

## A Defence of Kantian Synthetic-Analytic Distinction

*Science is organized knowledge. Wisdom is organized life.—Immanuel Kant*

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### Abstract:

*In the history of Western Philosophy, the distinction between synthetic and analytic judgment has been treated as one of the central issues. Immanuel Kant in his Critique of Pure Reason (1781) makes a clear distinction between these two types of judgment, but some philosophers like A.J. Ayer (1910-1989) in his Language Truth and Logic (1936) and W.V.O Quine (1908-2000) in his famous article Two Dogmas of Empiricism (1951) apparently shows that they have succeeded to reject this distinction. This paper is an analysis of defending Kantian notion of the distinction between synthetic and analytic judgment through a critical analysis the view of Ayer and W.V.O Quine.*

*Key words: synthetic, analytic, reject, analysis, defending*

In the history of Western Philosophy, though Immanuel Kant (1724-1804) makes a clear distinction between synthetic and analytic judgment in his *Critique of Pure Reason* (1781), the distinction has been played a central role in the philosophy of David Hume (1711-1776) and Gottfried Wilhelm Leibniz (1646-1716) who are the predecessors of Kant and the philosophy of Ayer (1910-1989) and Quine (1908-2000) are his ancestors. It is relevant to mention here that Quine in his *Two Dogmas of Empiricism* (1951) has tried to prove that the distinction between synthetic and analytic judgment is a dogma i.e. the theory which is based on wrong reason without building any system in Philosophy. But, Kant, being a great system building philosopher shows the limits and powers of Reason in case of philosophizing by excavating the Reason itself. In *Critique of Pure Reason* (1781) his main purpose is to establish scientific metaphysics i.e. transcendental metaphysics by rejecting the traditional metaphysics i.e. transcendent metaphysics and in this process of establishing metaphysics as science, he makes this distinction between synthetic and analytic judgment clearly. Ayer, being a logical positivist, on the other hand, has allowed this distinction from a different angle where it is believed that linguistic confusion is the source metaphysics and any type of metaphysics whether it is scientific or not should be eliminated; but the main fragrance about

this distinction always remains the same. This means being a follower of logical positivism, Ayer has to accept the rules of thoughts and the mathematical propositions as analytic and the other propositions are synthetic which depends on the verifiability criteria. This is a fact that Kant makes this distinction in such a way, the possibility of synthetic a-priori judgment will be remained intact, because the focal point of Kantian philosophy is correlated with the possibility of synthetic a-priori judgments which are the mark of science from Kantian point of view and Kant's main intention is to establish scientific metaphysics. In contrast with Kant, Ayer, in order to eliminate metaphysics, believes linguistic confusion is the source of metaphysics and synthetic and analytic judgments are the only meaningful judgement that is why he proposes the basis of the distinction between these two types of judgment as inferred by Kant is wrong and it should be rejected. Again, for Quine, who keeps believes in holistic theory of knowledge which implies that each and every proposition has the possibilities to be rejected in future and no proposition can be treated as analytic in strict sense except tautological rules that is why he has to prove that this distinction is meaningless.

But the question is—(i) Do Ayer and Quine successfully reject Kantian notion of the distinction between synthetic and analytic judgment?

An answer of the above mentioned question on the basis of a critical analysis is the topic of this paper. For the sake of clarity this paper will be furnished with the following sub sections:

- Kantian doctrine of synthetic-analytic distinction in Section-I
- Ayer's objection in Section-II
- Quine's objection in Section-III
- Ayer's alternative definition of synthetic-analytic distinction in Section –IV
- A defend of Kantian doctrine by rejecting the doctrine of the distinction between synthetic-analytic judgment as stated by Ayer in Section-V.
- A defend of Kantian doctrine by rejecting the criticism of Quine regarding the doctrine of the distinction between synthetic-analytic judgment in Section-VI.

### **Section-I: Kantian doctrine of synthetic-analytic distinction**

In the course of establishing metaphysics as a science, as mentioned earlier, Kant makes a clear distinction between synthetic and analytic judgment on the basis of two criteria. One of which is known as the containment criterion and the other is known as contradiction criterion. Following the first criterion i.e. the containment criterion an analytic judgment is that in which the predicate concept is already contained in the subject concept. On the other hand, in a synthetic judgment the predicate concept lies outside of the subject concept. To quote Kant,

Either the predicate B belongs to the subject A as something contained (though covertly) in the concept A; or B lies outside the sphere of the concept A, though

somehow connected with it. In the former case I call the judgment analytical, in the latter synthetic.<sup>1</sup>

The predicate concept in an analytic judgment is contained in the subject concept does not entail as like as the tea is contained in the cup. Tea is a material object and it can be contained in the cup easily, because it is also a material object. But the concept of an object cannot be treated as the object itself. That's why in an analytic judgment, the predicate is contained in the subject means the predicate concept is identical with at least one of the logical constituents of the subject concept. For example— 'All bodies are extended.' is an analytic judgment, because the analysis of 'body' yields two simpler concepts—the concept of extendedness and the concept of substantiality. The predicate concept of extendedness is identical with one of this constituent of the subject concept body i.e. with the concept of extendedness. On the other hand, in the synthetic judgment, the predicate concept lies outside of the subject concept. For example, 'All bodies are heavy.' is a synthetic judgment, because the concept of 'heaviness' lies outside of the concept of 'body' as the 'body' yields two simpler concepts—the concept of extendedness and the concept of substantiality and the concept of 'heaviness' is not identical with anyone of these logical constituents of the subject concept. So, it is synthetic. What N.K. Smith says in this regard is as follows:

In all judgments there is a relation between subject and predicate, and that can be of two kinds. Either the predicate B belongs to the subject A, or B lies outside the sphere of the concept A though somehow connected with it. In the former case the judgment is analytic; in the latter it is synthetic. The one simply unfolds what has all along been conceived in the subject concept; the other ascribes to the concept of the subject a predicate which cannot be found in it by any process of analysis. Thus the judgment 'all bodies are extended' is analytic. The concept of body already contains that of extension, and is impossible save through it. On the other hand, the judgment all bodies are heavy is synthetic. For not body as such, but only bodies which are in interaction with other bodies, are found to develop this property. Bodies can very well be conceived as not influencing one another in any such manner.<sup>2</sup>

Following the other criterion i.e. the contradiction criterion, an analytic judgement is governed purely by the logical law of contradiction. Thus, it can be said that a judgment is analytic if and only if the opposite of which is self contradictory. Whereas, corresponding to it, a synthetic judgement is one the opposite of which is not self contradictory. 'All bodies are extended.' is an analytic judgement, because the opposite of this judgement is 'Some bodies are not extended things.' This leads to self contradictory in this way—'Some extended things

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<sup>1</sup> Maxmuller, F. (Tr.) (1922) *Immanuel Kant's Critique of Pure Reason*, The Macmillan company, London, Page—48

<sup>2</sup> Smith, N. K.(1918) *A Commentary to 'Kant's Critique of Pure Reason'*, Macmillan and co., limited, London, P-29

are not extended things.’(bodies = extended things), because it is in the form—P.  $\sim$ P. But the opposite of ‘All bodies are heavy.’ is ‘Some bodies are not heavy.’ which cannot be reducible into a self contradiction and so, it is synthetic.

## Section-II: Ayer’s objection

Ayer in his *Language, Truth and Logic* maintains that the Kantian criteria of the distinction between synthetic and analytic distinction cannot be acceptable, because this criteria is infected with some difficulties. According to him, there are two difficulties arises, if Kantian criteria of the distinction between synthetic and analytic distinction is considered.

The first is related with the meaning of the term ‘concept’. The term ‘concept’ is indistinct. He remarks, “...the difficulties which arise out of the use of the vague term concept”.<sup>3</sup>

The term ‘concept’ raises difficulties, because this term has been used by different philosophers in different senses. Lock has used this term ‘concept’ to denote the idea where Hume has used it to express an impression.

Ayer thinks that this difficulty is not major one. The main difficulty is that of Kantian criteria violates the principle of division. He says, “...he gives two distinct criteria, which are by no means equivalent.”<sup>4</sup>

Violating the principle of division means a judgment is synthetic through one criterion and also at the same time is analytic through another criterion. In other words, a judgment which is proved as synthetic through containment criterion and at the same time is treated as analytic through contradiction criterion.

Kant gives two criteria, which are distinct to each other. For Ayer, Kant maintains that the first criteria i.e. containment criterion is psychological one and the other criterion i.e. contradiction criterion is logical one, because it depends on the logical law of contradiction. Following the first criterion, the predicate concept lies in the subject concept means the thought associated with the predicate concept lies in the thought associated in the subject concept.

‘ $7+5 = 12$ ’ is synthetic, because the thought associated with the predicate concept 12 i.e. the immediate successor of 11 does not lies in the thought associated with the subject concept i.e. the union of 7 and 5.

Ayer says that the judgment ‘ $7 + 5 = 12$ ’ can be proved as analytic by the logical law of contradiction, if Leibnizian conception of ‘Synonymous’ is applied.

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<sup>3</sup> Ayer, A. J. (1936) *Language Truth and Logic*, Penguin, London, P-104

<sup>4</sup> Ayer, A. J. (1936) *Language Truth and Logic*, Penguin, London, P-104

Two symbols belonging to the same language can be said to be synonymous if and only if, the simple substitution of one symbol for the other, in any sentence in which either can significantly occur, always yields a new sentence which is equivalent to the old. If '7+5' is substituted for 12 then '7+5=7+5' will be the result which is same as the old sentence '7+5=12'.<sup>5</sup>

It can also be said that the denial of this new sentence '7+5=7+5' leads to a self contradiction and it is analytic. So Ayer seems to prove that Kantian criteria of the distinction between synthetic and analytic judgment violate the principle of division, because the judgment '7+5=12' which is synthetic according to the psychological criterion has now become analytic by another criterion. That is why Ayer proposes to reject Kantian criteria of the distinction between synthetic and analytic judgment.

### Section-III: Quine's objection

Being a follower of holistic theory of knowledge, Quine has tried to reject Kantian notion of the distinction between synthetic and analytic judgment on the basis of three objections. First criticism, according to Quine, the criterion is applicable only to the subject-predicated form<sup>6</sup> of judgments, secondly, Kant has used the term 'containment' metaphorically<sup>7</sup> and thirdly, self-contradiction cannot be the basis of analyticity. The last criticism has not been directly charged against Kantian distinction of synthetic-analytic distinction, because this third notion is a paraphrase, after keeping intact the Kantian notion of synthetic-analytic distinction, from the purview<sup>8</sup> of Quine .

Quine says that the literal meaning of the term 'contain' indicates the space enclosed by an object falls within the space occupied by another object. For example, it can be said that the tea is contained in the cup. When Kant says that the predicate concept is contained in the subject concept it implies that Kant uses the term 'contain' to express the relation between two concepts which, no doubt, an example of the use of the term contain as metaphorically.

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<sup>5</sup> Ayer, A. J. (1936) *Language Truth and Logic*, Penguin, London, P-80

<sup>6</sup> Quine, W.V (1951) *Two Dogmas of Empiricism*, The Philosophical Review, Vol. 60, No. 1 , P-20

<sup>7</sup> Quine, W.V (1951) *Two Dogmas of Empiricism*, The Philosophical Review, Vol. 60, No. 1 , P-20

<sup>8</sup> Quine, W.V (1951) *Two Dogmas of Empiricism*, The Philosophical Review, Vol. 60, No. 1 , P-20

Again, Kant keeps believe in traditional logic where only the subject-predicated forms of judgments are accepted. But in modern logic all judgments are not subject predicated form although they apparently looks like subject-predicated forms of judgments. For example, we may take the following statements:

Statement	In symbol
1) Socrates is wise.	$Ws$
2) Socrates is a philosopher.	$Ps$
3) All men are mortal.	$(x)(Hx \supset Mx)$
4) No men are perfect.	$(x) (Hx \supset \sim Px)$
5) The table is upon the platform.	$(\exists x)\{ [Tx \cdot (y) (Ty \supset x=y)]. Px \}$
6) Tiger exists.	$(\exists x) Tx$

In the statement ‘Socrates is wise.’ the quality wisdom is assigned to the person named as Socrates. Here the statement is in subject predicated form. But after being symbolized its subject-predicated form is vanished. Again, the second statement is not a purely subject predicated form of statement, because ‘philosopher’ is a noun and a noun cannot be the quality of another noun—Socrates. Actually, this statement indicates that Socrates is belonged to the class of philosopher. In third and fourth statement, the relations between two classes are expressed. The third is an example of the class of inclusion and the fourth is the class of exclusion. These are in subject-predicated form. The fifth statement shows the relation between two objects and we cannot say the relation is identical with quality, because in that case category mistake will be committed. And the last statement is also not a subject predicated form of statement, as existence cannot be the predicate. If existence is recommended as a predicate then ‘Tiger exists.’ will be treated as tautologies (In that case, we have to say that the tiger which exists is exists.), although it is in fact a contingent statement. So, it seems that Quine is right to say that the criterion is applicable only to the subject-predicated form of statements.

According to contradiction criterion a judgment is analytic if its denial is self contradictory, whereas in case of synthetic judgment the opposite of a synthetic statement is not self-contradictory. For example, the statement ‘No unmarried are married’ is an example of an analytic statement, because the negation of this statement is ‘Some unmarried men are married.’ that is to say ‘There is at least one unmarried man who is married’ is self contradictory as it leads us to in the form  $p. \sim p$ .

But according to Quine, the above mentioned definition of analyticity, in terms of self contradictoriness is not a clear; because the notion of self-contradictoriness itself is not self depended. Let us make a clarification of Quine’s view with the help of the following phases:

Phase I: A statement is self-contradictory, if it is in the form  $p. \sim p$ . In this sense, “This is a table and this is not a table” is self-contradictory. But the statement “Some bachelors are not unmarried” cannot be said as self-contradictory through this definition as it is not in the form

of  $p$ .  $\sim p$ , although all we know very well that it is indeed a self-contradictory statement. So, we may say that this definition suffers from the defect of under-coverage.

Phase II: We may give another definition of analyticity, where the defect of under coverage cannot be applicable. In this sense, a judgment is self-contradictory if it is in the form  $p$ .  $\sim p$  or if it can be reduced to the form of  $p$ .  $\sim p$ . In this definition we cannot say that this definition is suffered from under coverage as “Some bachelors are not unmarried” can be reduced to be a self- contradictory. But, Quine has also rejected this definition by saying that it is not satisfactory, because it does not give us the instructions, how a judgment could be reduced in the form of  $p$ .  $\sim p$ .

Phase III: To remove the defects of the Phase I & II, it may be said that a judgment is self-contradictory, if it is in the form of  $p$ .  $\sim p$  or if it can be reduced to the form of  $p$ .  $\sim p$  with the help of definitions, the law of synonymy and rules of logic.

Here the instructions of reducing the judgment into self-contradictory judgment that is in the form of  $p$ .  $\sim p$  are given. So, the defects which have been charged against on the previous phases are not being applicable here. These instructions are as follows:

1. Some bachelors are not unmarried.
2. Some bachelors are married. (With the help of Logical Law of Double Negation.)
3. Some unmarried men are married.(bachelors=unmarried by definition and Law of synonymy as synonyms are mutually substitutable )

In symbolic form:

1.  $(\exists x) (Hx. \sim Mx. Mx)$  [Hx: x is a man, Mx: x is married]
2.  $Ha. \sim Ma. Ma$  [By E.I]
3.  $\sim Ma .Ma$  [By simp]
4.  $Ma. \sim Ma$  [By com]

But here it is found that the notion of self-contradictoriness is related with the notion of definition, synonymy and logical laws. But there are no sufficient reasons, according to Quine, to suppose these notions are very clear enough. So, the definition of analyticity on the basis of self-contradictoriness is rejected. Quine says,

But this definition has small explanatory value; for the notion of self contradictoriness, in quite broad sense needed for this definition of analyticity, stands in exactly the same need of clarification as does the notion of analyticity itself.<sup>9</sup>

Section –IV: Ayer’s alternative definition of synthetic analytic distinction

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<sup>9</sup> Ammerman, Robert. R. (Ed.) (1965) W.V.O. Quine’s *Two Dogmas of Empiricism* in *Classics of Analytic Philosophy*, Tata McGraw Hill Publishing Company Limited, P-197.

Before explaining Ayer's own criteria it should be mentioned here that Ayer does not reject the distinction, what he rejects, is the criteria which has been given by Kant. He also demands that he has kept the spirit of Kantian criteria of synthetic-analytic distinction.

According to Ayer 'a proposition is analytic when its validity depends solely on the definitions of the symbols it contains and synthetic when its validity is determined by facts of experience.'<sup>10</sup> Following this definition, the judgment—'There are ants which have established a system of slavery.' is a synthetic, because we cannot tell whether it is true or false merely considering the definition of the symbols it contained. We have to observe the actual behaviour of ants. On the other hand, the judgment—'It is either a table or it is not a table.' is analytic, because in this judgment the factual observations are not necessary. If one knows the function of the words 'either' 'or' and 'not' then one can see that any proposition of the form 'Either P is true or P is not true' is valid independently of experience. Accordingly, all such propositions are analytic.

Section-V: A defense of Kantian doctrine by rejecting the doctrine of the distinction between synthetic and analytic judgment as stated by Ayer

It should be noted here that Ayer's criticism of Kant is based on a total misunderstanding. Ayer has shown that the judgment '7+5=12.' is synthetic by the application of Kantian containment criterion and analytic by Kantian contradiction criterion on the basis of the Leibnizian notion of synonymous. Kant would not admit that '7+5' and '12' are synonymous in the same sense through which Ayer has thought. What Kant acknowledged '7+5' and '12' are extensionally identical; but these are not identical intentionally, because their connotations are not the same. In view of their extensional agreement, these are no doubt inter-changeable. But Kant does not admit this view, because he believes that all mathematical judgments without exception are synthetic a-priori. So, it is proved that Ayer's criticism is based on total misunderstanding.

Again, Ayer tries to reject Kantian doctrine of synthetic and analytic distinction, because according to him, it violates the principle of division. But Ayer's own criteria are not free from this charge. Ayer's own account of synthetic-analytic distinction proceeds following to two principles. These two principles are, as Richard Robinson calls them 'definitional principle' and 'experience-principle'.<sup>11</sup>

An analytic proposition is defined by Ayer according to the definitional principle thus; a proposition is analytic if its validity is determined solely by the definitions of terms. A synthetic proposition, however, is defined by him according to different principle, namely, the experience principle thus; a proposition is synthetic if its validity is determined by the

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<sup>10</sup> Ayer, A.J. (1936) *Language Truth and Logic*, Penguin, London, P-73

<sup>11</sup> Robinson, Richard. (1969) *Necessary propositions* in the first critique; Reflections on Kant's critique pure Reason, Belmont, Calif., Wadsworth Pub. Co. Page-29-30

facts of experience. Now this undetected duality of Ayer's principle of distinction does indeed generate confusion that is to say violates the principle of division.

Following Robinson, again, it may be argued against Ayer, that there are some propositions where Ayer's criteria are not applicable. For example, the proposition—'An apple should be juicy and sweet.' cannot be said to be analytic proposition, because the truth value of this proposition never be determined by the definition of the symbols i.e. 'apple', 'sweet' etc. it contained. So, this is synthetic according to Ayer's experience principle, however, this proposition is not synthetic (and so is analytic), since this proposition, being a normative are (i.e.—a should proposition), cannot be determined as true or false by appealing to the facts of experience.

Thus, we see that Ayer's own criteria violets the principle of division.

Again, it should be mentioned here that Ayer demands that he has maintained the spirit of Kantian doctrine of synthetic-analytic distinction. But Kant gives his doctrine in such a way that the possibility of synthetic-a priori statement could be explained. But Ayer's doctrine has failed to do so.

Section-VI: A defend of Kantian doctrine by rejecting the criticism of Quine regarding the doctrine of the distinction between synthetic and analytic judgment

As it has been mentioned earlier, Kant gives us two criteria—the containment criterion and contradiction criterion in order to make the distinction between synthetic and analytic judgment. According to the first criterion, a statement is analytic, if the predicate is conceptually contained in the subject concept. Here, the predicate concept is contained in the subject concept means, if the subject concept logically analyzed into its constituent parts then one of the logical constituent must be identical with the predicate concept. In this sense, the judgment 'All bodies are extended.' is analytic, because the logical constituents of the concept 'body' are substantiality and extendedness and the predicate concept extendedness is identical with the logical constituent extendedness. So, here it is observed that the predicate concept is identical with one of the logical constituents of the subject concept. But, on the other hand, in a synthetic judgment the predicate concept lies outside the subject concept. It means the predicate concept can never be identical with any one of the logical constituent of the subject concept. For example, the judgment— 'All bodies are heavy.' is a synthetic judgment, because the concept of heaviness is not identical with the concept of substantiality and extendedness.

From the discussion mentioned above it is clear that Kant has never used the term 'contain' in metaphorical sense, actually he has used the term 'contain' logical sense which Quine seems to be failed to understand.

Again, Kantian notion of the distinction between synthetic and analytic judgment is applicable only on the subject-predicated form of judgment—is Quine's another charge against Kant. But this charge is not major one, because Kant has used the term judgment

instead of sentence or proposition or statement etc. In a judgment, the relation between subject and predicate is established either through experience or through understanding or through intuition. The notion of judgment presupposed the notion of subject-predicated form. So, this charge is not major one.

The last charge against Kant is related with the notion of self-contradictoriness. If Kantian purpose of making this distinction is followed minutely it will be observed that Kant's main intention is to establish synthetic-a-priori judgment, because, for Kant, synthetic-a-priori judgments are the mark of science. How does a synthetic judgment a-priori possible? is the main problem of Kantian philosophy. In this case, the notion of a-priori is very important. According to Kant, there are two marks of a-priori—strict universality and necessity. The expression strict universality indicates that a judgment cannot be treated as universal on the basis of the quantifier it contains. For example, the judgment—'All swans are black.' is not strictly universal; whereas, ' $7+5=12$ ' is strictly universal. Regarding the concept of necessity, Kant makes a distinction between analytical or logical necessity and a-priori necessity. Following analytical or logical necessity, 'All bodies are extended.' is an analytic judgement, because the opposite of this judgement is 'Some bodies are not extended things.' This leads to self contradictory in this way—'Some extended things are not extended things.' (bodies = extended things), because it is in the form— $P. \sim P.$  But Kant is not too much interested on this notion of necessity. In fact, he is interested in a-priori necessity. In this sense, a judgment is treated as necessary if its denial is not constructible in the actual world. For example, 'No two straight lines can enclose a space.' is necessary, because the denial of this judgment is—'There are at least two straight lines which enclose a space.' cannot be constructed in the actual world. In order to enclose a space at least three straight lines are needed. So, it is true that Quine has been able to reject the notion of analytical necessity, but he has failed to reject Kantian notion of a-priori necessity.

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