SOME REFLECTIONS ON ANALYTIC AND SYNTHETIC DISTINCTIONS

I will try to cover in this paper a few points regarding the distinction between analytic and synthetic propositions. At the very outset, it is necessary to state that contemporary thinkers are not unanimous in their views of the above-mentioned distinctions. Ayer and Carnap for instance have maintained the distinction between analytic and synthetic propositions; whereas Quine on the contrary holds the view that no such distinction can be maintained. Grice and Strawson also have presented their respective points in their attempt to understand Quine. Each of these views is important from its own standpoint. In the analysis of some of these reflections, what I have tried to establish in this paper is that in trying to judge a particular proposition if it is to be considered as analytic or synthetic, we can judge it in respect of certain criteria to be discussed later; but if it is asked whether any general criterion is to be discovered by which a clear-cut distinction can be formed in respect of all propositions—i. e., to divide them into two clear-cut groups of analytic and synthetic ones, I would rather agree with Quine that no such general criterion can be established so far.

The problem of finding a criterion to distinguish analytic and synthetic propositions goes down to the root of it, i. e., what is the meaning of 'analytic' ? Mates, in one of his articles "Analytic Sentences"[1] has elaborated the different ways Quine and M. White[2] have analysed the term 'analytic'. In No. 4 of his analysis, S is analytic, if and only if S is true by virtue of meanings and independently of fact. Interpreted by Quine, this definition makes reference to certain entities known as 'meanings', which are believed to be either mental or Platonic ideas, in which case, they are illusive and cannot be pursued further, so according to Quine, this analysis of 'analytic' into 'meanings' is not satisfactory.

But this very attempt to define an analytic proposition as true and independently of fact, designates, according to Ayer, on the contrary, the very precise nature of an analytic proposition.[3]

According to Ayer, the fact that analytic propositions are devoid of factual content means not that they are senseless, but they enlighten us by showing the way in which we use certain symbols. It is "calling attention to the implications of a certain Linguistic image".[4] If one knows the functions of the words such as "either-or", 'not', etc., there one knows whether the proposition is true or not independently of experience and all such propositions are analytic propositions. And because they are devoid of any factual content, no experience whatsoever can refute them. Ayer further maintains that there is nothing mysterious about the certainty of logic and mathematics. Logical and mathematical propositions are analytic and no observation can refute them, in the sense that "7 + 5 = 12" depends simply on the fact that the symbolic expression "7 + 5" is synonymous with "12", just as our knowledge that every oculist is an eye-doctor depends on the fact that the symbol of "eye-doctor" is synonymous with "Oculist"[5]. According to Ayer, this is termed as *a priori* truth. Ayer is prepared to take mathematics much as it is. Existing mathematics is used as the formation of an epistemology.

Ayer's charcterisation of analytic propositions by this emphasis on this formal scheme devoid of actual content is also noticed in Carnap's way of distinguishing between these two types of formal and factual sciences.[6] Carnap also is of opinion that the formal sciences contain analytic and the factual sciences synthetic propositions. Carnap's special elucidation of analytic propositions includes in its sphere descriptive analytic propositions and the analytical logical ones. The latter is again subdivided into a narrower sense of logical and mathematical propositions. This subdivision is based on a practical standpoint in distinguishing mathematical propositions containing numberals of entities relating to numerals. The first division of descriptive analytic propositions is closer to a great extent to synthetic propositions in as much as they contain descriptive signs such as signs of extralogical entities. But the truth or falsity of these propositions is tested through the formal rules which are considered to be independent of these extra-logical entities.

Carnap's distinctions of these three types of analytic propositions prepares the ground that the criterion demarcating the

divisions of analytic and synthetic propositions is flexible since there will always be a group of descriptive analytic propositions which, with the advancement and change in science can be tested in a different light and there will always be a possibility of having new predictions, concerning the future. This possible scope of a further verification of an analytic proposition into changing to a synthetic one is suggested by Quine to demolish the very distinction of analytic and synthetic propositions. Quine looks at the mathematical analytic propositions from the point of this factual descriptive formula.

Quine, belonging to the other group wants to *describe the accepted* theories of mathematics too. For Quine and White, epistemology is a scheme within which mathematics must fit. Epistemological principles bearing a higher priority can be needed as a critical tool and if some pieces of mathematics or scientific theory do not fit that scheme, they should either be thrown out or totally revised.[7]

But it can be stated that the difficulty to set a standard to distinguish between 'logical' or 'mathematical' and 'descriptive' expressions (if those are what are meant by analytic and synthetic ones), is clarified if it is understood that :

> Logical truths are true statements that contain only logical words essentially.[8]

Further, logical truths are analytic, that is, they are true by virtue of the meaning of the words. But (i) origin of this truth, and (ii) certainty of it are not the deductions from the nature of logical truths. It simply means that analytic statements can be distinguished from the synthetic ones, if in this sense, the truth of the former is restricted only to the logical words and not to factual sources;

> their truth is determined solely by the ways in which the words they contain are used.[9]

While maintaining all the three clarifications of analytic propositions, Carnap's point regarding the formal science and factual science is very clear. Being devoid of actual content, formal science specially of logic and mathematics is not being denied of any importance. Carnap rightly holds the view that

this formal science containing analytic propositions serves in an auxiliary function for the inferential operations. The fact that these formal sciences have no objects, does not according to Carnap, put these propositions of logic and mathematics to the synthetic group when they are used formally for the latter. Factual propositions are of course synthetic ones and even if the delimitation between analytic and synthetic propositions is emphasised, the significance and understanding of analytic propositions are always there.

This is stated by Kemeny that a true mathematical proposition is a true analytic proposition,[10] for example '$365-1=364$', we know its meaning is determined by the usage of its component expressions.

If analytic propositions are understood as logically true in the way explained, then conventional use is one of the ways to understand this distinction.

This point of using convention as the device for recognising logical truths or analytic propositions is rightly handled by Grice and Strawson.[11] In their criticism of Quine, they state that it is not a mere convention that philosophers make a distinction between analytic and synthetic propositions. Those who are in favour of this distinction, apply it not only to some existing instances, but also to new ones and the fact that even in these new cases, agreement regarding the nature of propositions either as analytic or as synthetic is always established, confirms the thesis more that the distinction exists. This is already illustrated by the example of mathematical analytical propositions.

Leaving aside mathematical propositions now, Grice and Strawson further explore the grounds for believing in the distinction between analytic and synthetic propositions. Quine's 'cognitive synonymy' could be one such presumption for this distinction. But Quine himself considers 'synonymy' to be as unclarified as the term 'analyticity' is and hence no such distinction exists for him. According to him, definition of a term cannot give any clue to this problem, since any definition by itself presupposes a further synonymy. But this is not always done. There are

(i) Transparent cases where the defidierdum becomes synonymous with defiens—i.e., the cases where the two terms specially fit each other, and

(ii) Cases where—

Two expressions are synonymous in a language L if and only if they may be interchanged in each sentence in L without altering the truth value of that sentence.[12]

Mates points out the two criteria for this application of synonymity—(a) occurrence in the same language, and (b) languages which are not semantically closed, i.e. natural languages. Another important definition of synonymity is also found in reference to extensional contexts.[13] By extensional contexts, those terms are meant to be synonymous if it is established for instance that whatever is good is productive of pleasure and whatever is productive of pleasure is good. This sense of synonymity is accepted by many ephicists. This sense is different from the sense with reference to a language which is extensional no doubt but for the presence of the model operator—"it is necessary that....."

In the second case it is also to prove that two terms are synonymous if it is impossible for sometime to be good without being pleasant, or to be pleasant without being good. It is in the first sense that synonymity can be maintained in the case of analytic propositions.

Quine's further refutation of accepting the distinction consists in this : the family circle of analyticity, as suggested by Quine, is designated by other terms, so that, according to him, explanation or clarification of one of these groups will bring clarification to the rest of the others. But this point is met by Grice and Strawson by their objection to this grouping of all such terms into one family circle; in order to be grouped together, the members of the group must have some common characteristics but in this case no such common characteristic is shown by Quine. So one cannot say that all these notions such as analyticity, synonymy, necessity, definition, semantic rule etc., all belong to the same circle.

Quine's next objection to the distinction between analytic and synthetic propositions is centered round the fact that since

the so-called analytic propositions stand in a chance of being revised, i.e., in the light of experiential facts, we cannot have the proper boundary line between these two classes of propositions.

But as rightly pointed out by Grice and Strawson, this concept of revision of statements in the light of experience as suggested by Quine, is not still inconsistent with the distinction between analytic and synthetic propositions. That even mathematical analytic propositions are also prone to revision in face of experience does not mean that there is no distinction between analytic and synthetic ones; one such scientific statement which is considered to be analytic is explained in this way.[14]

Statement—*Momentum is proportional to velocity.* According to the formula propounded in classical physics, momentum is defined as mass velocity. This is part of a scientific theory with which the experiential findings of Michelson-Morley conflict, but these experiments do not conflict with any particular aspect of the above statement and the formula—*Momentum is equal to mass velocity*—can be revised even to accommodate the conflicting results of the experiment. Hence, in place of an 'equality', we substitute 'proportionate' sign—adding a constant.

Quine's emphasis on revisability is that there is no absolute necessity about the use of any conceptual scheme whatsoever or that there is no analytic proposition as such that we must have linguistic forms bearing just the sense required to express that proposition.

Grice and Strawson rightly say that if the same form of words bearing one sense express something true and having a different sense express something false, then of course the point of any revision of the conceptual scheme comes up. But

> if certain predictions in a discipline such as mechanics fail, one does not typically embark on a revision of the differential calculus, though the calculus is part of that theory.[15]

The point stressed is this : under a certain textual content the propositions that are immune to revision are termed as analytic and this point is perfectly admissible with the fact that all propositions logical and mathematical or scientific and empirical ones are all equally prone to experiential revision. But

the fact that because some aspect involved in a situation is not fulfilled and hence the proposition could be revised in the new light, does not alter the fact that under certain contexts, still the proposition is true by virtue of its meaning.

M. Dummett[16] also points out that the basic conception of analyticity lies in this that some sentences could not be given up unless some change in the meanings of some of the words involved has occurred. Quine attacked this very point. His supposition is that for only an analytic sentence we can have circumstances in which we need not have that sentence. But on this supposition, Dummett points out that a very high degree of analyticity is contained in this way—the rejection of some statement is intelligible only under the supposition of a rejection of one of the concepts involved in its expression. This is a very high notion of analyticity.

Further, as pointed out by Grice and Strawson, one can have 'intuitive' notions of analyticity and synonymy; they admit that this intuitive term itself is still vague and is not capable of being explained fully. But their appeal is to the understanding of those who want to use this distinction. Various terms cannot be scrutinised separately by this method of intuition. What they want to stress is that although there is great value in the way by which Quine and M. White analysed the notion of analyticity and synonymy, there is not much to be gained in that enquiry, however scrutinising and systematic it may sound. Dummett also is of opinion that Quine did not fully discuss the merit of a proposal of revision in detail. The angle from which Quine looked at the distinction between analytic and synthetic propositions is the urge to respond to new empirical data in scientific schemes. Grice's and Strawson's point of view seems to be a practical one of decision having, at the same time, in their conceptual scheme the basic understanding of some concepts to be understood in terms of truth-values or logical symbols and the concepts to be understood and hence prone to be revised through experiential facts.

The only point where Quine is really differing from Grice and Strawson is not to use this intuitive 'notion' of understanding by which one can have a boundary line between analytic and

synthetic propositions, although Quine was fully aware of all these 'intuitive notions', or logical symbols or logical truths concerned with analytic propositions. He admits clearly that "the truth of a statement is somehow analysable into a *Linguistic component* and a factual content"[17]. The point is this—Quine is not ready in fixing up a strict boundary line between these two groups of propositions so that any flexible operation in transferring some propositions of one group into another will never be allowed.

We conclude our discussion by saying that as some propositions, for example, logical and mathematical ones, are less subject to revision, the difference between an analytic and synthetic one, although it seems to be one of degree in the revisionary conceptional scheme, still is of a constant one and logico-mathematical propositions existing and at the same time perfectly being understood what they signify, can be termed as analytic propositions. But if it is wanted at the same time to have a clear criterion by dint of which all propositions could be divided into two specific groups, then I agree with Quine that no such criterion could be established so far.

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NOTES

1. Feigl, Sellars and Lehrer (ed), "Analytic Sentences", *New Readings in Philosophical Analysis* (Meredith Corp. 1972), pp. 137 - 142.
2. Linsky (ed), "The Analysic and the Synthetic: An untenable dualism", *Semantics and the Philosophy of Language* (Illinois Press 1952), pp. 272 - 286.
3. Ayer, *Language, Truth and Logic* (1964), p. 79.
4. *Ibid*, p. 79.
5. *Ibid*, p. 85.
6. Feigl and Brodbeck (ed), "Formal and Factual Science", *Readings in the Philosophy of Science* (Meredith Corp. 1953) pp. 123 - 128.

7. P. Benacerraf and H. Putnam (ed), *Philosophy of Mathematics* (Prentice Hall, 1964), p. 3.
8. Lambert and Brittan, *An Introduction to Philosophy of Sciences,* (Prentice Hall, 1970), p. 6.
9. *Ibid,* p. 10.
10. *Ibid,* p. 11.
11. Feigl, Sellars and Lehrer (ed), "In defense of a dogma", *New Readings in Philosophical Analysis* (1972), pp. 126-136.
12. Linsky (ed), *Semantics and the Philosophy of Language,* (1952), p. 119.
13. *Ibid,* p. 135.
14. Lambert and Brittan, *Ibid,* p. 20.
15. Lambert and Brittan, *Ibid,* p. 21.
16. Lewis (ed), "Is Logic empirical?", *Contemporary Btitish Philosophy* (George Allen and Unwin, 1976), pp. 45-68.
17. Ammerman (ed), "Two dogmas of empiricism", *Classics of Analytic Philosophy* (McGraw Hill, 1965), p. 207.

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