjective conditions of sensation* and depend on their appearance of perceptual activity, they are nonetheless characterized as being *a priori*. They are antecedent to the specific sensations for which they provide a conceptual frame.

Kant⁴⁹ states that *time* existed is not for itself or as an objective quality in things; to conceive of *time* as something objective would require its presence in things which were not objects of perception. However, since *time* and *space* are only knowable as the *a priori* forms of intuition, any other assumption about them, apart from this context, could not be substantiated. According to Kant⁵⁰, *time* is also the form of our inner sense, of our intuition of ourselves and of our own inner situation;

⁴⁸ *Ibid.*

⁴⁹ Kant, I., 1787, "*The Critique of Pure Reason: Preface To The Second Edition*", Translated By J. M. D. Meiklejohn, Retrieved 2003 <<http://www.encyclopedia.com/>>

⁵⁰ *Ibid.*

belonging neither to any pattern nor place, it determines the relationship of perceptions within our inner situation; because this inner intuition as such assumed no shaper, it had to be imagined by positing *succession* through a line extending *ad-infinitum* in which sensory impressions form a *uni-dimensional* sequence and by generalizing from the attributes of this line to those of *time* itself.

2. The Deduction of the Pure Concepts of Understanding

Kant, 1787, strives to demonstrate that *space* and *time* are neither experience nor concepts, but they are *pure* intuition. He calls it as *metaphysical demonstrations of space and time*; and concludes that: firstly, *space* is not an *empirical* concept obtained by abstraction due to any *empirical* concept obtained from the external senses such as even "*next to each other*" presupposes the notion of *space*; and this means that two things are located at two different *spaces*. *Time*⁵¹ is not obtained by abstraction or association from our *empirical* experience, but is prior to the notion of simultaneous or *successive*. *Space* and *time* are anticipations of perception and are not the products of our abstraction.

Secondly⁵², the idea of *space* is necessary due to the fact that we are not able to think of *space* without everything in it, however we are not able to disregard *space* itself. We⁵³ can think of *time* without any *phenomenon*, but it is not possible to think of any *phenomenon* without *time*; *space* and *time* are *a priori* as the conditions for the

⁵¹ *Ibid.*

⁵² *Ibid.*

⁵³ *Ibid.*

possibility of *phenomena*. Thirdly⁵⁴, the idea of *space* is not a universal concept; it is an individual idea or an intuition. There is only one *time* and various special *times* are parts of the whole *time* and the whole is prior to its parts. Fourthly, *space* is infinite and contains in itself infinitely many partial *spaces*.

Next, Kant, 1787, develops *Transcendental Demonstrations* to indicate that the possibility of *synthetic a priori* knowledge is proven only on the basis of *Space* and *Time*, as follows: first, if *space* is a mere concept and not an intuition, a proposition which expands our knowledge about the characters of *space* beyond the concept cannot be analyzed from that concept. Therefore, the possibility of *synthesis* and expansion of Geometric knowledge is thus based on *space's* being intuited or on the fact that such a proposition may be known true only in intuition. And thus the truth of a Geometric proposition can be demonstrated only in intuition.

Second⁵⁵, the *apodeicticity* of Geometric knowledge is explained from the apriority of intuition of *space* and the *apodeicticity* of Arithmetics knowledge is explained from the apriority of intuition of *time*. If *space* and *time* are to be *empirical*, they do not have necessity; however, both Geometric and Arithmetic propositions are universally valid and necessary true. Third⁵⁶, mathematical knowledge has the objective reality that based on *space* and *time* in which our experiences are possible. Forth, in regard to *time*, change and motion are only possible on the basis of *time*.

⁵⁴ *Ibid.*

⁵⁵ *Ibid.*

⁵⁶ *Ibid.*

3. The Schematism of the Pure Concepts of Understanding

Kant, 1787, claims that as a one-dimensional object, *time* is essentially *successive* that is one moment follows another; and in order to think *time* as a *succession*, we must generate the *time-series* i.e. we must think one moment as following another. Kant⁵⁷ suggests that at each point of the series up to that point; therefore, we always think *time* as a magnitude. Accordingly, since the *categories* of quantity are those of unity, plurality and totality, we can say that they apply to appearances in that all appearances must be thought as existing within a specific *time-span* which can be thought as momentary, that is, as a series of *time* spans or as the completion of a series of *time* spans.

On the other hand, Kant⁵⁸ insists that we can think of a given *time* as either empty or full; in order to represent objects in *time* we must resort to sensation, so that in thinking a *time* we must always ask whether that *time* is filled up. Thus the *schema* of quality is the filling of *time*; it would be natural to assume that the question whether-a *time* is full admits of a simple answer of yes or no. However, Kant⁵⁹ claims that reality and negation must be conceived as two extremes or limits, between which exist infinitely many degrees; he calls these degrees as "*intensive magnitudes*"

Meanwhile, Kant, 1787, insists that *time* is supposed to relate objects, not to one another, but to the understanding, that is, we can think an object in one of three

⁵⁷ *Ibid.*

⁵⁸ *Ibid.*

⁵⁹ *Ibid.*

ways: (1) as occupying some *time* or other without specifying what part of *time*, that is, the *schema of possibility* in which we can think of an object as possible in so far as we can think of it as occupying some *time* or other, whether or not it actually occupies it; (2) as existing in some definite *time* that is the *schema of actuality* in which we think of an object as actual when we claim that it exists in some specific part of *time*; and (3) as existing at all *times* that is the *schema of necessity* in which an object is thought as being necessary if it is something which we must represent as occupying all *times*. In other words, we could not think of a *time* which does not contain that object.

Kant⁶⁰ sums up that *time* is to be seen as the formal *a priori* condition for all appearance; whereas *space* remains the *pure form* of all outward intuition, *time* supplied the subject with an inward orientation essential for perceptual relations. Kant⁶¹ argues that the structure for the *a posteriori* representations we receive from sensation must itself be *a priori*. This leads him to the science of *a priori sensibility*, which suggests that our capacity to receive representations of objects includes a capacity to receive representations of the *a priori* form of objects. Accordingly, since *space* is one of two such *a priori* forms, *a priori sensibility* includes a capacity to receive *pure* representations of *space*. Kant⁶² denies that *time* and *space* as an absolute

⁶⁰ Gottfried, P., 1987, "Form of Intuition: Kantian Time And Space Reconsidered", *The World & I*: Issue Date: AUGUST 1987 Volume:02 Page: 689. Retrieved 2004 <<http://www.worldandI.com/public/1987/august/copyright.asp>>

⁶¹ Shabel, L., 2003, "Reflections on Kant's concept (and intuition) of space", *Studies In History and Philosophy of Science Part A* Volume 34, Issue 1 Retrieved 2003, <<http://www.sciencedirect.com/science?>>

⁶² Gottfried, P., 1987, "Form of Intuition: Kantian Time And Space Reconsidered", *The World & I*: Issue Date: AUGUST 1987 Volume:02 Page: 689. Retrieved 2004 <<http://www.worldandI.com/public/1987/august/copyright.asp>>

reality, and maintains that outside of its cognitive function *time* is nothing. Accordingly, the objective validity of *time* and *space* is limited to the regularity of their relationship to sensation; yet within this limited framework, their activity was constant and predictable.

Kant⁶³ states that *space* and *time* do not exist by *themselves*, that is, they are not real things existing outside of our mind. They are not qualities, nor relations belonging to the *things in themselves*. They are the forms of our *empirical* intuition and are rooted in the subjective structure of our mind. Further, he claims that we sense *space* and *time* with two forms of *empirical intuition* and *they themselves intuition* at the same *time*. These intuitions are *pure*, since they are capable of becoming objects of our inquiry quite apart and independent from our *empirical* intuition. Kant⁶⁴ also claims that *space* and *time* are also *a priori*, because these intuitions as the forms of *empirical* intuitions precedes from all *empirical* intuitions, as long as they are the subjective conditions in which something can be an object of our *empirical* intuition.

Space and *time*⁶⁵, therefore, are not containers in which all the real things are en-compassed nor the dimension or order which belongs to the *things in themselves*; they are the forms of our intuition. Kant⁶⁶ claims that our ideas are in regard to their origin either *pure* or *empirical*; they are intuitions or concepts. While Evans, J.D.G, (1999), notes from Kant that the notion of object *structurally* presupposes the subject,

⁶³ -----, "Immanuel Kant (1724-1804): "Kant's Criticism against the Continental Rationalism and the British Empiricism". Retrieved 2004 <<http://www.Google.com/Kant>>

⁶⁴ *Ibid.*

⁶⁵ *Ibid.*

⁶⁶ *Ibid.*

so the *transcendental* and necessary unity of apperception is the end product of a process of connection and *synthesis* of *phenomena* which depends on the application of the representation of an object in intuition to experience. Our minds are not comfortable with simply observing the sensuous world and its connections through universal laws; it requires some knowledge of *things in themselves* to be content (Kolak, in Meibos, A.). We know that *pure* science exists because there are universal laws, such as “*substance is permanent*” and “every event is determined by a cause according to constant laws”

These laws⁶⁷ must not be *a posteriori*, because experience can only teach us what exists and how it exists, but not that it must exist. Neither are they *a priori*, for we must make our deductions from observations. However, the conformity of experience to constant laws must be an *a priori* understanding. Through our awareness⁶⁸, we have perceptions; then, our *sensibility*, by using the concepts of *pure* understanding, structures these perceptions into experiences which we use to form science. This process is called the *schematism of pure understanding* where *schemata* are notions of objects categorized and structured in *time*. The *categories* can only subsume *schemata* and not awareness.

Kant⁶⁹ claims that there is only one way in which a mediating element can be discovered, that is, by examining the single element which is present in all

⁶⁷ Meibos, A., 1998, “*Intro to Philosophy: Kant and a priori Synthetic Judgment*”s, Prof. Arts Notes for PHIL 251. Retrieved 2004 <<http://www.icecavern.net/~qirien/punkus/index.html>>

⁶⁸ *Ibid.*

⁶⁹ Kant, I., 1787, “*The Critique of Pure Reason: Preface To The Second Edition*”, Translated By J. M. D. Meiklejohn, Retrieved 2003 <<http://www.encyclopedia.com/>>

appearances, but at the same *time*, it is capable of being conceptualized as “*time*”. According to him, we must, therefore, discover various ways of thinking of *time*, and if we can discover the ways in which this must be done, we can say that they both conform to the conditions of thought and are present in all appearances. Kant⁷⁰ calls these conceptualizations of *time* “*schemata*”. He then finds four fundamental modes of thinking *time*, one corresponding to each of the basic divisions of *categories* that are *time-series*, *time-content*, *time-order*, and the scope of *time*. Kant⁷¹ convicts that *schemata* for the *categories* of relation are treated separately because the relational *categories* treat them in respect to one another and that *time* considered of *it-self* is *successive* but not *simultaneous*, and *space* is *simultaneous* but not *successive*.

Kant⁷², therefore thinks objects in a *time-order*: as enduring through a number of *times* i.e. of the *permanence* of substance; as abiding while all else change; as in one state of affairs which succeeds another i.e. we think the states of substances as occupying a *succession* of *times* in accordance with a rule; and as co-existing i.e. the *schema* of reciprocity or mutual simultaneous interaction. Next, Kant maintains that in all subsumptions under a concept, the representation must be homogeneous with the concept; however *pure concepts of understanding* can never be met with any intuition. Hence, Kant argues that the *transcendental schema* in which it mediates principle between category and appearances must be *pure* and yet sensible.

⁷⁰ *Ibid.*

⁷¹ *Ibid.*

⁷² *Ibid.*

According to Kant⁷³, the application of the category to appearances becomes possible by means of the *transcendental* determination of *time*, that is, the *schema* of the concepts of understanding and mediates the subsumption of appearances under the category. Accordingly, the *schema* is always a product of imagination; it makes images possible as the products of the *empirical* faculty of reproductive imagination. Kant⁷⁴ concludes that there is a *schema* for each category in which the *magnitude* is the *generation of time* itself in the *successive* apprehension of an object. Kant⁷⁵ defines *quality* as the filling of *time* and *reality* as the sensation in general pointing to being in *time*; while *negation* is not-being in time and relation is the connecting of perceptions at all times according to a rule of *time* determination.

Further, *substance*⁷⁶ is permanence of the real in *time*; *cause* is the real which something else always follows; *community* is the *coexistence* according to a universal rule of the determinations of one substance with those of another. While *modality*⁷⁷ is the *time* itself as the correlation of the determination whether and how an object belongs to *time*; *possibility* is the agreement of the *synthesis* of different representations with the conditions of *time* in general; *actuality* is the existence in some determinate *time* and the *necessity* is the existence of an object at all *times*.

⁷³ *Ibid.*

⁷⁴ *Ibid.*

⁷⁵ *Ibid.*

⁷⁶ *Ibid.*

⁷⁷ *Ibid.*

4. System of all Principles of Pure Understanding

Propositions, according to Kant, 1787, can also be divided into two other types: *empirical* and *a priori*; *empirical* propositions depend entirely on sense perception, but *a priori* propositions have a fundamental validity and are not based on such perception. Kant's claims⁷⁸ that it is possible to make *synthetic a priori judgments* and regards that the *objects of the material world* is fundamentally unknowable; therefore, from the point of view of reason, they serve merely as the raw material from which sensations are formed. Kant⁷⁹ maintains that the *category* has no other application in knowledge than to objects of experience. To think an object and to know an object are different things. Accordingly, *knowledge* involves two factors: the *concept* and the *intuition*. For the only intuition possible to us is sensible, the thought of an object can become knowledge only in so far as the concept is related to objects of the senses. This determines the limits of the *pure concepts of understanding*.

Kant⁸⁰ insists that since there lies in us a certain form of *a priori* sensible intuition, the *understanding*, as spontaneity, is able to determine inner sense through the *manifold* of given representations in accordance with the *synthetic* unity of apperception. In this way the *categories* obtain objective validity. Further Kant⁸¹ insists that *figurative synthesis* is the synthesis of the manifold which is possible and necessary a priori. It opposes to combination through the understanding which is

⁷⁸ *Ibid.*

⁷⁹ *Ibid.*

⁸⁰ *Ibid.*

⁸¹ *Ibid.*

thought in the mere category in respect to intuition in general. It may be called the *transcendental synthesis of imagination* that is the faculty of representing in intuition of an object which is not present; and of course it belongs to *sensibility*.

For the principle that all intuition are extensive, as it was elaborated in the *Critique of Pure Reason*, Kant, 1787, proves that all *appearances* are *extensive magnitudes* and *consciousness* of the synthetic unity of the manifold is the concept of *magnitude*. A *magnitude* is extensive when the representation of the parts makes possible and therefore necessarily precedes the representation of the whole. In *appearances*, the real i.e. an object of sensation, has intensive magnitude or a degree. Kant⁸² proves that *perception* is empirical consciousness and *appearances* are not pure intuition like *time* and *space*. They⁸³ contain the real of sensation as subjective representation. Therefore, from *empirical consciousness* to *pure consciousness* a graduated transition is possible. There is also possible a *synthesis* in the process of generating the magnitude of a sensation as well as that the sensation is not itself an objective representation. Since neither the intuition of *space* nor *time* has met with it, its magnitude is not extensive but intensive.

Kant⁸⁴ proves that *experience* is possible only through the representation of a necessary connection of perceptions. For *experience* is an empirical knowledge, it is a synthesis of perceptions; it is not contained in perception but containing itself in one

⁸² *Ibid.*

⁸³ *Ibid.*

⁸⁴ *Ibid.*

consciousness of the synthetic unity of the manifold of perceptions. And since *time*⁸⁵ itself cannot be perceived, the determination of the existence of objects in *time* can take place only through their relation in *time* in general. Since this determination always carry a necessity with time, experience is only possible through a representation of necessary connection of perceptions. Kant⁸⁶ ascertains that the three *modes of time* are *duration*, *succession*, and *coexistence* and the general principles of the *three analogies* rest on the necessary unity of apperception at every instant of *time*. These general principles are not concerned with appearances but only with existence and relation in respect to *existence*. *Existence*, therefore, can never be known as *a priori* and can not be constructed like mathematical principles so that these principles will be only regulative. These *analogies* are valid for empirical employment of understanding but not for transcendental one. In the principle, we use the *category*; but in its application to appearances, we use the *schema*.

5. Phenomena and Noumena

According to Kant⁸⁷, *transcendental illusion* is the result of applying the understanding and sensibility beyond their limits. Although the objective rules may be the same in each case, the subjective idea of *causal connection* can lead to different

⁸⁵ *Ibid.*

⁸⁶ *Ibid.*

⁸⁷ Meibos, A., 1998, "Intro to Philosophy: Kant and a priori Synthetic Judgments," Prof. Arts Notes for PHIL 251 Retrieved 2004 <<http://www.icecavern.net/~qirien/punkus/index.html>>

deductions. Kant⁸⁸ indicates that reason which connects us directly to *things in themselves* is a question that he cannot answer. *Transcendental Deduction* aimed at showing that *particular concepts*, like causality or substance, are *necessary conditions* for the possibility of experience. Since *objects*⁸⁹ can only be experienced *spatio-temporally*, the only application of concepts that yields knowledge is to the empirical spatiotemporal world. Beyond that realm, there can be no sensations of objects for the understanding to judge rightly or wrongly.

Kant⁹⁰ states that *thoughts* without *content* are *empty*; *intuitions* without *concepts* are *blind*. To have meaningful awareness some datum is required. Accordingly, we possess two sources of input that can serve as such a datum physical sensation and the sense of moral duty. Kant⁹¹ admits that *transcendental synthesis* of imagination is an action of the understanding on sensibility, first application, and the ground of all other applications of the understanding. Kant⁹² finds that there was a *paradox* of how *inner sense* can represent to consciousness ourselves as we appear to ourselves. This *paradox* is coming from the fact that the understanding is able to determine sensibility inwardly. The understanding performs this act upon the passive subject whose faculty it is. While the understanding does not find in inner sense a

⁸⁸ Evan, J.D.G., 1999, "Kant's Analysis of the Paralogism of Rational Psychology in Critique of Pure Reason Edition B, *Kantian Review* vol. 3 (1999), 99-105. Retrieved 2004 <<http://www.qub.ac.uk/phil/courses/Kant/>>

⁸⁹ Wallis, S.F., 2004, *Immanuel Kant (1724-1804)*, New York: Media & Communication, The European Graduate School. Retrieved 2004 <<http://www.uni.scrf.ucam.org/ccps/Kantian.pdf>>

⁹⁰ *Ibid.*

⁹¹ Kant, I., 1787, "The Critique of Pure Reason: Preface To The Second Edition", Translated By J. M. D. Meiklejohn, Retrieved 2003 <<http://www.encyclopedia.com/>>

⁹² *Ibid.*

combination of the manifold, we intuit inner sense of ourselves only as we are inwardly affected by ourselves.

Kant⁹³ claims that in the synthetic original unity of apperception, we are conscious only that we are. This is a thought, not an intuition. The consciousness of self is very far from being a knowledge of self; it also needs an intuition of the manifold in the self. According to Kant⁹⁴, the *transcendental deduction* of the universally possible employment in experience of the pure concepts of the understanding needs to be clarified that the possibility of knowing a priori, by means of the categories of whatever objects, present *themselves* to our senses in respect of the laws of their combination. On the other hand, Kant⁹⁵ points out that the relations in which *a priori* is recognizable in *space* and *time* are valid to all the possible objects of experience. However, they are valid only to the *phenomena* and not to the *things in themselves*. Therefore, *space* and *time* have the *empirical reality* and the *transcendental ideality* at the same time.

Kant⁹⁶ insists that *any thing* as long as it is an *external phenomenon* necessarily appears in *spatial relationship*; while any *phenomenon* is necessarily appears in *temporal relationship*. It⁹⁷ calls that *space* and *time* are *objective* to everything given in experience; therefore, *space* and *time* are *empirically real*. They do not have *absolute reality* because they do not apply to *things in themselves*, whether as

⁹³ *Ibid.*

⁹⁴ *Ibid.*

⁹⁵ *Ibid.*

⁹⁶.....“Immanuel Kant (1724-1804) “*Kant's Criticism against the Continental Rationalism and the British Empiricism*” Retrieved 2004 <<http://www.Google.com/Kant?>>

⁹⁷ *Ibid.*

substances or as attributes. Due to *space* and *time* have no reality, but they are ideal, this, then, is called the *Transcendental Ideality of Space and Time*. Kant⁹⁸ contends that we are never able to recognize *things in themselves*. Any quality which belongs to the *thing- in- itself* can never be known to us through senses. At the same time, anything which given in *time* is not the *thing- in- itself*. What we intuitively recognize ourselves by reflection, is how we appear as a *phenomenon*, and not how we really are.

Kant⁹⁹ claims that *synthesis of apprehension* is the combination of the manifold in an empirical intuition. *Synthesis of apprehension* of the manifold of appearance must conform to *time* and *space*. *Time* and *space*¹⁰⁰ are themselves intuitions which contain a manifold of their own. They are not presented in a priori and they are not just the forms of sensible intuitions. *Unity* of synthesis of the manifold¹⁰¹ i.e. a combination to which everything conformly represented in *space* and *time*, is given *a priori* as the condition of the synthesis of all apprehension, without or within us, not in, but with these intuitions. Kant then concludes that all *synthesis* was in subject to the *categories* in which it prescribes *laws of a priori* to appearances. They do not exist in the appearances but only relative to the subject.

⁹⁸ *Ibid.*

⁹⁹ Kant, I., 1787, "*The Critique of Pure Reason: Preface To The Second Edition*", Translated By J. M. D. Meiklejohn, Retrieved 2003 <<http://www.encyclopedia.com/>>

¹⁰⁰ *Ibid.*

¹⁰¹ *Ibid.*

Kant¹⁰² claims that *pure understanding* is not in a position to prescribe through *categories* any *a priori laws* other than those which are involved in a nature in general that is in conformity to *space* and *time*. *Empirical laws* cannot be derived from *categories* but are subject to them. In term of the outcome of this *deduction* of the concepts of understanding, according to Kant, we cannot think of an object safe through the *categories* and cannot know an object so thought safe through intuitions corresponding to these concepts. For all our *intuitions* are empirical, there can be no *a priori* knowledge except of objects of possible experience. Objects of themselves¹⁰³ have *no existence*, and *space* and *time* exist only as part of the mind; where *intuitions* by which perceptions are measured and judged.

Kant¹⁰⁴ then states that a number of a priori concepts, which he called *categories*, exist. This *category* falls into four groups: those concerning *quantity* are *unity*, *plurality*, and *totality*; those concerning *quality* are *reality*, *negation*, and *limitation*; those concerning *relation* are *substance-and-accident*, *cause-and-effect*, and *reciprocity*; and those concerning *modality* are *possibility*, *existence*, and *necessity*. Kant's *transcendental method*¹⁰⁵ has permitted him to reveal the a priori components of *sensations* and the a priori *concepts*. There are *a priori judgments* that must necessarily govern all appearances of objects; these *judgments* are a function of the table of *categories'* role in determining all possible judgments. *Judgment* is the

¹⁰² *Ibid.*

¹⁰³, "Kant" Retrieved 2004 <<http://www.encyclopedia.com/>>

¹⁰⁴ *Ibid.*

¹⁰⁵ Wallis, S.F, 2004, *Immanuel Kant (1724-1804)*, New York: Media & Communication, The European Graduate School. Retrieved 2004 <<http://www.uni.scrf.ucam.org/ccps/Kantian.pdf>>

fundamental action of thinking. It is the process of conceptual unification of representations. Determining thought must be *judgmental* in form.

Concepts¹⁰⁶ are the result of judgments unifying further concepts; but this cannot be an infinitely regressing process. Certain concepts are basic to judgment and not themselves the product of prior judgments; these are the *categories* of the *pure* concepts. Therefore, the *categories* are necessary conditions of judging i.e. necessary conditions of thought. We can determine which concepts are the *pure* ones by considering the nature of judgment. *Judgments* can be viewed as unity functions for representations. Different forms of judgment will unify representations in different ways. *Understanding*¹⁰⁷ is the faculty of knowledge and the first pure knowledge of understanding is the principle of original *synthetic* unity of apperception; it is an objective condition of knowledge.

Kant¹⁰⁸ further claims that *transcendental* unity of apperception is how all the manifold given in an intuition is united in a concept of an object. It is *objective* and *subjective* unity of consciousness which is a determination of inner sense through which manifold is empirically given. Kant insists that *judgment* is the manner in which given *modes of knowledge* are brought to the objective unity of apperception. It indicates the objective unity of a given representation's relation to original apperception, and its necessary unity. Kant claims that the *representations* belong to

¹⁰⁶ Kant in Wallis, S.F, 2004, *Immanuel Kant (1724-1804)*, New York: Media & Communication, The European Graduate School. Retrieved 2004 <<http://www.uni.scrf.ucam.org/ccps/Kantian.pdf>>

¹⁰⁷ Kant, I., 1787, "*The Critique of Pure Reason: Preface To The Second Edition*", Translated By J. M. D. Meiklejohn, Retrieved 2003<<http://www.encyclopedia.com/>>

¹⁰⁸ *Ibid.*

one another in virtue of the necessary unity of apperception in the synthesis of intuition that accords to principles of the objective determination of all representations and only in this way does there arise from this relation a judgment which is objectively valid.

Kant¹⁰⁹ adds that all the *manifold* is determined in respect of one to the logical functions of judgment and is thereby brought into one consciousness; the *categories* are these functions of judgment. The *faculty of understanding* is a faculty for *synthesis* the unification of representations; the functioning of this faculty can be analyzed at two different levels. Corresponding to two different levels at which we may understand representations: *a general logical level* and *a transcendental level*. In terms of the former, *synthesis* results *analytic unity*; in terms of the latter, *synthesis* results *synthetic unity*; and the latter takes into account the difference between *pure* and *empirical* concepts. According to Kant, *analytic unity* is an analysis of a judgment at the *level of general logic* which indicates the formal relationship of concepts independently of their content; while *synthetic unity* refers to objectivity.

At the *transcendental level*, judgments¹¹⁰ have *transcendental content*; that is, they are related to some objects; they are given to the understanding as being about something. This is more than a matter of having a certain logical form. In which the *Categories* takes play in a *judgment*, that *judgment* is a representation of an object.

Kant says:

¹⁰⁹ *Ibid.*

¹¹⁰ *Ibid.*

If understanding as such is explicated as our power of rules, then the power of judgment is the ability to subsume under rules, i.e., to distinguish whether something does or does not fall under a given rule.¹¹¹

The following stage¹¹² in Kant's project will be used to analyze the *formal* or *transcendental* features of experience that enable judgment. If there are any such features besides what the previous stages have identified, the cognitive power of judgment does have a *transcendental structure*.

Kant¹¹³ argues that there are a number of principles that must necessarily be true of experience in order for judgment to be possible. Kant's analysis of judgment and the arguments for these principles are contained in his *Analytic of Principles*. According to Kant¹¹⁴, the *sorts of judgments* consists of each of the following: some *quantity*, some *quality*, some *relation*, and some *modality*. Kant¹¹⁵ states that any *intelligible thought* can be expressed in judgments of the above sorts; but, then it follows that any *thinkable experience* must be understood in these ways, and we are justified in projecting this entire way of thinking outside ourselves, as the inevitable structure of any possible experience. The *intuitions* and the *categories*¹¹⁶ can be applied to make judgments about *experiences* and *perceptions*, but cannot, according to Kant, be applied to *abstract ideas* such as *freedom* and *existence* without leading to

¹¹¹ Wallis, S.F., 2004, *Immanuel Kant (1724-1804)*, New York: Media & Communication, The European Graduate School. Retrieved 2004 <<http://www.uni.scrf.ucam.org/ccps/Kantian.pdf>>

¹¹² *Ibid.*

¹¹³ *Ibid.*

¹¹⁴ Kemerling, G., 2001, "Kant: Synthetic A Priori Judgement.". Retrieved 2003 <<http://www.philosophypages.com/referral/contact.htm>>

¹¹⁵ *Ibid.*

¹¹⁶, "Kant" Retrieved 2004 <<http://www.encyclopedia.com/>>

inconsistencies in the form of pairs of contradictory propositions, or “*antinomies*,” in which both members of each pair can be proved true.

6. Analogies of Experience

Kant¹¹⁷ elaborates that, in analogy, *experience* is possible only through the representation of a necessary connection of perceptions. Kant strives to prove this principle by exposing some arguments. First¹¹⁸, *experience* is an *empirical cognition*; therefore it is a *synthesis of perceptions* i.e. a *synthesis* which is not itself contained in perception, but which contains the *synthetical* unity of the *manifold* of perception in a consciousness. This *unity* constitutes the essential of our cognition of objects of the senses, that is, of *experience*. Second¹¹⁹, due to *apprehension* is only a placing together of the *manifold* of *empirical* intuition, in *experience* *our perceptions* come together contingently so that no character of necessity in their connection appears or can appear from the perceptions themselves,

Third¹²⁰, however, *experience* is cognition of objects by means of perceptions; it means that the relation of the existence of the *manifold* must be represented in *experience* not as it is put together in *time*, but as it is put objectively in *time*.

¹¹⁷ Kant, I., 1787, “*The Critique of Pure Reason: Preface To The Second Edition*”, Translated By J. M. D. Meiklejohn, Retrieved 2003<<http://www.encyclopedia.com/>>

¹¹⁸ *Ibid.*

¹¹⁹ *Ibid.*

¹²⁰ *Ibid.*

Fourth¹²¹, while *time* itself cannot be perceived, the determination of the existence of objects in *time* can only take place by means of their connection in *time* in general, consequently only by means of *a priori* connecting *conceptions*. As these *conceptions* always possess the character of necessity, *experience* is possible only by means of a representation of the necessary connection of perception.

Three *modus of time*¹²² are *permanence*, *succession*, and *coexistence*; accordingly, there are three rules of all relations of *time* in *phenomena*, according to which the existence of every *phenomenon* is determined in respect of the unity of all *time*, and these antecede all experience and render it possible. The *general principle* of all three analogies¹²³ rests on the necessary unity of apperception in relation to all possible *empirical consciousness* at every *time*; consequently, as this unity lies *a priori* at the foundation of all mental operations, the principle rests on the *synthetical unity* of all *phenomena* according to their relation in *time*. According to Kant¹²⁴, for the *original apperception* relates to our *internal sense* and indeed relates *a priori* to its form; it means that the relation of the *manifold* empirical consciousness in *time*. This *manifold* must be combined in original apperception according to relations of *time* i.e. a necessity imposed by the *a priori transcendental unity* of apperception.

¹²¹ *Ibid.*

¹²² Kant, I., 1787, "*The Critique of Pure Reason: Preface To The Second Edition*", Translated By J. M. D. Meiklejohn, Retrieved 2003 <<http://www.encyclopedia.com/>>

¹²³ *Ibid.*

¹²⁴ *Ibid.*

All *empirical determinations* of time¹²⁵ must be subject to rules of the *general determination* of time; and the *analogies of experience* of which we are now about to treat must be rules of this nature. These *principles*¹²⁶ have this peculiarity, that is, they do not concern *phenomena* and the *synthesis* of the *empirical* intuition thereof, but merely the existence of *phenomena* and their relation to each other in regard to this existence. Now the *mode*¹²⁷ in which we apprehend a thing in a *phenomenon* can be determined *a priori* in such a manner that the *rule* of its *synthesis* can give or produce this *a priori* intuition in every *empirical* example. However, as Kant specifies, the existence of *phenomena* cannot be known *a priori* although we could arrive by this path at a conclusion of the fact of some existence.

We¹²⁸ could not cognize the *existence* determinately; it means that we should be incapable of anticipating in what respect the *empirical intuition* of it would be distinguishable from that of others. An *analogy of experience*¹²⁹ is, therefore, only a *rule* according to which *unity of experience* must arise out of perceptions in respect to objects not as a *constitutive*, but merely as a *regulative principle*. The same holds good of the *postulates of empirical thought* in general, which relates to the *synthesis of mere intuition* which concerns the form of *phenomena*, relates to the *synthesis of perception* which concerns the matter of *phenomena*, and relates to the *synthesis of experience* which concerns the relation of these perceptions.

¹²⁵ *Ibid.*

¹²⁶ *Ibid.*

¹²⁷ *Ibid.*

¹²⁸ *Ibid.*

¹²⁹ *Ibid.*

a. First Analogy

In the “*Principle of Permanence of Substance*”, Kant, 1787, exposes that in all change of appearances *substance* is permanent; its *quantum* in nature is neither increased nor diminished. This *principle*¹³⁰ says that *all appearances* are in *time*. *Time* is the *substratum* in which *coexistence* or *succession* can be represented. *Time*¹³¹ itself cannot be perceived; therefore, there must be in the objects perceived the substratum which represents *time* in general. Kant¹³² mentions that the *substratum* of all real is substance; it is the permanent in relation to which alone all time-relations of appearances can be determined. In this “*First Analogy*”, Kant characterizes *substance* as “*something which can exist as subject and never as mere predicate.*”

*Substance*¹³³ would mean simply a something which can be thought only as *subject*, never as a *predicate* of something else. It can exist as *subject* only, and not as a mere determination of other things. Our apprehension of the *manifold* in a *phenomenon* is always *successive* and consequently always changing. Without the *permanent*¹³⁴, then, no *relation* in *time* is possible. *Time* in itself is not an object of perception; consequently the *permanent* in *phenomena* must be regarded as the *substratum* of all determination of *time* and as the condition of the possibility of all *synthetical unity* of perceptions, that is, of experience. All *existence* and all *change* in

¹³⁰ *Ibid.*

¹³¹ *Ibid.*

¹³² *Ibid.*

¹³³ *Ibid.*

¹³⁴ *Ibid.*

time can only be regarded as a *mode* in the *existence* of that which abides unchangeably.

In all *phenomena*¹³⁵, the *permanent* is the object in itself, that is, the *substance* or *phenomenon*; but all that *changes* belongs only to the *mode of the existence* of this *substance* or *substances*. If¹³⁶ in the *phenomenon* which we call *substance* is to be the *proper substratum* of all determination of *time*, it follows that *all existences* in past as well as in future *time*, must be determinable by means of it alone. Accordingly, we are entitled to apply the term *substance* to a *phenomenon*, a notion which the word *permanence* does not fully express, only because we suppose its *existence* in all *time* as it seems rather to be referable to future time.

*Change*¹³⁷ is a mode of *existence* which follows another mode of existence of the same object; hence all changes is permanent, and only the condition there of changes. Since this *mutation* affects only determinations, which can have a beginning or an end, we may say that employing an expression which seems somewhat paradoxical that is only the *permanent substance* is subject to *change*. The *mutable* suffers *no change*, but rather alternation, that is, when certain determinations cease, others begin. *Substances*¹³⁸ are the *substratum* of all determinations of *time*. The beginning of some *substances* and the ceasing of others would utterly do away with the only condition of the *empirical unity* of *time*. In this case *phenomena* would relate

¹³⁵ *Ibid.*

¹³⁶ *Ibid.*

¹³⁷ *Ibid.*

¹³⁸ *Ibid.*

to two different *times*, in which, side by side, *existence* would pass. For there is only one *time*¹³⁹ in which all different *times* must be placed not as *coexistent* but as *successive*; accordingly, *permanence* is a *necessary condition* under which alone *phenomena*, as things or objects, are determinable in a *possible experience*.

b. Second Analogy

In the “*Second Analogy*”, Kant¹⁴⁰ exposes that all *alterations* take place in conformity with the *law of the connection of cause and effect*. Kant proves that the *preceding principle* implies that all appearances of *succession in time* are *alterations* i.e. *not coming-to-be*; those *appearances* follow one another and connects two perceptions and thus this is a *synthetic faculty* of imagination. Kant¹⁴¹ finds that the objective of *relation* of appearance of *succession* is not determined through *perception*. In order that this *relation* is known as determined, it must be so thought that it is thereby determined as *necessary* which comes first; and, *necessity* can only come from a *pure concept* of understanding; and thus, in this case, it is *cause and effect*. Further, Kant¹⁴² sums up that the *apprehension* of the *manifold of appearance* is always *successive*. *Appearances*, simply in virtue of being *representations*, are not in any way distinct from their *apprehension* because we do not know if the parts of the object follow one another.

¹³⁹ *Ibid.*

¹⁴⁰ Kant, I., 1787, “*The Critique of Pure Reason: Preface To The Second Edition*”, Translated By J. M. D. Meiklejohn, Retrieved 2003 <<http://www.encyclopedia.com/>>

¹⁴¹ *Ibid.*

¹⁴² *Ibid.*

There is a *subjective succession*¹⁴³ e.g. of looking at a house top to bottom or left to right, as an *arbitrary succession*; while *objective succession* can be such an *order* in the *manifold* of *appearance* according to a rule that happens as an applies to *events*. *Appearance*¹⁴⁴ never goes backwards to some preceding *time*, but it does stand in relation to some preceding *time*; there must lie in that which precedes an *event* i.e. the condition of a rule according to which this *event* necessarily follows. Therefore, according to Kant, the *event*, as conditioned, thus affords reliable evidence of some condition; this condition is what determines the *event*. Kant¹⁴⁵ says that we have to show that we never ascribe *succession* to the object; when we perceive that something happens this representation contains the consciousness that there is something preceding.

Only by *reference*¹⁴⁶ to what preceded does the *appearance* acquire its *time relation*. The rule is that the condition under which an *event* necessarily follows lies in what precedes the *event*, called *the principle of sufficient reason*. It is the *ground of possible experience* in which the relation of *cause* to *effect* is the condition of the *objective validity* of our *empirical judgments*. Kant¹⁴⁷ notes that although *phenomena* are not *things in themselves* and nevertheless the only thing given to us to cognize, it is his duty to show what sort of *connection* in *time* belongs to the *manifold* in *phenomena themselves*, while the representation of this *manifold* is always *successive*.

¹⁴³ *Ibid.*

¹⁴⁴ *Ibid.*

¹⁴⁵ *Ibid.*

¹⁴⁶ *Ibid.*

¹⁴⁷ *Ibid.*

Accordingly, when we know in *experience* that something happens, we always presuppose that, in conformity with a rule, something precedes. He emphasizes that, in reference to a rule to which *phenomena* are determined in their *sequences*, we can make our *subjective synthesis* objective, and it is only under this *presupposition* that even the experience of an *event* is possible.

Kant¹⁴⁸ says that we have *representations* within us in which we should be conscious. Widely extended, accurate, and thorough going this consciousness may be, these *representations* are still nothing more than *representations*, that is, *internal determinations* of the mind in this or that relation of *time*. For *all experiences* and the *possibility of experience*¹⁴⁹, *understanding* is indispensable. The first step which it takes in this sphere is not to render clearly the *representation* of objects, but to render the *representation* of an object in general be possible; it does this by applying the order of *time* to *phenomena*, and their *existence*. All *empirical cognition*¹⁵⁰ belongs to the *synthesis* of the *manifold* by the *imagination* i.e. a *synthesis* which is always *successive* in which the *representation* always follow one another.

The *order of succession*¹⁵¹ in *imagination* is not determined, and the *series of successive* representations may be taken retrogressively as well as progressively. If this *synthesis* is a *synthesis of apprehension*, then the *order* is determined in the object. There¹⁵² is an *order of successive synthesis* which determines an object in which

¹⁴⁸ *Ibid.*

¹⁴⁹ *Ibid.*

¹⁵⁰ *Ibid.*

¹⁵¹ *Ibid.*

¹⁵² *Ibid.*

something necessarily *precedes*, and when this is posited, something else necessarily *follows*. The *relation of phenomena*¹⁵³ is necessarily determined in *time* by something *antecedes*, in other words, in conformity with a *rule*. The relation of *cause* and *effect* is the condition of the *objective validity* of our *empirical judgments* in regard to the sequence of perceptions of their *empirical truth* i.e. their experiences. The principle of the relation of *causality* in the *succession* of *phenomena* is therefore *valid* for all objects of experience because it is itself the *ground* of the possibility of experience.

c. Third Analogy

In the “*Third Analogy*”, Kant¹⁵⁴ delivers the principle that *all substances*, in so far as they can be perceived to *coexist* in *space*, are in thorough going *reciprocity*. Kant strives to prove this principle with the following arguments: First¹⁵⁵, *things* are *coexistent* when in *empirical intuition*, the perceptions of them can follow upon one another *reciprocally*. Second¹⁵⁶, we cannot assume that because *things* are set in the same *time*, their *perceptions* can follow *reciprocally* in which *influence* is the relation of *substances* contains the *ground* of the determinations of another. The *community* or *reciprocity* is the *relation of substances* where each contains the *ground* of the determinations in the other.

¹⁵³ *Ibid.*

¹⁵⁴ Kant, I., 1787, “*The Critique of Pure Reason: Preface To The Second Edition*”, Translated By J. M. D. Meiklejohn, Retrieved 2003<<http://www.encyclopedia.com/>>

¹⁵⁵ *Ibid.*

¹⁵⁶ *Ibid.*

Third¹⁵⁷, we know *two substances* in the same *time* when the *order* in the *synthesis of apprehension* of the *manifold* is a matter of indifference. Fourth¹⁵⁸, if *each* is completely *isolated*, *coexistence* would not be a *possible perception*; therefore, there must be something through which *A determines for B* and vice versa in which its position is in *time* and the *cause* of another determines the *position* of the other in *time*. It is necessary¹⁵⁹ that the *substances* stand immediately in *dynamical community* if their *coexistence* is to be known in any *possible experience*. *Things*¹⁶⁰ are *coexistent* when in *empirical intuition* the perception of the one can follow upon the perception of the other or which cannot occur in the *succession of phenomena*. *Coexistence* is the existence of the *manifold* in the same *time*, however *time* it-self is not an object of perception. Therefore we cannot conclude from the fact that *things* are placed in the same *time*; while the perception of these *things* can follow each other reciprocally.

A *conception*¹⁶¹ of the understanding or *category* of the *reciprocal sequence* of the determinations of *phenomena* is requisite to justify that the *reciprocal succession* of perceptions has its *foundation* in the object and to enable us to represent *coexistence* as objective. The *relation of substances*, in which the one contains determinations the ground of the other substance, is the relation of influence. When this influence is reciprocal, it is the relation of community or reciprocity. Consequently, the

¹⁵⁷ *Ibid.*

¹⁵⁸ *Ibid.*

¹⁵⁹ *Ibid.*

¹⁶⁰ *Ibid.*

¹⁶¹ *Ibid.*

*coexistence*¹⁶² of substances in *space* cannot be cognized in experience except that under the precondition of their reciprocal action. This is therefore the condition of the possibility of *things* themselves is an objects of experience. *Things* are *coexistent* in so far as they exist in one and the same *time*; but how can we know that they exist in one and the same *time*?

Every *substance*¹⁶³ must contain the *causality* of certain determinations in another *substance*, and at the same time the *effects of the causality* of the other in *itself*. If *coexistence* is to be cognized in any possible experience, *substances* must stand in *dynamical community* with each other; however, it would itself be impossible if it is cognized without experiences of objects. Consequently, it¹⁶⁴ is absolutely necessary that *all substances* in the world of *phenomena*, in so far as they are *coexistent*, stand in a relation of *complete community* of reciprocal action to each other. Kant¹⁶⁵ finds *three dynamical relations* from which all others spring: *inherence, consequence, and composition*; these, then, are called *three analogies of experience*.

According to Kant¹⁶⁶, they are nothing more than *principles of the determination* of the *existence of phenomena in time*. *Three modi of determinations* covers *the relation to time itself* as a quantity, *the relation in time as a series or*

¹⁶² *Ibid.*

¹⁶³ *Ibid.*

¹⁶⁴ *Ibid.*

¹⁶⁵ *Ibid.*

¹⁶⁶ *Ibid.*

succession, and *the relation in time as the complex of all existence*. Kant¹⁶⁷ claims that this *unity of determination* in regard to *time* is thoroughly *dynamical*. It says that *time* is not considered as *experience* determines immediately to every *existence* of its position because it is impossible that *absolute time* is not an object of perception in which *phenomena* can be connected with each other.

C. Kant's System of A Priori Concepts and Synthetic A Priori Principles

Kant's¹⁶⁸ distinction between the *regulative* and *constitutive* uses of the understanding, a kind of dichotomous gap, reappears between the faculties of *reason* and *intuition*. Kant¹⁶⁹ justifies the *validity* of this distinction in two series of arguments where he also distinguishes between two different *regulative* uses of reason. The grounds¹⁷⁰ of these distinctions seem to follow the structure of his three ways division of the logic into *judgment*, *understanding* and *reason*. Each of these three activities has correlation in the *logical syllogism*. *Understanding*¹⁷¹ is that faculty by which we make rules and the *generator* of the *Major Premise* in a syllogism. *Judgment*¹⁷² is that by which we bring *particulars* under a property or class; this is the source of the

¹⁶⁷ *Ibid.*

¹⁶⁸ Faller, M., 2003, "Kant's Mathematical Mistake", Retrieved 2004 <<http://polar.alaskapacific.edu/mfaller/KntMth.PDF>>

¹⁶⁹ *Ibid.*

¹⁷⁰ *Ibid.*

¹⁷¹ *Ibid.*

¹⁷² *Ibid.*

Minor Premise. Reason is that by which we tie the premises together with the conclusion.

1. Transcendental Logic in the Critique of Pure Reason

Kant¹⁷³ elaborates the idea of *transcendental logic* in the Second Part of “*Transcendental Doctrine of The Elements*” of the “*Critique of Pure Reason*”. In this Part, there are four Sub Topic: *Logic in General*, *Transcendental Logic*, *Division of General Logic into Analytic and Dialectic*, and *Division of Transcendental Logic into Transcendental Analytic and Dialectic*. *Logic In General* consists of two fundamental sources of knowledge: *sensibility* i.e. the capacity to receive representations which consists of the *Science of Aesthetic* and *How objects are given to us*; and *understanding* i.e. the power of knowing an object through representations which consists of *The science of Logic* and *How an object is thought*. Kant claims that only through their union can knowledge arise.

According to Kant¹⁷⁴, there are two types of *logic*: *logic in general* contains absolutely necessary rules of thought viz. *the logic of elements*; and *logic of the special employment of the understanding* contains rules of correct thinking about certain kinds of objects viz. *the logic of a particular science*. *General logic* consists of *pure* i.e. an abstracts from all *empirical* conditions, hence it deals with mere forms of

¹⁷³ Kant, I., 1787, “*The Critique of Pure Reason: Preface To The Second Edition*”, Translated By J. M. D. Meiklejohn, Retrieved 2003 <<http://www.encyclopedia.com/>>

¹⁷⁴ *Ibid.*

thought; and consists of *applied* i.e. an understanding under *subjective empirical conditions*. Kant¹⁷⁵ characterizes *transcendental logic* not as an abstract from the entire content of knowledge. It excludes only those modes of knowledge which have *empirical content* and treats the origin of modes in which we know objects. Further, Kant¹⁷⁶ claims that not every kinds of *a priori knowledge* should be called *transcendental*; only that by which we know that certain representations can be employed or are possible *a priori*. *Space* is the knowledge that the representations are not *empirical* one.

Kant¹⁷⁷ divides *transcendental logic* into *transcendental analytic* and *dialectic*. He elaborates that *transcendental analytic* has two aspects: *logic* which deals with elements of *pure knowledge* yielded by understanding and *logic* in which no object can be thought. In *transcendental dialectic*, a misuse of *transcendental analytic* and *dialectic illusion* may happen. *Dialectic*¹⁷⁸ is concerned with the *fallacies* produced when *metaphysics* is extended beyond *possible experience*; while the *Analytic*, about secure metaphysics, is divided into the *Analytic of Concepts* and the *Analytic of Principles*.

Kant¹⁷⁹ distinguishes *the science of the laws of sensibility* i.e. *aesthetic* from *the science of the laws of the understanding* i.e. *logic*. *Logic* in its turn may be considered as *logic of the general* or *of the particular* use of the understanding. The

¹⁷⁵ *Ibid.*

¹⁷⁶ *Ibid.*

¹⁷⁷ *Ibid.*

¹⁷⁸ *Ibid.*

¹⁷⁹ *Ibid.*

first contains the *absolutely necessary laws of thought* without which no use what so ever of the understanding is possible. It gives *laws to the understanding* without regard to the difference of objects on which it may be employed. The *second* contains the *laws of correct thinking* upon a particular class of objects. In a *pure general logic*¹⁸⁰ we abstract all the *empirical conditions* under which the understanding is exercised. It has to do merely with *pure a priori principles*. It is a canon of understanding and reason but only in respect of the formal part of their use to be the content of what it may be *empirical or transcendental*.

According to Kant¹⁸¹, in a *pure general logic* we must always bear in mind two rules. First, *as general logic*, it makes abstraction of all content of the cognition of the understanding and of the difference of objects. It has to do with nothing but the mere form of thought. Second, *as pure logic*, it has no *empirical principles* and consequently draws nothing from psychology which therefore has no influence on the canon of the understanding. It is a *demonstrated doctrine* in which everything in it must be certain completely *a priori*. In an *applied general logic* we direct the *laws of the use of the understanding* under the *subjective empirical conditions* in which psychology teaches us. It is an *empirical principle* although at the same *time*, it is in so far general, that it applies to the exercise of the understanding, without regard to the difference of objects.

¹⁸⁰ *Ibid.*

¹⁸¹ *Ibid.*

*Applied logic*¹⁸² is a representation of the understanding and of the rules of its necessary employment *in concreto* under the accidental conditions of the subject which may either hinder or promote this employment in which they are all given only *empirically*. Thus *applied logic*¹⁸³ treats of *attention, its impediments and consequences* of the origin of error, of the state of doubt, hesitation, conviction, etc. It relates *pure general logic* in the same way that *pure morality*. It contains only the necessary *moral laws of a free will*, is related to *practical ethics*. It considers these laws under all the impediments of feelings, inclinations, and passions to which peoples are more or less subjected. It can never furnish us with a true and demonstrated science because it, as well as applied logic, requires *empirical and psychological principles*.

With regard to our cognition in respect of its mere form, it¹⁸⁴ is equally manifest that *logic* exhibits the *universal and necessary laws of the understanding* and must in these very laws present us with criteria of truth. Whatever contradicts these *rules* is false because the *understanding* is made to contradict its own *universal laws of thought* i.e. contradict to itself. These criteria¹⁸⁵, however, apply solely to the form of truth, that is, of thought in general, and in so far they are perfectly accurate, yet not sufficient. Although *cognition* may be perfectly accurate as to logical form or not *self-contradictory*, it is not withstanding quite possible that it may not stand in agreement

¹⁸² *Ibid.*

¹⁸³ *Ibid.*

¹⁸⁴ *Ibid.*

¹⁸⁵ *Ibid.*

with its object. Consequently, the merely *logical criterion of truth*, namely, the accordance of cognition with the *universal and formal laws of understanding and reason*, is nothing more than the *conditio sine qua non* or negative condition of all truth.

In the expectation¹⁸⁶ that there may be *mathematical conceptions* which relate *a priori* to objects, not as *pure or sensuous intuitions*, but merely as *acts of pure thought*, we form the *idea of a science of pure understanding and rational cognition* by cogitating objects entirely *a priori*. This kind of *science*¹⁸⁷ should determine the *origin*, the *extent*, and the *objective validity* of mathematical cognitions and must be called *transcendental logic*. Like in *general logic*¹⁸⁸, the *transcendental logic* has to do with the *laws of understanding and reason* in relation to *empirical* as well as *pure rational cognitions* without distinction, but concerns itself with these only in an *a priori* relation to objects. In *transcendental logic*¹⁸⁹ we isolate the *understanding* and select from our *cognition* merely that part of thought which has its origin in the *understanding* alone.

*Understanding and judgment*¹⁹⁰ accordingly possess in *transcendental logic* a canon of *objectively valid, true exercise*, and *is comprehended* in the analytical department of that logic. However, *reason*, in her endeavors to arrive by *a priori* means at some true statement concerning objects and to extend cognition beyond the

¹⁸⁶ *Ibid.*

¹⁸⁷ *Ibid.*

¹⁸⁸ *Ibid.*

¹⁸⁹ *Ibid.*

¹⁹⁰ *Ibid.*

bounds of possible experience, is altogether *dialectic*. Its illusory assertions cannot be constructed into a canon such as an analytic ought to contain. *Logical illusion*¹⁹¹, which consists merely in the imitation of the form of reason, arises entirely from a want of due attention to *logical rules*. *Transcendental dialectic*¹⁹² will therefore content itself by exposing the *illusory appearance* in *transcendental judgments* and guarding us against it; but to make it, as in the case of *logical illusion*, entirely disappear and cease to be illusion is utterly beyond its power.

There¹⁹³ is a merely *formal logical use*, in which it makes abstraction of all content of cognition; but there is also a *real use*, in as much as it contains in itself the source of certain conceptions and principles, which it does not borrow either from the senses or from the understanding. As a division of reason into *a logical* and *a transcendental faculty* presents itself here, it becomes necessary to seek for *a higher conception* of this source of cognition which shall comprehend both conceptions. Here¹⁹⁴ we may expect, according to the *analogy of the conceptions of the understanding*, that the *logical conception* will give us the key to the *transcendental*, and that the *table of the functions* of the former will present us with the clue to the *conceptions of mathematical reason*.

2. The Method of Discovering the Concepts of the *Pure Understanding*

¹⁹¹ *Ibid.*

¹⁹² *Ibid.*

¹⁹³ *Ibid.*

¹⁹⁴ *Ibid.*

In the “*Critique of Pure Reason*”, Kant (1787) addresses the challenge of subsuming *particular sensations* under *general categories* in the *Schematism* section. Kant argues that *Transcendental Schemata* allow us to identify the homogeneous features picked out by concepts from the heterogeneous content of our sensations. Therefore, he indicates that *judgment* is only possible if the mind can recognize the components in the diverse and disorganized data of sense that make those sensations an instance of a concept or concepts. Further, Kant argues that the *necessary conformity* of objects to *natural law* arises from the mind. Kant's *transcendental method* has permitted us to reveal the *a priori* components of sensations i.e. the *a priori concepts*. There are *a priori judgments* that must necessarily govern all appearances of objects. These *judgments* are a function of the *Table of Categories* in determining all *possible judgments*.

The continuity of nature¹⁹⁵ is also reflected in the *dynamical categories*, which are divided into those of *relation* and those of *modality*. The *relational* categories are *substance-accident*, *cause-effect*, and *agent-patient*. In each case, the corresponding principle is one of continuity. Kant¹⁹⁶ held that the only *change* occurred is a *change* in the state of an existing *thing*. Thus, there are no discontinuities of existence in nature, no new *things* coming to be, and no existing *things* passing away. All *change* is bound by *laws of nature*, which precludes the discontinuity that would result if *change* were random.

¹⁹⁵ Kant in “*Kant*” Retrieved 2004 <<http://www.encyclopedia.com/>>

¹⁹⁶ *Ibid.*

Following (Figure 13) is the *schematized of categories* which is summarized by Kant¹⁹⁷:

<i>Categories of the Understanding</i>			
<i>As to: Quantity - Quality - Relation – Modality</i>			
<i>Unity (Measure)</i>	<i>Reality</i>	<i>Substance</i>	<i>Possibility</i>
<i>Plurality (Magnitude)</i>	<i>Negation</i>	<i>Cause</i>	<i>Existence</i>
<i>Totality (Whole)</i>	<i>Limitation</i>	<i>Community</i>	<i>Necessity</i>

Figure 13: Categories of Understanding

Since *individual images*¹⁹⁸ are perfectly separable as they occur within the *sensory manifold*, connections among them can be drawn only by the knowing subject in which the principles of connection are to find. As in *mathematics*, so in *science* the *synthetic a priori judgments* must derive from the structure of the understanding itself. *Transcendental illusion*¹⁹⁹ is the result of applying the *understanding* and *sensibility* beyond their limits. Although the *objective rules* may be the same in each case, the *subjective idea of causal connection* can lead to different deductions.

3. The Legitimate and Illegitimate Use of the Categories

¹⁹⁷ *Ibid.*

¹⁹⁸ Kant in Kemerling, G., 2001, “*Kant: Synthetic A Priori Judgement.*”. Retrieved 2003 <<http://www.philosophypages.com/referral/contact.htm>>

¹⁹⁹ Kant in Meibos, A., 1998, “*Intro to Philosophy: Kant and a priori Synthetic Judgments*”, Prof. Arts Notes for PHIL 251 Retrieved 2004 <<http://www.icecavern.net/~qirien/punkus/index.html>>

Kant²⁰⁰ argues that in the sections titled the *Axioms, Anticipations, Analogies, and Postulates*, there are *a priori judgments* that must necessarily govern all appearances of objects. These *judgments* are a function of the *Table of Categories* in determining all possible judgments. *Axioms of Intuition* states that all intuitions are extensive magnitudes. *Anticipations of Perception* states that in all appearances the real that is an object of sensation has intensive magnitude, i.e., a degree. *Analogies of Experience* states that: a. in all variations by appearances substance is permanent, and its quantum in nature is neither increased nor decreased; b. all changes occur according to the law of the connection of cause and effect; and c. all substances, insofar as they can be perceived in space as simultaneous, are in thoroughgoing interaction. *Postulates of Empirical Thought* states: a. what agrees with the formal conditions of experience is possible; b. what coheres with the material conditions of experience is actual; and that whose coherence with the actual is determined according to universal conditions of experience is necessary.

D.Kant's Concepts of Space And Time

Of the space and time, Kant concerns them with their metaphysical exposition and their relation to subjective conditions of sensation. According to Kant²⁰¹, a *pure* concept of space warrants and constrains intuitions of finite regions of *space*; that is,

²⁰⁰ In Wallis, S.F, 2004, *Immanuel Kant (1724-1804)*, New York: Media & Communication, The European Graduate School. Retrieved 2004 <<http://www.uni.scrf.ucam.org/ccps/Kantian.pdf>>

²⁰¹ *Ibid.*

an *a priori* conceptual representation of *space* provides a governing principle for all spatial constructions, which is necessary for mathematical demonstration as Kant understood (Shabel, L.). Kant²⁰² notes that the *aesthetic* means to constitute and begin with an investigation of *space*. The concept²⁰³ of *space* would be indistinguishable from the general concept of spaces in general. According to Kant, such a general concept itself rests on limitations of *space* and cannot itself be the source of the boundlessness of *space*. Thus, an exposition of such a general concept of spaces could not be expected to satisfy Kant's goals in the *Transcendental Aesthetic* (Shabel, L.). Kant²⁰⁴ identifies that a concept of *space* is strictly identical neither to a general concept of *spaces*, nor to any particular intuition. Kant²⁰⁵ admits that *space* could not be an *empirical concept*.

According to Kant²⁰⁶, concepts are not singular, nor can they contain infinitely many parts; thus, *space* is represented in intuition and it seems equally impossible to intuit a single infinitely large object. Therefore, according to Kant's, this would require that we be able to form an immediate (unmediated) representation of an infinite spatial magnitude, that we grasp its infinitude in a single 'glance', as it were (Shabel, L.).

²⁰² *Ibid.*

²⁰³ Shabel, L., 2003, "Reflections on Kant's concept (and intuition) of space", *Studies In History and Philosophy of Science Part A* Volume 34, Issue 1 Retrieved 2003, <<http://www.sciencedirect.com/science?>>

²⁰⁴ Gottfried, P., 1987, "Form of Intuition: Kantian Time And Space Reconsidered", *The World & I*: Issue Date: AUGUST 1987 Volume:02 Page: 689. Retrieved 2004 <<http://www.worldandI.com/public/1987/august/copyright.asp>>

²⁰⁵ *Ibid.*,

²⁰⁶ *Ibid.*

So, Kant²⁰⁷ uses the *Metaphysical Exposition*, at least in part, to describe the *pure* spatial intuition that underlies any and all geometric procedures, but he does not use properly geometric procedures to describe that intuition. While cognition of the 'axioms' of geometry depends, in some sense, on our having a capacity for *pure* spatial intuition, that capacity cannot itself be described as a capacity for geometric reasoning. So, our capacity for *pure* spatial intuition²⁰⁸, described in the *Metaphysical Exposition*, is pre-geometric in the sense that it is independent of and presupposed by Euclidean reasoning.

Kant in Ross, K.L. (2001) proposes that *space* and *time* do not really exist outside of us but are *forms of intuition* i.e. conditions of perception imposed by our own minds. This enables Kant to reconcile Newton and Leibniz. Kant agrees with Newton that *space* is absolute and real for objects in experience, i.e. for *phenomenal* objects open to science. However, Kant also agrees with Leibniz that *space* is really nothing in terms of objects as they exist apart from us, i.e. with *things in themselves*. The bulk of Kant's exposition on *time* and *space* in relation to sensory perception can be found in the opening pages of *The Critique of Pure Reason* (1781) (Gottfried, P., 1987). In the first part of the *Critique*, the "*Transcendental Aesthetic*," Kant treats of *time* and *space* as the *a priori* condition for cognition. Kant examines *time* and *space* as universal forms of intuition that help render sensory impressions intelligible to the human mind.

²⁰⁷ *Ibid.*

²⁰⁸ *Ibid.*

Kant delivers his explanation to clarify distinction between *appearance* and *illusion*, a confused representation of reality. According to Kant, in *space* and *time*, *intuition* represents both *external objects* and *the self-intuition of the mind*. It affects our senses. *Appearance objects* are always seen as *truly given* providing that their situation depends upon the subject's mode of intuition and that the object as appearance is distinguished from an object in itself. According to Kant, we need not to say that body simply seems to be outside of us when we assert that the quality of *space* and *time* lies in our mode of intuition and not in objects in themselves.²⁰⁹

E. Kant's Theory of Judgment

Kant²¹⁰ elaborates that *judgments* are complex conscious cognitions, that: 1) refer to objects either directly (via intuitions) or indirectly (via concepts), 2) include concepts that are predicated either of those objects or of other constituent concepts, 3) exemplify *pure* logical concepts and enter into inferences according to *pure* logical laws, 4) essentially involve both the following of rules and the application of rules to the objects picked out by intuitions, 5) express true or false propositions, 6) mediate the formation of beliefs, and 7) are unified and self-conscious. Correspondingly²¹¹, a

²⁰⁹ Gottfried, P., 1987, "Form of Intuition: Kantian Time And Space Reconsidered", The World & I: Issue Date: AUGUST 1987 Volume:02 Page: 689. Retrieved 2004 <<http://www.worldandI.com/public/1987/august/copyright.asp>>

²¹⁰ Hanna, R., 2004, "Kant's Theory of Judgment", Stanford Encyclopedia of Philosophy, Retrieved 2004, <<http://plato.stanford.edu/cgi-bin/encyclopedia/archinfo.cgi?entry=kant-judgment>>

²¹¹ Kant in Hanna, R., 2004, "Kant's Theory of Judgment", Stanford Encyclopedia of Philosophy, Retrieved 2004, <<http://plato.stanford.edu/cgi-bin/encyclopedia/archinfo.cgi?entry=>

Kantian cognitive faculty is innate in the three fold senses, that: 1) it is intrinsic to the mind, hence a necessary part of the nature of the rational animal possessing that faculty, 2) it contains internal structures that are underdetermined by sensory impressions — which is the same as their being *a priori*, and 3) it automatically systematically synthesizes those sensory inputs according to special rules that directly reflect the internal structures of the faculty, thereby generating its correspondingly-structured outputs.

Understanding and *sensibility*²¹² are both sub-served by the faculty of *imagination* (*Einbildungskraft*), which when taken generically is the source or engine of all sorts of *synthesis*, but which when taken as a dedicated to *task-sensitive cognitive faculty*, more specifically generates: 1) the *spatial* and *temporal* forms of intuition, 2) novel mental imagery in conscious sensory states, 3) reproductive imagery or memories, and 4) *schemata*, which are supplementary rules for interpreting general conceptual rules in terms of more specific figural (*spatio-temporal*) forms and sensory images. According to Kant²¹³, *judgment* is the mediate cognition of an object and hence it is *the representation of a representation* of it. In every *judgment* there is a concept that holds of many (representations), and that among this many also comprehends a given representation, which is then immediately referred to the object.

kant-judgment>

²¹² *Ibid.*

²¹³ Hanna, R., 2004, "Kant's Theory of Judgment", Stanford Encyclopedia of Philosophy, Retrieved 2004, <<http://plato.stanford.edu/cgi-bin/encyclopedia/archinfo.cgi?entry=kant-judgment>>

All *judgments*²¹⁴ are functions of unity among our representations, since instead of an immediate representation a higher one, which comprehends this and other representations under itself, is used for the cognition of the object, and many possible cognitions are hereby drawn together into one. A *judgment*²¹⁵ is nothing more than the way to bring given cognitions to the objective unity of apperception. Kant's questions the ground of the reference of that in us which we call *representation* to the object that is the possibility of valid mental representations, is the fundamental topic of Kant's "*theory of cognition*". Kant²¹⁶ insists that justified true belief is *scientific knowing* which connects epistemology in Kant's sense directly with his conception of a *science* as a systematically unified body of cognitions based on *a priori* principles.

Kant²¹⁷ holds that *a belief* constitutes *scientific knowing* if and only if the *judgment* underlying that belief is not only *subjectively sufficient* for believing but is also *objectively sufficient* one, and coherent with a suitably wide set of other beliefs, and *also* true, although it still remains fallible. The *objective sufficiency* of a judgment for Kant²¹⁸ is the *inter-subjectively* rationally communicable conscious state of "*conviction*", which is also the same as "*certainty*". One of the most controversial, influential, and striking parts of *Kant's theory of judgment* is his multiple classification of judgments according to kinds of *logical form* and kinds of *semantic content*.

²¹⁴ Kant in Hanna, R., 2004, "*Kant's Theory of Judgment*", Stanford Encyclopedia of Philosophy, Retrieved 2004, <<http://plato.stanford.edu/cgi-bin/encyclopedia/archinfo.cgi?entry=kant-judgment>>

²¹⁵ *Ibid.*

²¹⁶ *Ibid.*

²¹⁷ Kant, I., 1781, "*The Critique of Pure Reason: Transcendental Analytic, Book II, Analytic Of Principles*" Translated By J. M. D. Meiklejohn, Retrieved 2003 <[http://www.Encarta.Msn. Com/](http://www.Encarta.Msn.Com/)>

²¹⁸ *Ibid.*

Indeed, the very importance of Kant's multiple classification of judgments²¹⁹ has sometimes led to the misconception that his theory of judgment will stand or fall according to the fate of, e.g., his *analytic-synthetic* distinction, or the fate of his doctrine of *synthetic a priori* judgments. The core²²⁰ of *Kant's theory of judgment* consists in the central *thesis* and the priority of the proposition thesis, both of which can still hold even if some of his classifications of judgments are rejected. The *table of judgments*²²¹, in turn, captures a fundamental part of the science of *pure general logic*: *pure*, because it is *a priori*, necessary, and without any associated sensory content; *general*, because it is both *universal* and *essentially formal*, and thereby abstracts away from all specific objective representational contents and from the differences between particular represented objects; and *logic* because, in addition to the table of judgments, it also systematically provides *normative cognitive rules* for the truth of judgments and for valid inference.

Kant's table of judgments²²² lays out an exhaustive list of the different possible logical forms of propositions under four major headings, each major heading containing three sub-kinds, as follows²²³:

- | | |
|--------------------------|---|
| 1. Quantity of Judgments | : <i>Universal, Particular, Singular</i> |
| 2. Quality | : <i>Affirmative, Negative, Infinite</i> |
| 3. Relation | : <i>Categorical, Hypothetical, Disjunctive</i> |

²¹⁹ *Ibid.*

²²⁰ *Ibid.*

²²¹ *Ibid.*

²²² *Ibid.*

²²³ *Ibid.*

4. Modality : *Problematic, Assertoric, Apodictic.*

For Kant²²⁴, the *propositional content of a judgment* is more basic than its *logical form*. The propositional content of a judgment, in turn, can vary along at least three different dimensions: (1) its relation to *sensory content*; (2) its relation to the *truth-conditions of propositions*; and (3) its relation to the *conditions for objective validity*.

The notion of *cognitive content* for Kant²²⁵ has two sharply distinct senses: 1) *intension*, which is *objective* and *representational* (semantic content); and 2) *sensory matter*, which is *subjective* and *non-representational*, reflecting only the immediate conscious response of the mind to the external impressions or inputs that trigger the operations of the faculty of *sensibility*. To be sure, for Kant²²⁶, just as for the *Empiricists*, *all cognition* begins with the *raw data* of sensory impressions. But in a crucial departure from *Empiricism* and towards what might be called a *mitigated rationalism*, Kant²²⁷ also holds that *not all cognition* arises from sensory impressions: so for him, a significant and unique contribution to both the form and the objective representational content of cognition arises from *the innate spontaneous cognitive capacities*.

²²⁴ Kant in Hanna, R., 2004, "Kant's Theory of Judgment", Stanford Encyclopedia of Philosophy, Retrieved 2004, <<http://plato.stanford.edu/cgi-bin/encyclopedia/archinfo.cgi?entry=kant-judgment>>

²²⁵ *Ibid.*

²²⁶ *Ibid.*

²²⁷ *Ibid.*

Applying the notions to judgments²²⁸, it follows that a *judgment* is *a posteriori* if and only if either its logical form or its propositional content is strictly determined by sensory impressions; and a *judgment* is *a priori* if and only if neither its logical form nor its propositional content is strictly determined by sensory impressions and both are instead strictly determined by our *innate spontaneous cognitive faculties*, whether or not that cognition also contains sensory matter. Kant²²⁹ also holds that a *judgment* is *a priori* if and only if it is *necessarily true*. This strong connection between *necessity* and *apriority* expresses: 1) Kant's view that the *contingency of a judgment* is bound up with the modal dependence of its semantic content on sensory impressions, i.e., its *aposteriority*, 2) his view that *necessity* is equivalent with strict universality or *strenge Allgemeinheit*, which he defines in turn as a proposition's lack of any possible counterexamples or falsity-makers, and 3) his view that *necessity* entails truth.

Kant's distinction²³⁰ between *analytic* and *synthetic judgments* is as: (1) *analyticity* is truth by virtue of linguistic meaning alone, exclusive of *empirical facts*, (2) *syntheticity* is truth by virtue of *empirical facts*, and (3) the *necessary statement* vs. *contingent statement* distinction is *formally* and *materially* equivalent to the *analytic-synthetic* distinction. A *judgment*²³¹ is *analytic* if and only if its propositional content is necessarily true by virtue of necessary internal relations between its objectively

²²⁸ *Ibid.*

²²⁹ *Ibid.*

²³⁰ *Ibid.*

²³¹ *Ibid.*

valid conceptual microstructures or its conceptual comprehensions. A *proposition*²³² is *synthetic* if and only if its truth is *not* strictly determined by relations between its conceptual microstructures or conceptual comprehensions alone; and a *judgment* is *synthetically* true if and only if it is true and its denial does *not* logically entail a contradiction.

This²³³ is not to say either that *synthetic judgments* do not contain any concepts or even that the conceptual components of a *synthetic judgment* are irrelevant to its meaning or truth but only to say that in a *synthetic judgment* it is the intuitional components that strictly determine its meaning and truth, not its conceptual components. In short, a *synthetic judgment* is an *intuition-based proposition*. Combining the *a priori-a posteriori* distinction with the analytic-*synthetic* distinction, Kant²³⁴ derives four possible kinds of judgment: (1) *analytic a priori*, (2) *analytic a posteriori*, (3) *synthetic a priori*, and (4) *synthetic a posteriori*. By virtue of the fact that *analytic judgments* are *necessarily true*, and given Kant's thesis that *necessity entails apriority*, it follows that *all analytic judgments* are *a priori* and that there is no such thing as an *analytic a posteriori judgment*. By contrast²³⁵, *synthetic judgments* can be either *a priori* or *a posteriori*. *Synthetic a posteriori judgments* are *empirical* and *contingent* although they may vary widely to their degree of generality. *Synthetic a priori judgments*, by contrast, are *non-empirical* and *non-contingent judgments*.

²³² *Ibid.*

²³³ Hanna, R., 2004, "Kant's Theory of Judgment", Stanford Encyclopedia of Philosophy, Retrieved 2004, <<http://plato.stanford.edu/cgi-bin/encyclopedia/archinfo.cgi?entry=kant-judgment>>

²³⁴ *Ibid.*

²³⁵ *Ibid.*