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ARGUMENTS FOR THE EXISTENCE OF GOD IN ANSELM'S  
PROSLOGION CHAPTER II AND CHAPTER III

A Thesis Submitted to the University of Glasgow for  
the Degree of Doctor of Philosophy

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## Abstract

Anselm's argument for the existence of God in Proslogion Chap.II starts from the contention that "when a Fool hears 'something-than-which-nothing-greater-can-be-thought', he understands what he hears, and what he understands is in his mind". This is a special feature of the Pros.II argument which distinguishes the argument from other ontological arguments set up by, for example, Descartes and Leibniz. This is also the context which makes semantics necessary for evaluation of the argument. It is quite natural to ask "What is understood by the Fool, and what is in his mind ?" It is essential for a proper consideration of the argument to identify the object which is understood by the Fool, and so, is in his mind. A semantics gives answers to the questions of "What the Fool understands ?" and "What is in the Fool's mind ?" If we choose a semantics as a meta-theory to interpret the Pros.II argument, it makes an effective guide to identify the object. It is a necessary condition for a proper evaluation of the Pros.II argument to fix our universe of discourse, especially since, in the argument, we are involved in such talk about existing objects as Anselm's contention that "when a Fool hears 'something-than-which-nothing-greater-can-be-thought', he understands what he hears, and what he understands is in his mind". The ontology to which a semantic theory commits us will be accepted as our scope of objects when we introduce our semantic theory to interpret the Pros.II argument, and this ontological boundary constrains us to identify the object in a certain way. Consistent application of an ontology, most of all, is needed for the evaluation of the logical validity of an argument.

If we take Frege's three-level semantics, we are ontologically committed to intensional entities, like meaning, as well as extensional entities. Sluga contends that Frege's anti-psychologism for meanings should not be interpreted as vindicating reification of intensional entities in relation to Frege's contextualism, that Frege's anti-psychologism with his contextualism is nothing but a linguistic version of Kantian philosophy for the transcendental unity of a judgement. There is, however, another possible interpretation of Frege's contextualism.

According to Dummett, the significance of Frege's contextualism must be understood as a way of explanation for a word's having meaning. If Dummett's view is cogent, we could say that Frege's contextualism does not prevent our interpreting his semantics as being committed to intensional entities. We need not worry that Frege's over all semantics, especially with his contextualism, would internally deny the ontological interpretation of his theory. We see Anselm's argument for the existence of God in Pros.II is an invalid argument if we introduce Frege's three-level semantics, i.e. if we acknowledge meanings of words as entities in our universe of discourse.

We can also employ extensional semantics for the interpretation of the Pros.II argument. According to extensionalists, like Quine and Kripke, we need not assume intensional entities, like meaning, to be part of our ontological domain. They argue that we can employ our language well enough without assuming intensional entities. If we choose extensional semantics as a meta-theory to interpret the Pros.II argument, it commits us only to extensional entities as objects in the universe of our interpretation. In Sections 1.4. and 1.5., I show that extensional semantics makes the Pros.II argument a valid argument for the existence of God.

"Necessary existence" is the central concept of Anselm's argument for the existence of God in Proslogion Chap.III. It has been said that, even if the argument is formally valid, it cannot stand as a valid argument for the existence of God, since "necessary existence" is an absurd concept like "round square". And further that even if there is a meaningful combination of concepts for "necessary existence", it cannot qualify as a subject of an a priori argument. As objections to the interpretations which make the Pros.III argument valid, it has been argued that even if there is a concept of "necessary existence" which is meaningful and there is another concept of "necessary existence" which is suitable as a subject of an a priori argument, there is no concept of "necessary existence" which is meaningful and at the same time suitable as a subject of an a priori argument. In Chap.2 and Chap.3, I try to show that there can be concepts of "necessary existence" which are proof against these objections. Anselm's

arguments for the existence of God in Proslogion Chap.II and Chap.III are logically valid arguments on some logical principles.

Some fideists, K. Barth, for example, argue that Anselm's arguments for the existence of God in Proslogion are not proofs for the existence of God even if they are logically valid arguments. I raise the question how this attitude could be possible, in Chap.4 and Chap.5. Barth's fideistic interpretation of Anselm's Proslogion arguments does not find any flaw in the validity of the arguments, and it accepts the meaningfulness and truth of the premises even to the fool in Proslogion. If this is the case, i.e. if Barth's interpretation accepts the validity of the arguments and the truth of the premises, I raise the question, how can the arguments not be interpreted as proofs for the existence of God ? How is it possible that the function of the arguments is not that of proving the existence of God ? According to Wittgensteinian fideism, premises in the arguments should not be intelligible to those who do not believe in God's existence already, and so the real function of the arguments is the elucidation, the understanding of believer's belief, rather than proving articles of belief to unbelievers. Barth's fideistic interpretation of the arguments, however, fully recognizes the meaningfulness and truth of the premises in the arguments as well as the validity of the arguments.

I argue that there could be a justification for the Barthian fideism. As Malcolm notices, there are still atheists who understand Anselm's arguments as valid, but the only possibility for the people who recognize the validity of Anselm's arguments still to remain atheists has been thought to be to challenge the truth of premises employed in the arguments. Now, of the atheistic possibility, we can change the direction of our attention, that is, to the question about the function of a logically valid argument itself. What has not been thought of in relation to Anselm's arguments is the significance of logical truth or the logical validity of an argument. We have not asked such questions as "What does a logical truth say ?" and "What does a logically valid argument guarantee with true premises ?" Let us assume that even the premises are accepted by atheists. Do they all convert to theism ? If that were so, the disagreement between atheist and believer over the ontological arguments should turn only on the truth of

premises. If that is not so, there is some point in raising this other question. If there are people who, recognizing the premises and validity of an argument, are still reluctant to accept the conclusion, we have reason to question the function of a valid argument. I argue that there is a way of being consistently reasonable while accepting the premises and the validity of the ontological arguments and yet remaining an atheist or an agnostic. There are some views in philosophical logic which would make this possible. Here I do not mean that fideism is atheistic. As shown in the text, I only mean that the Barthian fideistic interpretation of Anselm's arguments has the same logical attitude as the atheistic position explained, in that they do not accept Anselm's arguments as proofs for the existence God even if the arguments are logically valid and the premises are true. I attempt to show that the Barthian fideism in interpreting Anselm's arguments for the existence of God in Proslogion, lies in the cogency of logical nihilism which is to the effect that logical truth reflects only human conventions for logical words. Fideism in general may have logical nihilism as an aspect of its foundation.

Logical nihilism is founded on the possibility of deviant logics, since logical systems substantially different from each other should be possible if we can have significantly different logical conventions. Deviation in logic, however, cannot be more than notational. So, logical nihilism loses its power to convince by its failure to establish logical systems which are substantially different from each other, and the fideism we have sketched also becomes weakened in its persuasiveness.

If a fideistic interpretation of Anselm's arguments reduces its cogency, we cannot but conclude that Anselm's arguments for the existence of God in Proslogion Chap.II and III are successful proofs for the existence of God for those who accept the truth of the premises and some logical principles on which the validity of the arguments are established.



## 1. Semantics

### 1.1. Introduction

Anselm's argument for the existence of God in Proslogion Chap.II starts from the contention that "when a Fool hears 'something-than-which-nothing-greater-can-be-thought', he understands what he hears, and what he understands is in his mind". As the starting point of an argument for the existence of God, the assertion should be clearly understood. It is not very easy, however, to make out Anselm's reasoning in the sentence "he understands what he hears, and what he understands is in his mind". The sentence is puzzling. The difficulty in interpreting Anselm's starting contention, and so his whole argument in Pros.II, is in the identification of the thing which the Fool understands and has in his mind. What does the Fool hear ? And what is understood by him and is in his mind ? It may be generally accepted that the Fool hears and understands a linguistic expression. But it may not be very sensible to argue that a linguistic expression, as either sound or written marks, is in his mind. The first thing we have to do for a proper consideration of Anselm's argument for the existence of God in Pros.II, unless we are simply going to discard the starting point, and so the whole argument, as nonsensical, is to identify what is understood by the Fool and is in his mind when he hears 'something-than-which-nothing-greater-can-be-thought'.

The following is a translation of the argument in Pros.II by Charlesworth<sup>1</sup> (the numbering is mine);

[1] But surely, when this same Fool hears what I am speaking about, namely, 'something-than-which-nothing-greater-can-be-thought', he understands what he hears,

(Sed certe ipse idem insipiens, cum audit hoc ipsum quod dico: 'aliquid quo maius nihil cogitari potest', intelligit quod audit;)

[2] and what he understands is in his mind, even if he does not understand that it actually

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<sup>1</sup> Charlesworth, M.J.; St. Anselm's Proslogion (Clarendon Press, Oxford, 1965) p.117

exists.

(et quod intelligit in intellectu eius est, etiam si non intelligit illud esse.)

[3] For it is one thing for an object to exist in the mind, and another thing to understand that an object actually exists.

(Aliud enim est rem esse in intellectu, aliud intelligere rem esse.)

[4] Thus when a painter plans beforehand what he is going to execute, he has [the picture] in his mind, but he does not yet think that it actually exists because he has not yet executed it.

(Nam cum pictor praecogitat quae facturus est, habet quidem in intellectu, sed nondum intelligit esse quod nondum fecit.)

[5] However, when he has actually painted it, then he both has it in his mind and understands that it exists because he has now made it.

(Cum vero iam pinxit, et habet in intellectu et intelligit esse quod iam fecit.)

[6] Even the Fool, then, is forced to argue that something-than-which-nothing-greater-can-be-thought exists in the mind, since he understands this when he hears it, and whatever is understood is in the mind.

(Convincitur ergo etiam insipiens esse vel in intellectu aliquid quo nihil maius cogitari potest, quia hoc cum audit intelligit, et quidquid intelligitur in intellectu est.)

[7] And surely that-than-which-a-greater-cannot-be-thought cannot exist in the mind alone.

(Et certe id quo maius cogitari nequit, non potest esse in solo intellectu.)

[8] For if it exists solely in the mind even, it can be thought to exist in reality also, which is greater.

(Si enim vel in solo intellectu est, potest cogitari esse et in re, quod maius est.)

[9] If then that-than-which-a-greater-cannot-be-thought exists in the mind alone, this same that-than-which-a-greater-cannot-be-thought is that-than-which-a-greater-can-be-thought.

(Si ergo id quo maius cogitari non potest, est in solo intellectu: id ipsum quo maius cogitari non potest, est quo maius cogitari potest.)

[10] But this is obviously impossible.

(Sed certe hoc esse non potest.)

[11] Therefore there is absolutely no doubt that something-than-which-a-greater-cannot-be-thought exists both in the mind and in reality.

(Existit ergo procul dubio aliquid quo maius cogitari non valet, et in intellectu et in re.)

As said above, the difficulty which is first met in the argument is how to understand Anselm's use of such phrases as 'intelligere', 'intelligi', 'esse in intellectu', and 'habere in intellectu'. It is not easy to identify subjects of 'intelligi' and 'esse in intellectu', and objects of 'intelligere' and 'habere in intellectu'. For a reasonable evaluation of Anselm's Pros.II argument, we have to know, first of all, what are subjects of 'to be understood' and 'to be in the mind', and what are objects of 'to understand' and 'to have in the mind'. It is crucial for the whole argument to identify what is understood by the Fool and is in his mind. Without identifying the object, Anselm's whole argument in Pros.II cannot be properly understood.

But it is difficult and perplexing to find out the thing which is understood by the Fool and is in his mind. O. K. Bouwsma, in his "Anselm's Argument", well illustrates the perplexity which is encountered in the interpretation of the starting contention.

"A man walks with a limp. Someone asks, "You have something in your knee ?" The man replies, "Yes, something in my knee." The other asks, "And what is it ?" And the reply is, "O, just something in my knee." The conversation goes on, "Just something in your knee ? Not a bone, for instance." The man smiles. "O, no. I mean a pain. If you have a pain in your knee, it's just in your knee, and if it's in your knee, it can't be anywhere else. If it were somewhere else, it wouldn't be the pain in your knee. So I said it was just in my knee."

"But aren't you making a mistake ? Let me examine your knee." And he pulls a needle out of the man's knee. "See," he says, "you were wrong. It wasn't just in your knee after all since I've pulled it out." The man is flabbergasted. "And I was sure I had a pain in my knee and it's turned out not to be a pain at all but a needle. How could I have made such a mistake ?" Anselm now explains, "I said you had something in your knee greater than which none is conceivable, so you might have known it wasn't a pain, seeing ever so many things conceivable - such as a needle or water - are greater than a pain. Anything which is just something in a knee, like a pain, is obviously not as great as something which can be not only in a knee but which can also be drawn out

of a knee - 'which is greater.'"<sup>2</sup>

We have to find out what object is in the Fool's mind. It may be something like a pain, or it may be something like a needle, or something else. Anselm himself seems to fluctuate in identifying the object. He seems to take sometimes a linguistic expression, sometimes its meaning, and sometimes an extra linguistic entity referred to by the linguistic expression, as what is in the Fool's mind.<sup>3</sup> This fluctuation is not permissible for the argument to stand as a rigorous argument for the existence of God. We have to identify the object and stick to it consistently through the whole argument.

The demand to identify the object which is understood by the Fool and is in his mind is a special feature of Anselm's argument for the existence of God in Pros.II, which distinguishes the argument from other ontological arguments. In other ontological arguments, for example, in Descartes' and Leibniz's, the process of identifying the object in a human mind is not necessary. Descartes' argument runs : from the fact that we cannot form the idea of God without existence, it follows that existence is inseparable from him, and hence He really exists.<sup>4</sup> Leibniz's argument runs similarly : the most perfect being can be known to us, and since existence is contained in the number of the perfections, it is evident that the most perfect being also exists.<sup>5</sup> The task of identifying the object which is understood and is in a mind is peculiar and crucial to Anselm's Pros.II argument.

According to Charlesworth, what is understood by the Fool and is in his mind is an extra linguistic object which is referred to by the expression 'aliquid quo maius nihil cogitari potest'. In [1], 'Cum audit hoc ipsum quod dico: 'aliquid quo maius nihil cogitari potest', intelligit

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<sup>2</sup> Bouwsma, O.K.; "Anselm's Argument" in The Nature of Philosophical Inquiry (ed. by J. Bobik, Univ. of Notre Dame Press, 1970. pp.252-293)

<sup>3</sup> In [1] and [2], either a linguistic expression or its meaning seems to be meant to exist in the mind. In [3] onwards, an extra linguistic entity referred to by the expression seems to be meant.

<sup>4</sup> Descartes, R.; Meditations on First Philosophy (The fifth meditation) in The Philosophical Writings of Descartes (tr. by J. Cottingham etc., Cambridge Univ. Press, 1984) vol.II, pp.44-49

<sup>5</sup> Leibniz; New Essays Concerning Human Understanding (tr. by A. G. Langley, New York, Macmillan, 1896) Appendix X, pp.714-5 Hick's excerpt in his The Existence of God (Macmillan, 1964) is consulted.

quod audit' is translated as 'when this same Fool hears what I am speaking about, namely, 'something-than-which-nothing-greater-can-be-thought', he understands what he hears'. What the Fool hears and understands is not a linguistic expression which Anselm utters but an extra linguistic object about which Anselm is speaking.<sup>6</sup> And this object is something than which nothing greater can be thought. Deane shares this line of translation with Charlesworth<sup>7</sup>.

Charlesworth and Deane treat 'aliquid quo maius nihil cogitari potest' as in apposition to 'hoc ipsum' in [1] ("But surely, when this same Fool hears what I am speaking about, namely, 'something-than-which-nothing-greater-can-be-thought', he understands what he hears (Sed certe ipse idem insipiens, cum audit hoc ipsum quod dico: 'aliquid quo maius nihil cogitari potest', intelligit quod audit;)."). Further, 'hoc ipsum quod dico' is translated as 'what I am speaking about' rather than 'what I am speaking'. From this they interpret the phrase 'hoc ipsum' as indicating an extra linguistic object which is something than which nothing greater

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<sup>6</sup> It may be argued that Charlesworth's translation can be still understood as saying that a linguistic expression or its meaning is in the Fool's mind ; as saying "When this same Fool hears what I am speaking about the thing which is something than which nothing greater can be thought, he understands what he hears". If Charlesworth intends this, his interpretation of [1] is conditional. I.e., Charlesworth understands [1] as saying "If this same Fool hears what I am speaking about the thing which is something than which nothing greater can be thought, he understands what he hears" ; what Anselm asserts in [1] is simply that, conditionally, if he speaks something about the thing, for example, "The thing is good", or "The thing is omniscient" etc., the Fool understands what Anselm utters. If so, [1] and [2] together do not say anything about what the Fool understands and is in his mind. It asserts only conditionally that if Anselm speaks something about the thing, the Fool understands what is uttered by Anselm. But this interpretation is not permissible. For Anselm argues that the object which is identified in [1] and [2] cannot exist in the mind alone. Anselm categorically asserts that something is in the Fool's mind in [1] and [2]. If [1] is understood as a conditional sentence in the above sense, Anselm's argument runs : whatever Anselm speaks about the thing than which nothing greater can be thought is in the Fool's mind ; whatever Anselm speaks about the thing than which nothing greater can be thought is not itself if it exists in the mind alone ; therefore, the thing than which nothing greater can be thought exists in reality. This is really unintelligible. So, [1] should be interpreted as a categorical assertion that something is understood by the Fool. On this condition that [1] should not be interpreted conditionally, Charlesworth's translation of [1], "when this same Fool hears what I am speaking about, namely, 'something-than-which-nothing-greater-can-be-thought', he understands what he hears", cannot be interpreted as saying that a linguistic expression or its meaning is understood by the Fool, and is in his mind.

<sup>7</sup> Deane translates as 'But, at any rate, this very fool, when he hears of this being of which I speak - a being than which nothing greater can be conceived - understands what he hears'. Saint Anselm Basic Writings (Open Court Publishing Company, Illinois, 1962) p.7

can be thought. There are, however, reasons not to follow Charlesworth and Deane's way of translation. If Anselm had really intended [1] to be interpreted in Charlesworth and Deane's way, he could have expressed his intention more clearly. If Anselm said "hoc ipsum quo dico : 'aliquid quo maius nihil cogitari potest'" instead of "hoc ipsum quod dico : 'aliquid quo maius nihil cogitari potest'", [1] should be definitely understood as Charlesworth and Deane's translation indicates. The Latin relative pronoun for the neuter ablative, 'quo', would have left no other possibility than interpreting [1] as "what I am speaking about, namely, 'something-than-which-nothing-greater-can-be-thought'". But the Latin relative pronoun for the neuter accusative, 'quod', which is actually employed in [1], makes it possible to translate the clause 'hoc ipsum quod dico' as saying 'this itself which I speak'. I.e. if we accept that Anselm actually said "hoc ipsum quod dico" instead of "hoc ipsum quo dico", we may reasonably understand the intensive pronoun 'hoc ipsum' to refer to a linguistic expression which Anselm utters, namely, 'aliquid quo maius nihil cogitari potest'.

It could be, however, argued that since 'dicere' means not only 'to speak' but also 'to speak about', 'hoc ipsum quod dico' itself can mean 'what I am speaking about'. I do not object to this way of argument. Rather I believe that Anselm's use of the pronoun 'quod' makes it possible to depart from Charlesworth and Deane's way of translation. "Hoc ipsum quod dico : 'aliquid quo maius nihil cogitari potest'" can be quite legitimately interpreted as saying "this itself which I speak, namely, 'something-than-which-nothing-greater-can-be-thought'". The use of inverted commas in Schmitt's text of Proslogion may support this way of interpretation.

It is anachronistic to assume that Anselm used inverted commas in his original writings. However, assuming that Schmitt's use of inverted commas is an interpretation of Anselm's original intentions, consideration of inverted commas in Schmitt's text would not totally lose its relevance. At least, it may be said that there is an interpretation of Anselm's Proslogion which sheds some light on the translation of [1] by using inverted commas. Schmitt's text shows three ways in using inverted commas throughout Proslogion and Reply. Firstly, inverted

<sup>8</sup> Charlesworth's translation

commas in Schmitt's text of Proslogion are mostly signs of quotations from Scripture. Secondly, in the Reply, inverted commas are used as a sign of a name word or a definite description. For example, in Reply I it is written, "If, therefore, it were 'that-than-which-a-greater-cannot-be-thought', it would not be that-than-which-a-greater-cannot-be-thought, which is completely absurd"<sup>8</sup> (Si ergo esset 'quo maius cogitari non possit', non esset quo maius cogitari non possit : quod nimis absurdum.). A way to interpret this sentence is to treat the formula for the Divine Being with inverted commas in the if-clause as a name and 'esset' in the if-clause as an identity sign, and to treat the formula and 'esset' in the main clause as a predicate and a predicate sign, respectively. This presumption can be supported by the fact that an inverted commaed formula for the Divine Being is never put in a predicate place. Schmitt may be said to support the hypothesis that Anselm wants to distinguish a name word or a definite description from other elements of a sentence, a predicate for example, in a certain way. Another use of inverted commas is found in sentence [1], Pros II. 'Aliquid quo maius nihil cogitari potest' in [1] is an exceptional use of inverted commas in Schmitt's text. Anselm is never quoted as using inverted commas when the formula for the Divine Being is with 'id' or 'aliquid' anywhere in Proslogion and the Reply.<sup>9</sup> Charlesworth seems to treat 'aliquid quo maius nihil cogitari potest' in [1] as a name word. There is, however, a way of constructing

<sup>9</sup> Variations of the formula for the Divine are as follows;

1. aliquid quo maius nihil cogitari potest; once in Pros.[2]
2. aliquid(id) quo nihil maius cogitari possit; once in Pros.[2]
3. aliquid(id) quo nihil maius cogitari potest; twice in Pros.[2]
4. id(aliquid) quo maius cogitari nequit; 18 times in Pros.[2][3][15] Reply[1][2][3][4][5][7][8][9]
5. id(aliquid) quo maius cogitari non potest; 8 times in Pros.[2][3][4] Reply[1][2][9]
6. aliqui(id) quo maius cogitari non valet; twice in Pros.[2] Reply[8]
7. quo nil maius valet cogitari; twice in Pros.[5] Reply[9]
8. aliquid quo maius cogitari non possit; 21 times in Reply[1][2][3][5][6][7][10]
9. quo maius nequit cogitari; 4 times in Reply[1][3][5][9]
10. quo maius non potest cogitari; once in Reply[2]
11. quo non valet cogitari maius; once in Reply[3]
12. quo maius non possit cogitari; 6 times in Reply [5][9]
13. quo non possit cogitari maius; twice in Reply[5][9]
14. quo nihil potest maius cogitari; once in Reply[8]
15. quo maius cogitari nequeat; once in Reply[8]
16. qua maius cogitari nequit; once in Reply[9]
17. quo maius nequeat cogitari; once in Reply[9]

Anselm's general method for name word or definite description, which departs from Charlesworth's translation of [1]. Assuming Schmitt's text - Charlesworth also adopts Schmitt's text -, the inverted commaed formula without 'id' or 'aliquid', or the formula with 'id' without inverted commas are generally used as a name word or a definite description in Proslogion and Reply. A remaining possibility<sup>10</sup> is to interpret Schmitt's text as saying that Anselm wants to distinguish a sign for name of a linguistic expression itself. If this interpretation of Schmitt's text, in terms of the use of inverted commas, is cogent, it may support the treatment of 'hoc ipsum' in [1] as referring to a linguistic expression. If we accept the interpretation of 'hoc ipsum' in this way, it conforms with the view of some philosophers that 'understand' makes sense when it is used in relation to a linguistic expression or its meaning."

'Hoc ipsum quod dico' need not be necessarily translated as 'what I am speaking about'. It may be reasonably translated as 'the expression itself which I am speaking'<sup>12</sup>. Charlesworth himself translates the expression 'quod dico' in Pros.IX as 'what I am saying', rather than as 'what I am talking about'. Anselm says, "Aduva me, iuste et misericors deus, cuius lucem quaero, adiuva me, ut intelligam quod dico" in Pros.IX. Charlesworth translates this sentence as 'Help me, just and merciful God, whose light I seek, help me so that I may understand what I am speaking'. Charlesworth's translation of this sentence makes sense more easily than his translation of 'quod dico' in [1]. If 'quod dico' may be translated as referring to a linguistic

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18. quo maius aliquid cogitari non potest; once in Reply[10]

<sup>10</sup> It is said that the origin of the formula for the Divine is found in Seneca's Naturales Quaestiones Book 1 Preface. It is in the form of "qua nihil maius cogitari potest". This need not itself be evidence that Anselm quotes Seneca's formula in Proslogion.

<sup>11</sup> Russell, B.; "The philosophy of logical atomism", Logic and Knowledge(Allen & Unwin, London, 1956) pp.200- 202

Church, A.; "Carnap's introduction to semantics", The Philosophical Review 52, 1943, p.301

Carnap, R.; Meaning and Necessity (The University of Chicago Press, 1956, enlarged ed.) pp.100-101

Wittgenstein, L.; Philosophical Investigations (Basil Blackwell, Oxford, 1967, tr. by Anscombe) §199

Barnes, J.; The Ontological Argument (Macmillan, 1972) p.10

<sup>12</sup> J. Hopkins takes this line of translation. He translates [1] as 'But surely when this very Fool hears the words "something than which nothing greater can be thought", he understands what he hears'. Anselm of Canterbury (The Edwin Mellen Press, Toronto, 1975, ed. and tr. by J. Hopkins and H. Richardson) Vol I p.93



expression in Anselm, we need not necessarily understand 'cum audit hoc ipsum quod dico --- intelligit quod audit' as saying 'when (this same Fool) hears what I am speaking about --- he understands what he hears', as Charlesworth and Deane did. I do not here make a strong claim that only the linguistic expression 'aliquid quo maius nihil cogitari potest' is understood by the Fool and is in his mind in [1] and [2]. I simply argue that we have reasons not to follow Charlesworth and Deane's way of translating 'hoc ipsum quod dico' in [1] as 'what I am speaking about' or 'this being of which I speak', and not to take the object referred to by the linguistic expression as what is understood by the Fool and is in his mind. If my argument against Charlesworth's translation of [1] is cogent, what is understood by the Fool and in his mind is something other than the reference of the expression 'aliquid quo maius nihil cogitari potest'.

But Charlesworth's translation may be argued to be supported by the sentence [3] ("For it is one thing for an object to exist in the mind, and another thing to understand that an object actually exists (Aliud enim est rem esse in intellectu, aliud intelligere rem esse)"). [3] is employed as a ground to claim [2] ("et quod intelligit in intellectu est, etiam si non intelligit illud esse (and what he understands is in his mind, even if he does not understand that it actually exists)"). If [3] is adopted to be a basis for [2], what the fool understands and what he has in his understanding is a *res*. If so, 'hoc ipsum quod dico' in [1] can be translated to be 'what I am speaking about' or 'this being of which I speak' on the assumption that 'res' is always used for an extra linguistic extensional entity in Anselm. Now I would like to ask whether a linguistic expression or its meaning could not be a *res* in [3], that is, whether only an extensional entity is a *res* in Anselm. It might be argued from [4] ("Thus when a painter plans beforehand what he is going to execute, he has [the picture] in his mind, but he does not yet think that it actually exists because he has not yet executed it.") and [5] ("However, when he has actually painted it, then he both has it in his mind and understands that it exists because he has now made it.") that Anselm used 'res' to refer to an extra linguistic extensional entity at least in sentence [3]. [4] and [5] presenting a particular example of [3] must have the same

logical structure as [3]. It is not a linguistic expression or any other symbolic system for pictures, or its meaning, which a painter has in his mind (*habet quidem in intellectu*). It makes sense to treat only an extra symbolic entity, a picture, as what a painter has in his mind, under the present situation that we do not have a linguistic or other symbolic system for pictures. From this one can conclude, as Charlesworth clearly did, that what a painter has in his mind is a picture. "He has [the picture] in his mind", Charlesworth translates. 'Res' in [3] must be interpreted as referring to an extra symbolic entity. But this is likely only under the present situation that we do not have a symbolic system for pictures. If it is possible to develop a symbolic system for pictures, it could make sense to interpret '*habet quidem in intellectu*' as 'he has [the symbol or its meaning] in his mind' a la Charlesworth. I do not see any necessity to confine 'res' in [3] to extra symbolic entities on the basis of [4] and [5]. If Charlesworth is insistent upon translating 'res' in [3] as 'an object' in the sense of an extra linguistic extensional entity from [4] and [5], and further to translate '*hoc ipsum quod dico*' in [1] as 'what I am speaking about', it could be because of a confusion between present situation and logical impossibility.

In spite of these negative arguments against Charlesworth and Deane's interpretation of [1], there is a simple and effective way to vindicate Charlesworth's extra linguistic object oriented translation of [1]. If we confine the universe of our discourse to linguistic expressions and to extensional entities which are referred to by the linguistic expressions, we have to acknowledge the reference of a linguistic expression as what is understood by the Fool and is in his mind. Unless so, the whole argument in Pros.II becomes unintelligible. This will be explained in sections 1.3. and 1.5. For the moment, I can say that the decision over the universe of our discourse, i.e. the agreement about the ontological boundary in which we will interpret the argument, may give powerful guidance in identifying the object which is in the Fool's mind. Identification of the object is strongly dependent upon our choice of the ontological boundary within which an interpretation of Anselm's Pros.II argument is made.

Semantics, as a theory of meaning, is an ontology in itself. A theory of meaning is concerned

with entities which linguistic expressions designate or express. Carnap's view that an ontological problem "has arisen again in connection with semantics"<sup>13</sup> is right if his view is to do with ontology as a universe of discourse. If we base our discourse on Fregean 3 level semantics, we admit of intensional entities, like meaning, as entities in the universe of our discourse. The meaning of a linguistic expression can be referred to by subjects or objects of phrases like 'esse in intellectu' or 'habere in intellectu'. If we rely on extensional semantics, however, these subjects or objects stand only for either linguistic expressions or extensional entities designated by the expressions.

We can introduce a meta theory to interpret an object theory. A semantics can be introduced to interpret Anselm's Pros.II argument. If we adopt Fregean 3 level semantics as our meta theory for the interpretation of Pros.II argument, we can treat 'res' in sentence [3] of Pros.II as referring to either an extra linguistic entity or an intensional entity like meaning. Fregean semantics is committed to intensional entities in the sense that it holds meaning of a linguistic expression to be an entity. We should admit intensional objects like meaning as part of our universe of discourse if we adopt Fregean 3 level semantics. A sense or meaning should be an objective entity which is not psychological. When we adopt Fregean 3 level semantics, we should acknowledge a meaning to be independent not only of any human mind but also of the referent of the linguistic expression which expresses the sense. We need not constrain ourselves to translate 'hoc ipsum quod dico' as 'what I am speaking about' in [1]. If, however, we adopt Russellian 2 level semantics for a name<sup>14</sup> or Kripkean 2 level semantics for a rigid designator, we have to treat 'res' in [3] as referring to either a linguistic expression or an extra linguistic extensional entity. Charlesworth and Deane could find support for

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<sup>13</sup> Carnap, R.; "Empiricism, Semantics and Ontology", Revue Internationale de Philosophie, vol.4, 1950, p.21

<sup>14</sup> As is known, Russell's theory of name is not fixed. Sometimes ordinary proper names, like 'Socrates', are treated as names, but only demonstratives, like 'this' or 'that', are called logically proper names, and sense-data are objects referred to by those logically proper names. Russell seems to relegate ordinary proper names to incomplete predicate places to save the view that meaning of a name is its denotation. If only sense-data are entities in Russell's theory, 'res' must refer to a sense-datum.

translating 'hoc ipsum quod dico' as 'what I am speaking about' from these semantics.

As a guide for identifying the object which is understood by the Fool and in his mind, i.e. as a meta theory for interpreting Anselm's Pros.II argument, a semantics is extremely suitable. Anselm's argument in Pros.II is principally an inference from hearing a language to confirming the existence of an extra linguistic object which is in relation to the language. Semantics, as a theory about extra linguistic entities which are related to linguistic expressions, can well guide us to trace the object whose existence is confirmed by understanding a linguistic expression. A semantics, when employed as a meta theory, determines the ontological boundary which exists in relation to linguistic expressions of an object theory. And we can identify what is understood and in mind when hearing a linguistic expression in the light of the guidance of the semantics.

It is urgently necessary to determine what semantics to choose in order to understand Anselm's argument, to identify what exists in the Fool's mind, to identify the thing which 'res' in [3] designates. A semantics fixes the boundary of entities in which we are interpreting Anselm's argument for the existence of God in Pros.II, and guides us in identifying the object in the Fool's mind. Whatever semantics we choose, we should adhere to it for our interpretation to be coherent.

## 1.2. Fregean Semantics

Logic is a science of valid inference for Frege. For him it is a study of "the legitimacy of transitions from one assertion to another"<sup>15</sup>. What is relevant to the validity of inference is "conceptual content"<sup>16</sup> of a sentence, a thought, which is employed to make an assertion. A sentence can express other things than conceptual content, for example, "a host of features concerning the speaker's or hearers' attitudes, expectations, presumed knowledge etc."<sup>17</sup> These other things have nothing to do with validity of inference. Only conceptual content is relevant to it.<sup>18</sup> In the preface to Begriffsschrift (hereafter BS), Frege says, "I have omitted

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<sup>15</sup> Baker, G.P. and Hacker, P.M.S.; Frege: Logical Excavations (Oxford Univ. Press, 1984) p.107

<sup>16</sup> "Conceptual content" has both intensional and extensional connotations. The conceptual content of a sentence can be both the truth-value, the extensional entity, and the thought expressed by the sentence, the intensional entity, in Frege. According to Dummett, "from 1891 onwards the notion of content is replaced by the two notions of sense and reference, and that of judgeable content, in particular, by those of a thought and a truth-value". (The Interpretation of Frege's Philosophy (Duckworth, London, 1981) p.397) Baker also says, "The change fundamental to the 'thorough-going development' of his logic consisted in the splitting of judgeable-content into thought and truth-value, or, more generally, in splitting conceptual content into sense and reference" (Baker, *op.cit.*, p.233). "Although when we assert something we in effect say that it is true, what we assert is not a truth-value. A fortiori what distinct proofs prove to be true is not merely identical, and the random substitution of one true judgement for another in a proof will typically impair the cogency of the argument. In short, the truth-value assigned to a sentence does not exhaust its logical significance, so truth-values cannot take over the entire burden carried by judgeable-contents in Begriffsschrift. What is asserted by using a declarative sentence is an entity distinct from a truth-value. Frege rechristened this, calling it a 'thought' (in a non-psychological sense). What was formerly conceived as a judgeable-content must in fact be split up (horizontally, as it were) into two distinct entities, and the various roles it fulfilled in his early logical system must be distributed between the two. A sentence stands for or designates a truth-value, it expresses a thought. The truth-value is the reference of the sentence, the thought expressed is its sense. The truth-value fulfills one role of judgeable-content: it is the value of concepts (functions). The thought fulfills the other two roles - the object of assertion and whatever is relevant to the cogency of inference (as distinct from tone and colouring)." (Baker and Hacker, p.278) I confine my present study to the intensional side. For what I would like to show here is that Frege's semantic theory is ontologically committed to intensional entities, thought of a sentence, senses of a name and a concept word. So when I say "conceptual content", it means the intensional side of conceptual content. Dummett especially endorses contextualism to be relevant to both extensional and intensional sides. (*op.cit.* p.369ff)

<sup>17</sup> Ibid p.36

<sup>18</sup> Words like 'but', 'nevertheless', 'although', 'however', have the same informational content as 'and'. For example, 'It is raining and windy' and 'It is raining but windy' are different in expressing attitudes of speaker, but

the expression of everything which is without importance for the chain of inference. In §3, I have designated by conceptual content that which is of sole importance for me"<sup>19</sup>. In §3 of BS, Frege says of conceptual content,

"[T]here are two ways in which the content of two judgements may differ ; it may, or it may not, be the case that all inferences that can be drawn from the first judgement when combined with certain other ones can always also be drawn from the second when combined with the same other judgements. The two propositions 'the Greeks defeated the Persians at Plataea' and 'the Persians were defeated by the Greeks at Plataea' differ in the former way ; even if a slight difference of sense is discernible, the agreement in sense is preponderant. Now I call the part of the content that is the *same* in both the *conceptual content*. *Only this* has significance for our symbolic language; we need therefore make no distinction between propositions that have the same conceptual content."<sup>20</sup>

What is significant in logic is not speaker's or hearer's attitudes expressed in a sentence. Only conceptual content of a sentence is relevant to the science of inference.

In identifying conceptual content, Frege separates himself from psychologism. According to him, conceptual content is not something which is dependent on any human mind. It does not need, for its being, a subject which entertains it. Even if there is no thinking mind,  $2+3$  would still be equal to 5. Frege was a most influential opponent of psychologism in logical theory. Conceptual content is neither linguistic entity, nor a combination of ideas in a human mind. It is an imperceptible entity which a sentence is carrying. It is "what is thought, judged, asserted; also what is true or false"<sup>21</sup>.

According to Sober, 'psychologism' is a term for "a family of views, all tending to downplay or deny distinctions between epistemology and logic on the one hand and psychology on the other"<sup>22</sup>. "Metaphysical psychologism" in Sober's classification of the family of views seems

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the same in informational content.

<sup>19</sup> In Conceptual Notation and Related Articles (tr. and ed. by T.W.Bynum, Clarendon Press, Oxford, 1972) p.104

<sup>20</sup> Geach's translation in Translations from the Philosophical Writings of Gottlob Frege (ed. by P. Geach and M. Black, 3rd ed., Basil Blackwell, 1988) pp.2-3

<sup>21</sup> Baker; op.cit., p.36

<sup>22</sup> Sober, E.; "Psychologism" in Journal for the Theory of Social Behaviour vol.8, 1978, p.169

to be what Frege's anti-psychologism objects to. Metaphysical psychologism is "the view that the laws of logic and the characterization of rationality that epistemology seeks to formulate are about human mental activity"<sup>23</sup>. According to Frege, logic and mathematics are not about human psychological facts. They are not about human mental contents. Laws of logic and mathematics are not empirical laws of human thinking. On the one hand, Frege's anti-psychologism can be viewed as an anti-empiricism or anti-inductivism in identifying mathematical objects and in the foundations of mathematics.<sup>24</sup> Number is not "something subjective" (The Foundations of Arithmetic, (tr. by Austin, Basil Blackwell, 1986, 2nd ed.), hereafter FA, p.33), and the laws of arithmetic are not "inductive truths" (FA, p.12). On the other, his anti-psychologism also distinguishes logic from psychology. What is asserted and judged, i.e. the thought expressed in a sentence, is independent of the human mind. "In thinking we do not produce thoughts, we grasp them." ("Thoughts" in Collected Papers on Mathematics, Logic, and Philosophy p.368) In grasping a thought, "what is grasped, taken hold of, is already there and all we do is take possession of it. --- [It] does not come into existence as a result of [any mental] activities" ("Logic" in Posthumous Writings (ed. by H. Hermes etc., tr.by P. Long and R. White, Blackwell,Oxford,1979), hereafter PW, p.137). Frege argues that logic and mathematics are not about human inferential habit, and they are not descriptive generalization of human mentality, because their objects are not mental entities. The thought of a sentence, which is the object of logic, is not subjective. He says,

"[N]othing would be a greater misunderstanding of mathematics than making it subordinate to psychology. Neither logic nor mathematics has the task of investigating minds and contents of consciousness owned by individual men".<sup>25</sup>

Sober says about Frege's anti-psychologism,

"Frege's anti-psychologism --- constitutes the beginning of the modern view that truths of logic do not describe how the human mind works. Frege's extremely influential variability argument explicitly challenged the empiricist view that the meaning of a term

<sup>23</sup> Ibid p.166

<sup>24</sup> Sluga, H.D.; Gottlob Frege (RKP, 1980) p.102

Sober, E.; op.cit., p.169

<sup>25</sup> "Thought" (tr.by Geach) in Collected Papers on Mathematics, Logic, and Philosophy (ed. by B. McGuinness, Basil Blackwell, 1984) pp.368-369

is the mental image that the term calls up in thought, but it implicitly had a more general application. The point was to banish psychological considerations from theory of meaning. By easy extension, the positivists used Frege's argument to proscribe psychology from epistemology in general. The argument is really quite simple: if communication is to be possible, the speakers of a language must associate the same, or nearly the same, meanings with the terms they use. But the mental images that people associate with terms vary enormously from person to person. Images vary, but meanings cannot, so meanings are not mental images. --- Frege's argument claimed that the objects of philosophical inquiry were not psychological, and he consistently took this view in his theory of meaning and philosophy of mathematics"<sup>26</sup>.

Sober's explanation does not seem to reflect Frege's plan in one respect. Frege's anti-psychologism aims primarily to establish the mind independence of thought of a sentence, rather than that of meaning of a word. His anti-psychologism is firstly about what is expressed by a sentence. Frege's objection to psychologism is related primarily to the identification of meaning of a sentence as a combination of ideas, rather than to the identification of meanings of words as mental ideas associated with the words. The conceptual content of a sentence, a thought, is as objective as physical bodies, except that it is not spatio-temporal. Logic, whose task is "to test in the most reliable manner the validity of a chain of reasoning"(BS, Preface, Bynum's tr. p.104), is freed from psychologism. For what is inferred in an inference from one assertion to another is the conceptual content of the conclusion from the conceptual content of the premise. What is relevant to logic, the conceptual content of a sentence, is neither a linguistic entity nor a combination of ideas in human mind.

For Frege, conceptual content, which is relevant to logic, is comprised in the judgeable content of a sentence and the unjudgeable content of a word.<sup>27</sup> Unjudgeable content expressed by a word is obtained by splitting up the judgeable content of a sentence. "[I]nstead of putting a judgement together out of an individual as subject and an already previously found concept as predicate, we do the opposite and arrive at a concept by splitting up the content of possible judgement." ("Boole's logical calculus and the concept-script" in PW, p.17) For Frege, logic

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<sup>26</sup> Sober, E.; *op.cit.*, p.169

<sup>27</sup> This distinction is not given explicitly in Frege's writings, especially in BS. But I think Baker's contention that this distinction appears "from the general explanation of content in Begriffsschrift" is acceptable.



is the science of the relations between <sup>the</sup> judgeable contents. So judgeable content of a sentence has primary importance in Frege's logical theory. Unjudgeable contents expressed by words are important only for the fact that they are components of judgeable contents. According to Aristotelian traditional logic, judgement is formed by a combination of previously given component concepts. It is traditionally held that all deductive inferences can be analyzed as inferences between categorical propositions. These categorical propositions affirm or deny relationships between classes which are designated by the subject and predicate terms of the categorical propositions.<sup>28</sup> Designations of subject and predicate terms, i.e. classes which are the extensions of the terms, are prior to judgements. Frege says, "For in Aristotle, as in Boole, the logically primitive activity is the formation of concepts by abstraction, and judgement and inference enter in through an immediate or indirect comparison of concepts via their extensions" ("Boole's logical calculus and the concept-script" in PW, p.15). For Frege, Aristotle like Boole "mistakenly assumes that concepts are formed by abstraction from individual things and that judgements express comparisons of concepts"<sup>29</sup>. Frege holds a contrary view. He says, "I do not think that the formation of concepts can precede judgement, for that would presuppose the independent existence of concepts; but I imagine the concept originating in the analysis of a judgeable content". "I do not begin with concepts and put them together to form a thought or judgement ; I come by the parts of a thought by analyzing the thought." ("Notes for Ludwig Darmstaedter" in PW, p.253) This is the so-called contextualism of Frege. Frege gives examples of contextualism for cases of number words. Homer's Iliad can be thought of as one poem, twenty-four books, or a large number of verses. (FA p.28) But the question "what is the number of the Iliad ?" is not sensible. If we ask someone to find the weight of a stone, we have given him "precisely the object he is to investigate". But if we give him a box of cards and ask to find "the number of these, this does not tell him whether I wish to know the number of cards, or of complete packs of cards, or even say of points in the game of skat". (FA p.28) To give him a box of cards does not mean that he is given "completely the object he is to investigate ; we must add some further word - cards, packs, or points". (FA p.28-29) "It

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<sup>28</sup> Copi, I.M.; Introduction to Logic (Macmillan, 1972, 4th ed.) pp.148-150

<sup>29</sup> Sulga; op.cit., p.91

should throw some light on the matter to consider number in the context of a judgement which brings out its basic use. While looking at one and the same external phenomenon, I can say with equal truth both "It is a copse" and "It is five trees", or both "Here are four companies" and "Here are 500 men". (FA p.59) We need a unit for counting in order to count. We cannot say what number attaches to a box of cards unless we are given further words such as 'cards', 'packs' or 'points'. Number words do not have clear senses by themselves. They mean something only in contexts, i.e. when they are used with unit words.<sup>30</sup>

Frege's contextualism is reminiscent of Kant's theory that "the basic way to explain or analyze any given concept is to make clear how it is used in judgements"<sup>31</sup>. For Kant, "to have a given concept one must be able to use it in judgements"<sup>32</sup>. One of three fundamental principles in FA is "never to ask for the meaning of a word in isolation, but only in the context of a proposition". (page x) It seems that Frege thinks the basic unit of our knowledge is judgeable content of a sentence rather than unjudgeable content of a word.

It is controversial whether Frege's anti-psychologism is a Platonic realism for intensional entities. According to Sluga, Frege's contextualism prevents his anti-psychologism from being interpreted in terms of a realistic ontology. Sluga objects to the realistic interpretation of Frege's anti-psychologism, calling it "standard interpretation". For Sluga, Frege's anti-psychologism of thought must be interpreted epistemologically rather than ontologically. Investigation into Frege's conception of "objectivity" is said to support Sluga's view. Conceptual content is the objective. The objective is something which can be grasped by more

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<sup>30</sup> Dummett explains, "An example, using variables, given by Frege is ' $a > b \rightarrow a+1 > b+1$ ', where this is tacitly understood as a universally quantified sentence. By the standards of Grundgesetze such improper sentences are not genuine components of the complex sentence at all, since they are not logical units; they are therefore not in the running for possessing a sense or a reference. Frege says of them, in the passages cited by Kluge, that they do not by themselves express a sense, but contribute to the expression of the sense of the whole complex sentence". (The Interpretation of Frege's Philosophy p.376)

<sup>31</sup> Bennett, J.; Kant's Dialectic (Cambridge Univ. Press, 1981) p.24

<sup>32</sup> Ibid. p.23

than one thinking creature and which is independent of being entertained by any human being. But, Sluga contends, this kind of objectivity of conceptual content need not be interpreted ontologically. "Frege's notion of objectivity can be clarified by comparison with Lotze's notion of validity.--- Lotze is grappling here with the nature of what Frege came to call the sense of expressions. For Lotze, these are objective because they can be the same for different thinkers and are, in that way, independent of them. But Lotze is explicit in maintaining that to call them objective is not to make an ontological claim."<sup>33</sup> Frege's contextualism, according to Sluga, is a piece of evidence not to interpret Frege's anti-psychologism ontologically. Sluga says,

"The ontological interpretation of the Platonic ideas, Lotze argues, is due to their separation from their propositional contexts. --- Frege must be understood to belong to the Lotze-Kant tradition. Neither Lotze nor Kant are generally regarded as realists, and by connecting Frege with them I wanted to undermine the standard, realistic interpretation of his thought. --- When Frege opposes psychologism he rejects the thesis that human understanding can be analyzed in terms of a naturalistic psychology of subjective mental processes. But he also has a much more specific target in mind, namely, the Lockean theory of ideas according to which all knowledge can be understood in terms of impressions and the processes of abstraction and combination of ideas. This target he shares with Kant and most of the anti-psychologists of the nineteenth century. --- Against the theory of ideas Kant had argued that judgements are not formed out of previously given constituents, that they possess an initial transcendental unity out of which we gain the constituent concepts of the judgement by analysis. --- Wilhelm Wundt wrote : It had become the dominating characteristic of logic and has in many respects remained so until today to regard the judgement as the beginning of all logical thinking from which the concept was supposed to originate only through analysis. Frege's principle --- must be interpreted as a linguistic version of Kant's principle of the transcendental unity of judgement." ("Frege's alleged realism" pp.234-238)

He continues,

"Kant's philosophy can be seen as an attempt to mediate between the ontological claims of realism and the epistemological claims of idealism. His resolution of the dispute consists in the thesis that knowledge is objective, but objective only for us, that the objective is not independent of reason. He thought that our classical modes of reasoning could thus be safeguarded without committing us to unwanted metaphysical

<sup>33</sup> Sluga; "Frege's alleged realism" in *Inquiry* vol.20, 1977, pp.232-233

conclusions. If Frege's theory of objectivity can be interpreted in this Kantian sense, we can credit him with an understanding of the shortcomings of metaphysical realism or Platonism while holding on to the belief in the objectivity of logic and mathematics. There is a sense in which that position can be called realism but its realism is not incompatible with idealism : it is itself a form of idealism". (Gottlob Frege p.107)

Frege's contextualism, according to Sluga, shows what his anti-psychologism is really for. Frege's contextualism, which is a linguistic version of Kant's principle of the transcendental unity of judgement, leads us to interpret his anti-psychologism epistemologically. It is just an objection to the Lockean theory of knowledge that all knowledge is combination of ideas. Since ideas vary from person to person, they cannot be the ground for objective knowledge. So, if there is any objective knowledge, it must not be combination of ideas. This is what Frege really wants to say with his anti-psychologism. His anti-psychologism is no more than an attempt to establish the transcendental unity of judgement. Frege's anti-psychologism is reducible without remainder to contextualism.

Frege's contextualism is to the effect that intensional entities at word level have their identities through the sense of a sentence.<sup>34</sup> The rationale for this principle seems to be his anxiety that if we look for meanings of words in isolation we cannot but take "as the meaning of words mental pictures or acts of the individual mind". Frege says,

"That we can form no idea of its content is therefore no reason for denying all meaning to a word or for excluding it from our vocabulary. We are indeed only imposed on by the opposite view because we will, when asking for the meaning of a word, consider it in isolation, which leads us to accept an idea as the meaning. Accordingly, any word for which we can find no corresponding mental picture appears to have no content. But we ought always to keep before our eyes a complete proposition. Only in a proposition have the words really a meaning. --- It is enough if the proposition taken as a whole has a sense ; it is this that confers on its parts also their content." (FA §60 p.71)

This principle of contextualism was taken by Sluga to be a basis for interpreting Frege's anti-psychologism in the context of Kant's philosophy, and not for interpreting it ontologically.

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<sup>34</sup> Baker argues strongly that Frege's contextualism has nothing to do with the primacy of sentence, but with the primacy of thought of a sentence.

There is, however, an interpretation of Frege's contextualism which does not lead us to interpret Frege's anti-psychologism as a linguistic version of Kant's philosophy. According to Dummett, it is an "obvious and crucial fact that we understand new sentences which we have never heard or thought of before, so long as they are composed of words which we know, put together in ways with which we are familiar"<sup>35</sup>. So, if Frege's doctrine is taken as saying that "the words in a sentence no more carry a meaning of their own than the letters in a word"<sup>36</sup>, it must be absurd and false. If words have no meanings outside sentences, dictionaries must be written in terms only of contextual definitions. But dictionaries can teach us meaning of a word without giving an example sentence in which the word is used. Dummett contends Frege's contextualism must be understood to the effect that "in the order of *explanation* the sense of a sentence is primary, but in the order of *recognition* the sense of a word is primary"<sup>37</sup>. An acceptable theory of meaning should be one which concedes that we know the sense of a sentence through the previously known senses of constituent parts of the sentence, for, unless so, we will not successfully explain our understanding new sentences. But if we are concerned about "any general explanation of what it is for sentences and words to have a sense", then "the order of priority is reversed"<sup>38</sup>. Dummett says,

"For Frege, the sense of a word or of any expression not a sentence can be understood only as consisting in the contribution which it makes to determining the sense of any sentence in which it may occur. Since it is only by means of a sentence that we may perform a linguistic act<sup>39</sup> - that we can *say* anything - the possession of a sense by a

<sup>35</sup> Dummett, Michael; Frege Philosophy of Language (Duckworth, London, 1973) p.3

<sup>36</sup> Ibid

<sup>37</sup> Ibid p.4

<sup>38</sup> Ibid

<sup>39</sup> My note; Wittgenstein explains Frege's contextualism as a thesis that we cannot make a move in language-game, that is, we cannot assert, question and command, outside a sentence. Section 49 of Philosophical Investigations goes,

" --- Here we might say --- that a sign "R" or "B", etc may be sometimes a word and sometimes a proposition. But whether it is a word or a proposition depends on the situation in which it is uttered or written. For instance, if A has to describe complexes of coloured squares to B and he uses the word "R" *alone*, we shall be able to say that the word is a description - a proposition. But if he is memorizing the words and their meanings, or if he is teaching someone else the use of the words and uttering them in the course of ostensive teaching, we

word or complex expression short of a sentence cannot consist in anything else but its being governed by a general rule which partially specifies the sense of sentences containing it. If this is so, then, on pain of circularity, the general notion of the sense possessed by a sentence must be capable of being explained without reference to the notion of the senses of constituent words or expressions. This is possible via the conception of truth-conditions : to grasp the sense of a sentence is, in general, to know the conditions under which that sentence is true and the conditions under which it is false.

Here we are concerned with the form which a *general* account must take of what it is for a sentence to have a sense ---, and of what it is for a word to have a sense. For the purpose of such a general account, the notion of the sense of a sentence has the priority : for this can be explained by reference to the notion of truth-conditions, whereas the general notion of the sense of a word can be explained only in terms of that of the sense of a sentence in which the word may occur. ---

In the context of this account, it is senseless to ask whether a sentence or a word is to be considered as the 'unit of meaning!' (Frege *Philosophy of Language* pp.4-6)

Frege's contextualism taken as a tool to explain what it is for a sentence and a word to have senses need not be an objection to interpreting Frege's semantics as an ontological claim with respect to intensional entities. Sluga argues that Frege's anti-psychologism is not an ontological claim for intensional entities on the account that the significance of Frege's contextualism is in securing the transcendental unity of judgements. But there is an interpretation which is much more widely accepted than Sluga's. According to Dummett, Frege's contextualism is simply for explaining what it is for a sentence and a word to have senses, not a linguistic version of Kant's transcendental theory of judgements. Further, Dummett argues that Lotze's theory of objectivity has nothing to do with Frege's notion of objectivity. He explains,

"Here Lotze expressly says that objectivity, as he is using the term, is unaffected by whether that to which it attaches does or does not exist independently of thought or

shall not say that they are propositions. In this situation the word "R", for instance, is not a description : it *names* an element - but it would be queer to make that a reason for saying that an element can *only* be named! For naming and describing do not stand on the same level : naming is a preparation for description. Naming is so far not a move in the language-game - any more than putting a piece in its place on the board is a move in chess. We may say : *nothing* has so far been done, when a thing has been named. It has not even *got* a name except in the language-game. This was what Frege meant too, when he said that a word had meaning only as part of a sentence." (tr. by G.E.M. Anscombe, Basil Blackwell, Oxford, 1967, p.24e)

experience. It would, therefore, have been better called 'intersubjectivity', and it would seem intelligible to say that it is not an ontological notion.. But it plainly has nothing to do with Frege's notion of objectivity, for which it is essential that that to which it is rightly ascribed exists independently of whether it is apprehended or referred to by any thinking subject".<sup>40</sup>

Dummett strongly argues that Frege's anti-psychologism should be interpreted ontologically, even if Lotze's is epistemological. Frege's contextualism, explained by Dummett, quite well complies with interpreting Frege's overall semantics, when employed as a meta theory, as giving intensional entities as part of the universe of an object theory .

Frege's "Über Sinn und Bedeutung" starts from the question of how contingent identity statements have cognitive value. He asks about the relation of identity, "Is it a relation ? A relation between objects, or between names or signs of objects ?" If we take the relation as a relation between objects, ' $a=b$ ' will not differ from ' $a=a$ ', provided ' $a=b$ ' is true. But it is the case that ' $a=b$ ' and ' $a=a$ ' have different cognitive values. If we consider the relation as holding between names ' $a$ ' and ' $b$ ', that is, as saying "' $a$ ' and ' $b$ ' designate the same thing", identity statements will describe our arbitrary mode of naming. But it is not the real significance of ' $a=b$ ' to describe our arbitrary way of naming. Frege argues, "if the sign ' $a$ ' is distinguished from the sign ' $b$ ' only as an object (here, by means of its shape), not as a sign (i.e. not by the manner in which it designates something), the cognitive value of  $a=a$  becomes essentially equal to that of  $a=b$ , provided  $a=b$  is true".<sup>41</sup> The cognitive difference between ' $a=b$ ' and ' $a=a$ ' can be explained only if there is a difference in the "mode of presentation of the thing designated". Assuming  $a$ ,  $b$ ,  $c$ , to be lines connecting between verticals of a triangle with the midpoints of the opposite sides, the point of intersection of  $a$  and  $b$  is the same as the point of intersection of  $b$  and  $c$ . We have different modes of presentation for the same point. Identity statements of the form ' $a=b$ ' contain cognitive value in this way. Frege says,

"It is natural, now, to think of there being connected with a sign (name, combination of words, written mark), besides that which the sign designates, which may be called the

<sup>40</sup> The Interpretation of Frege's Philosophy p.394

<sup>41</sup> "Über Sinn und Bedeutung" (Black's tr.) in Gottlob Frege Collected Papers on Mathematics, Logic and Philosophy (ed. B. McGuinness, Basil Blackwell, 1984) pp.157-158

meaning (Bedeutung, 'nominatum' in Feigl's tr., my parenthesis) of the sign, also what I should like to call *the sense* of the sign, wherein the mode of presentation is contained. In our example, accordingly, the meaning (Bedeutung, my parenthesis) of the expressions 'the point of intersection of a and b' and 'the point of intersection of b and c' would be the same, but not their sense. The meaning (Bedeutung, my parenthesis) of 'evening star' would be the same as that of 'morning star', but not the sense." (Max Black's tr.)

The general relation between a linguistic expression, its sense and its reference is such that there is a definite sense corresponding to a sign, and in turn a definite thing is designated by the sign, while there can be several signs for a given thing. According to Carnap, if two signs designate the same thing but have different senses, the identity relation which is expressed by these signs is equivalence. On the other hand, if they have the same sense as well as the same reference, it is L-equivalence.

Sometimes a name and its bearer have relations by baptizing. In this case, <sup>the</sup> theory of reference has primary importance in semantics. In some other cases, however, language is connected to the external world through descriptions. In this latter case, intensions are the ways in which the objects are given. In the history of astronomy, Neptune was found after Adams and Leverrier gave descriptions to the putative trans-Uranian planet. It is not uncommon in science that, after descriptions of a putative object have been fixed, the new object is found. Intensional entities are sometimes not merely required for the explanation of natural languages, but have logical primacy over extensional entities in the semantic process in which linguistic expressions acquire relations with the external world. Carnap emphasizes the primacy of intensions over extensions. He even contends that extensions can be reduced to intensions. "[A] semantical rule for a sign determines primarily its intension; only secondarily, with the help of relevant facts, its extension."<sup>42</sup> There is not always an extensional object corresponding to a sense.  $\pi$  is the ratio of the circumference of a circle to its diameter. We, however, do not know what number ' $\pi$ ' designates, even though ' $\pi$ ' is used very frequently in science. To grasp a sense does not guarantee the existence of any thing designated by a sign

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<sup>42</sup> Carnap, R.; Meaning and Necessity ( Univ. of Chicago Press, 2nd ed., 1956) §27, p.111



which expresses the sense. Expressions whose reference is not confirmed are useful as much in science as those expressions whose reference is already known to us. This fact reflects the cogency of Frege's view that sense determines reference.<sup>43</sup>

Frege's intensional semantics has merits not only in helping to solve the problem of how correctly to analyze certain types of identity statements but also in satisfying a requirement raised by some contexts in natural languages. There are contexts, in natural languages, which demand intensional entities expressed by linguistic expressions. They may be called 'intensional contexts'. Sentences which are formed by these contexts are not truth functional. For example, modal contexts, belief contexts, and tense operators do not permit Leibniz's "salva veritate" principle. The principle of extensionality or the principle of truth functionality is found in Russell's Inquiry into Meaning and Truth. On p.168, Russell says,

"The principle of extensionality has two parts;

1. The truth value of any function of a proposition depends only upon the truth value of the argument, i.e. if p and q are both true or both false, then any sentence containing p remains true or false, as the case may be, if q is substituted for p.
2. The truth value of any function of a function depends only on the extension of the function, i.e. if whenever  $\Phi_x$  is true,  $\Psi_x$  is true, and vice versa, then any sentence about the function  $\Phi$  remains true or false as the case may be, if  $\Psi$  is substituted for  $\Phi$ ."

These two formulations can be fused to one as "materially equivalent sentences or coextensive predicates are interchangeable salva veritate". In sentences like 'Necessarily p', 'I believe p', the principle does not hold.<sup>44</sup> Modal contexts and belief contexts are well illustrated to be intensional by Quine's<sup>45</sup> and Russell's examples. These intensional contexts require positing

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<sup>43</sup> Dummett, M.; "Frege as a Realist" in Inquiry vol.19, 1976, p.461

<sup>44</sup> A context which employs a tense operator does not obey the principle of extensionality, either. If it is 1988, both 'It is 1900' and 'It is 2000' are false. When a tense operator 'It was' is applied to these sentences, 'It was that it is 1900' is true ; but 'It was that it is 2000' is false.

<sup>45</sup> Quine thinks that intensions can be replaced by extensions by taking theory of meaning to be a theory of reference. Concepts like tense logic, modal logic and doxastic logic need not be developed in Quine's view and find no place in the logical framework that Quine develops as a canonical notation for science. Quine holds that if our concern is to develop a canonical notation for science, we do not need to attend to intensional contexts. On the other hand, Church argues that nothing less than an ontology comprising intensional entities has the necessary explanatory power. ( Church ; "The Need for Abstract Entities in Semantic Analysis" in

intensional entities, like meaning, which are different from truth-values, concepts and individuals. Assuming intensional entities, we can explain how these contexts which do not obey the salva veritate principle function in our every day use of language. They are sentences not about extensions of linguistic expressions, like truth-values, concepts and individuals, but about intensions of linguistic expressions.

There are some respects in religious language which need Fregean distinction between sense and reference. It may be generally agreed by those who accept Fregean semantics that God is identified only through descriptions of Him. Only when some descriptions of God are available, is identification of God possible. For example, we can identify Him as the Creator of the Universe, and as the God and Father of our Lord Jesus Christ.<sup>46</sup> Without these descriptions, we cannot identify God at all. In this respect, Houston's contention that "the most important reference problem which referring to God raises is the provision of descriptions of Him wherewith to secure the reference" is quite right. If we find more descriptions which are applicable to God, we can approach closer to the sense of 'God'. And by the objective sense of 'God' which is reached through descriptions applicable to God, is identified the reference of 'God'.

Frege put emphasis on the fact that sense of a sign is not those ideas associated with the sign. Frege employs what Sober calls "Frege's extremely influential variability argument", and urges that ideas associated with a sign differ from person to person. They are subjective, but sense of a sign is objective. He says,

"A painter, a horseman, and a zoologist will probably connect different ideas with the name 'Bucephalus'. This constitutes an essential distinction between the idea and sign's sense, which may be the common property of many people, and so is not a part or a mode of the individual mind. For one can hardly deny that mankind has a common state of thoughts which is transmitted from one generation to another."

We have here the impression that Frege's anti-psychologism of sense of a word has

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Contemporary Readings in Logical Theory (ed. Copi et al, Macmillan 1967, pp.194-203))

<sup>46</sup> Houston, J.; Some Logical Issues, Chiefly Concerning Reference, Raised by Theological Language  
D.Phil. Thesis, Oxford, see especially pp.105-113

authorization from the anti-psychologism of thought expressed by a sentence. This was called his contextualism. We, however, need not worry that Frege's overall theory, in relation to his contextualism, would internally deny the ontological interpretation of his theory, as Sluga contends. Dummett's explanation of Frege's contextualism well complies with an ontological interpretation of Frege's anti-psychologism. If we choose Frege's semantics as a meta theory for the interpretation of Anselm's Proslogion II argument, we can legitimately acknowledge an intensional entity as a *res*.

We see reasons to commit ourselves to intensional entities in Frege's philosophy. His three-level semantics is not short of grounds for which we should accept the theory. The need to avoid psychologism in logic and to give an objective status to the science of inference, certain types of identity statements and contexts which require intensional entities, and some respects in religious discourse, call for a semantics which acknowledges something other than extensional entities referred to by linguistic expressions. Frege's semantics, as an ontological claim for intensional entities, well satisfies the demand. We can introduce Frege's semantics to interpret the argument in Anselm's Proslogion Chap.II. It means that we acknowledge the intensional entities, like meaning, as part of the universe of our discourse. On this basis we can think of the sense of the formula "aliquid quo maius nihil cogitari possit" as a *res* which is understood by a hearer, and so, which is in the understanding of the hearer.

### 1.3. An Interpretation of Proslogion Chap. II Argument

We can treat meanings of words, phrases and sentences as entities in the ontological boundary within which Anselm's Pros.II argument is interpreted, if we adopt Fregean 3 level semantics as our meta theory. Fregean semantics as an ontological claim for intensional entities, when chosen as a meta theory for the argument, permits us to accept intensional entities as parts of the universe of Anselm's argument in Pros.II.

Many authors - Hopkins, Malcolm, Charlesworth and Adams, etc. - interpret the expression 'esse in intellectu' in [2] ("and what he understands is in his mind, even if he does not understand that it actually exists.") metaphorically. 'To be in understanding or in mind' means the same as 'to be understood' in these authors. It seems, however, that if we follow this line of interpretation, it leads to the consequence that sentences in [2] and [6] ("what he understands is in his mind", and "whatever is understood is in the mind") are non-significant tautologies ("what he understands is understood", and "whatever is understood is understood"). It is suspicious that in this view Anselm employs such otiose sentences as premises of <sup>the</sup> argument for the existence of God. Rather, I think, the view that 'esse in intellectu' must be treated literally is acceptable. If we are to interpret [2] literally, the only way to make [2] sensible is to treat 'what he understands' in the first sentence of [2] as indicating the sense of the formula ; supposing my interpretation of [1], in which I assume that 'to understand' applies to a linguistic expression or its meaning, argued in pp.4-10 above, to be relevant ; and assuming linguistic expressions, written English or Latin letters, to be incapable of being in any human mind. S. P. Schwartz says, in relation to Fregean semantics, "it is this meaning that is known or present to the mind when the term is understood", in his Introduction to Naming, Necessity and Natural Kinds (Cornell Univ. Press, 1977). Schwartz's remarks are quite acceptable to my interpretation. From the fact that [2] as a premise must be true for the whole argument to be appreciated, it is sensible to take the sense of the formula as what is understood and consequently what is in the Fool's mind. Fregean semantics which contends that intensional

entities are to be acknowledged allows us to say that the meaning of 'F' ('F' stands for the formula for the Divine Being) is a thing which is somewhere. If we adopt Fregean semantics as a meta theory determining the ontological boundary of our discourse, and take my argument against Charlesworth and Deane concerning the translation of [1] in pp.4-10 as cogent, what is in the Fool's mind is the meaning of 'F' in [1] and [2].

In [6] ( Even the Fool, then, is forced to argue that something-than-which-nothing-greater-can-be-thought exists in the mind, since he understands this when he hears it, and whatever is understood is in the mind), Anselm tries to assure what he has established with [1] and [2].<sup>47</sup> The since-clause of [6] is a conceptual combination of [1] and [2]. [1] and [2] are employed here as grounds to assure that the thing than which nothing greater can be thought is in the Fool's mind.<sup>48</sup> But this inference does not seem to be valid. What the Fool understands and is in his mind is the meaning of 'F' in [1] and [2] ( the since-clause of [6] ) on the adoption of Fregean semantics as a meta theory. The Fool understands the meaning of 'F' in the since-clause of [6]. In the main clause of [6], however, the thing than which nothing greater can be thought is claimed to exist in the mind. Anselm infers from 'the Fool understands the meaning of 'F'' to 'the Fool understands F' in [6]. This is not a valid inference. Barnes correctly argues that "at some point in the reductio he must move from talk about words to talk about things; indeed, this move is the very crux of the ontological argument"<sup>49</sup>. [6] should have proved this move for the whole argument to be valid. But the inference in [6] is not valid, i.e. the thing than which nothing greater can be thought is not validly inferred to be in the Fool's mind from the true premises of [1] and [2].

There may be an attempt to save Anselm's inference in [6]. If it is conceded that 'to understand

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<sup>47</sup> Steps [3], [4] and [5] are supplementary explanations for [2].

<sup>48</sup> Barnes treats [1] and [2] as premises and [6] as an intermediate conclusion from [1] and [2]. Some others (Adams, G.I.Mavrodes and S.T.Davis) directly take the main clause of [6] as a premise without [1] and [2]. And sometimes [1] - [6] are not treated as parts of the reductio argument in Pros.II (Jan Berg, "An Examination of Ontological Proof" in *Theoria* 27, 1961). I follow the first line of interpretation.

<sup>49</sup> Barnes, J.; *The Ontological Argument* (Macmillan, 1972) p.10

the meaning of 'F' and 'to understand F' imply each other, Anselm's inference in [6], i.e. from "the Fool has the meaning of 'F' in his mind" to "the Fool has F in his mind", may be established to be valid. Actually in our every day use of language, both sentences of the form 'I understand the meaning of 'F' and 'I understand F' are meaningful. The word 'to understand' is legitimately applied to both meanings of linguistic expressions and objects referred to by the expressions. This kind of oscillation in the use of the word 'to understand' is accepted in our habitual treatment of ordinary language. For example these two sentences ; I understand the meaning of 'the king who let his son be killed in 16c in Korea' and 'I understand the king who let his son be killed in 16c in Korea' can be used meaningfully. It, however, must be remarked that these two sentences have different meanings. The latter sentence might be synonymous with 'I am sympathetic to the King who let his son be killed in 16c in Korea'. The former speaks about my ability to read and understand English language. These two sentences are about totally different facts, so there cannot be a logical relation of implication, and they cannot be used interchangeably. It is not very reasonable to accept the concession that 'to understand the meaning of 'F' implies 'to understand F'. If so, Anselm's inference in [6] will be concluded to be invalid. It may be, however, argued that there are particular examples where the inference from 'I understand 'F' to 'I understand F' is valid. For example, a theoretical model like Rutherford's model for an atom is said to allow the implication between 'to understand 'F' and 'to understand F'. If 'I understand 'electron' is maximally true, it may entail 'I understand electron'. But with respect to the formula for the Divine Being, it is not very clear whether this is the case. The formula, 'something-than-which-nothing-greater-can-be-thought', does not seem to be referring to a theoretical model like Rutherford's model for an atom. We can at least argue that, so far as the formula is concerned, 'I understand 'F' does not imply 'I understand F', even if we cannot strongly argue that the implication does not hold in all cases.

Barnes tries to get a similar concession to the above one by interpreting [2] in a peculiar way. He argues that what the Fool understands is the phrase 'something than which a greater cannot

be imagined' (sentence [1]), but this together with [2] ("What he understands is in his mind") does not lead to the conclusion [6] ("something-than-which-nothing-greater-can-be-thought exists in the mind"), so we have to interpret [2] as meaning 'If anyone understands a word or phrase for X, then X is in his understanding' to get the conclusion of [6] from [1] and [2]. Barnes says that this is what Anselm wanted and meant in [2]. From this concession, Barnes concludes the argument in Pros.II to be valid. But I do not see any necessity to change [2] according to Barnes's interpretation. Barnes seems to interpret [2] this way because he does not acknowledge the meanings of expressions as entities. His interpretation works well to draw the intermediate conclusion of [6]. However, as said above, so far as the formula for the Divine Being is concerned, there does not seem to be the relation of implication between 'to understand 'F'' and 'to understand F'. Barnes's interpretation of [2] is false, in so far as the formula is concerned. It is not very cogent to interpret a premise into a false one. I believe it would be more cogent to argue, as Schwartz did, that if 'F' is understood, the meaning of 'F' is in the understanding, supposing a meaning to be an entity. Barnes's attempt to make out the inference in [6] to be valid does not seem to be successful.

[8] says, "if it exists solely in the mind even, it can be thought to exist in reality also, which is greater". If the pronoun 'it' in the if-clause stands for the thing than which nothing greater can be thought rather than the meaning of 'something-than-which-nothing-greater-can-be-thought', we do not know whether it exists in the mind yet. Nothing is said about that. [6] must prove its existence in the mind. But [6] is false. The conclusion of [6] cannot be inferred from [1] and [2]. If Anselm's argument in Pros.II essentially asks 'the thing than which nothing greater can be thought is in the Fool's mind' to be true, the argument fails, because it is nowhere proved. If it is not needed for the thing to exist in the Fool's mind, [1] - [6] are not main parts of Pros.II argument.

[9] gives a clue for the interpretation of [8]. [9] reads, "If then that-than-which-nothing-greater-can-be-thought exists in the mind alone, this same that-than-which-nothing-greater-can-be-thought is that-than-which-a-greater-can-be-thought". It is clear that the pronoun 'it' in [8]

stands for the thing than which nothing greater can be thought. We do not know whether this thing exists in the Fool's mind yet, since [6], which must prove the thing's existence in the mind, is the conclusion of an invalid inference. There can be a question about the status of [6]. Is the proof of the thing's existence in the Fool's mind essential for the whole argument to stand? We can construct the Pros. II argument without [1] - [6] as Jan Berg did<sup>50</sup>. If we construct the argument in this way, Anselm's reductio argument can at most<sup>51</sup> prove that it is not the case that the thing exists in the mind alone. But this does not imply that the thing exists both in the mind and in reality. For the fact that it is not the case that the thing exists in the mind alone can also mean that the thing exists nowhere. We need the fact that the thing exists at least in the mind. The truth of the conclusion of [6] is crucial for the whole argument to work as a proof for the existence of God, presuming [8] and [9] to be true. This fact, however, is proved nowhere, that is, [1] and [2] do not lead to this fact. We see intensional entities are the subjects of 'intelligi' and what is in the Fool's understanding in [1] and [2].

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<sup>50</sup> Berg, J.; Berg's argument runs as follows: Premise<sub>1</sub>; God is that than which nothing greater can be thought, Premise<sub>2</sub>; If God does not exist, He is not that than which nothing greater can be thought, Conclusion; God exists. (op. cit. in note 44) Berg's reformulation does not reflect Anselm's Pros. II argument exactly. Anselm's original formulation is more subtle than Berg's reformulation. Premise<sub>2</sub> is different from [9]. We can construct an argument without [1]-[6] better than Berg's: Premise<sub>1</sub>; God is that than which nothing greater can be thought, Premise<sub>2</sub>; Something is greater when it exists both in mind and in reality than when it exists in mind alone, [8], Premise<sub>3</sub>; If God exists in mind alone, God is that than which a greater can be thought, [9], Conclusion; It is not the case that God exists in mind alone.

<sup>51</sup> I mean presuming [8] and [9] to be true.



#### 1.4. Extensionalism

S. Kripke, in his "Identity and Necessity", first asks "How are contingent identity statements possible ?", as Frege did in his "Über Sinn und Bedeutung". According to Fregean 3 level semantics, a contingent identity statement is possible and informative because two expressions flanking an identity sign designate the same referent but express different senses. We understand the sentence 'The morning star is the evening star' as expressing a contingent fact in the world. The sentence, if true, is informative of the world in that the sentence affirms identity of the referents of two different names which have different senses. If, however, we do not acknowledge intensional entities as parts of the universe of our discourse, the truth of the sentence 'The morning star is the evening star' must show only the fact that we have two different names for a celestial body, Venus, if the sentence is true. That is, unless we posit intensional entities, a contingent identity statement must be only about our arbitrary convention of calling an object. In this case, the identity statement is not about a contingent identity in a state of affairs, but about a contingent fact in human linguistic convention. Without acknowledging intensional entities, a contingent identity statement is non-informative of any state of affairs beyond human linguistic convention. This is not the case, as shown in the example above, so we have to acknowledge intensional entities.

Kripke, however, contends that every identity statement between two proper names is necessarily true if it is true, even though false identity statements are not necessary. If 'a=b' is true, and 'a' and 'b' are proper names, then 'a' and 'b' refer to the same thing, that is, objects referred to by 'a' and 'b' are identical. Since objects cannot be identical contingently, it is necessarily true that 'a=b', if true. Kripke formulates this in his "Identity and Necessity" as follows :

(1)  $(x)(y)[(x=y) \supset (Fx \supset Fy)]$  (This reads, "For any objects x and y, if x is identical to y, then if x has a certain property F, so does y".)

(2)  $(x)[x=x]$  (This reads, "Every object is necessarily self identical".)

(3)  $(x)(y)[(x=y) \supset \Box[(x=x) \supset \Box(x=y)]]$  ( a substitution instance of (1))

From (2) and (3),

(4)  $(x)(y)[(x=y) \supset \Box(x=y)]$  (This reads, "For every x and y, if x is identical to y, then it is necessary that x is identical to y". Here the clause  $(x=x)$  of the conditional drops out because it is known to be true from (2).)

We can argue with Frege that there are undoubtedly contingent identity statements. For example, 'The morning star is the evening star' expresses a contingent identity relation which might have been proved false. To this, Kripke might have answered that 'The morning star is the evening star' is contingently true since 'the morning star' and 'the evening star' are not real proper names. Kripke might have retorted that 'the morning star' and 'the evening star' are abbreviations for descriptions, such as that 'the morning star' is an abbreviation for 'the heavenly body seen from such and such a position at such and such a time in the morning', and 'the evening star' for 'the heavenly body seen from such and such a position at such and such a time in the evening', and so, 'The morning star is the evening star' is contingently true.

Kripke does not take this way to vindicate his contention that there cannot be a contingent identity statement between proper names from the intuitive contention that 'The morning <sup>star</sup> is the evening star' is contingently true. Kripke strongly contends that a sentence like 'The morning star is the evening star' is necessarily true, if true. Kripke distinguishes between a rigid and nonrigid designator to show that every identity statement between two proper names is necessarily true, if true. A nonrigid designator, or an accident designator, is a designator that can refer to a different object under different circumstances. For example, 'the inventor of bifocals' actually designates Benjamin Franklin, but we can "imagine that the world could have been different" so that "someone else could have come upon this invention before Benjamin Franklin did, and in that case, he would have been the inventor of bifocals". 'The inventor of bifocals' is a nonrigid designator in this sense. On the other hand, a rigid designator is a designator which refers to the same thing in all "counterfactual situations", or in all possible

worlds.<sup>52</sup> Of this, Kripke explains,

"In contrast, consider the expression 'the square root of 25'. Independently of the empirical facts, we can give an arithmetical proof that the square root of 25 is in fact the number 5, and because we have proved mathematically, what we have proved is necessary. If we think of numbers as entities at all, and let us suppose, at least for the purpose of this lecture, that we do, then the expression 'the square root of 25' necessarily designates a certain number, namely 5. Such an expression I call 'a *rigid designator*'".

From this criterion, proper names like 'Cicero', 'Tully', and natural kind terms like 'gold', 'water' are rigid designators. For the rigidity of proper names, Kripke says,

"[W]hen we talk even about the counterfactual situation in which we suppose Nixon to have done different things, we assume we are still talking about Nixon himself. We say, "If Nixon had bribed a certain Senator, he would have gotten Carswell through," and we assume that by 'Nixon' and 'Carswell' we are still referring to the very same people as in the actual world. And it seems that we cannot say "Nixon might have been a different man from the man he in fact was," unless, of course, we mean it metaphorically : He might have been a different sort of person (if you believe in free will and that people are not inherently corrupt). You might think the statement true in that sense, but Nixon could not have been in the other literal sense a different person from the person he, in fact, is, even though the thirty-seventh President of the United States might have been Humphrey. So the phrase "the thirty-seventh President" is nonrigid, but 'Nixon', it would seem, is rigid".

Likewise , a stuff is not gold unless it is the same stuff designated by 'gold', that is, the element with atomic number 79. Kripke argues that, by employing this distinction, he can save his contention that every identity statement between proper names is necessarily true if it is true. If 'a' and 'b' are rigid designators of a certain man or thing x, then, in every possible world, 'a' and 'b' refer to this same object x, and so "there will be no situation in which a might not have been b". There cannot be a situation in which Hesperus is not  $\wedge$  <sup>Phosphorus</sup>, since the situation must be that in which "the object which we are also now calling 'x' would not have been identical

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<sup>52</sup> Donnellan distinguishes two uses of definite descriptions, the attributive and the referential. When a definite description is used attributively, "the speaker intends to be saying something about whoever or whatever fits a certain description. In the case of the referential use, the speaker has independently a definite idea whom or what he means to be speaking about and uses the description to refer to that individual. A referential description is simply a tool for accomplishing the reference and may succeed in doing this even if the thing referred to fails to fit the description". "Reference and Definite Descriptions" The Philosophical Review, vol.75, 1966

with itself'.

Here it can be argued that Kripke's theory of designators is circular. According to Kripke, a rigid designator is a linguistic expression which designates the same thing in all counterfactual situations or in all possible worlds, so a rigid designator refers to a thing necessarily because 'necessarily' means 'in all possible worlds' ; and a proper name is a rigid designator, so the identity relation between proper names is necessary if true. But how do we know that a rigid designator refers to the same thing in all possible worlds, that is, how can there be the same thing transworldly ? How is there the same thing which a rigid designator will refer to identically across possible worlds ? Is it because the thing is referred to by a rigid designator ? If Kripke answers so, the argument is circular. Kripke has to answer the question of how we can know that an object has transworld identity. We need a criterion for transworld identity of an object, first. For example, from Kripke's theory of rigid designator, 'Nixon' must designate the same person in all possible worlds.<sup>53</sup> But in a world different from the actual one, there can be several people who resemble Nixon in some ways. In this situation, to whom does 'Nixon' refer ? It might be answered that 'Nixon' refers to Nixon in that world. But which of these people is Nixon ?<sup>54</sup> For 'Nixon' to refer to the same person in all possible worlds, we have to presume Nixon has transworld identity in different possible worlds first of all. Further we need a criterion to individuate Nixon in another possible world. We cannot ask whether a term is a rigid designator or nonrigid designator before we get a criterion of identity across possible worlds. Only after a thing is confirmed to be identical across possible worlds,

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<sup>53</sup> In talking about a rigid designator, Kripke does not imply that the object referred to by the rigid designator has to exist in all possible worlds, that is, to exist necessarily. He says, "All I mean is that in any possible world where the object in question does exist, we use the designator in question to designate that object. In a situation where the object does not exist, then we should say that the designator has no referent and that the object in question so designated does not exist".

<sup>54</sup> According to David Lewis, we should not speak of Nixon in another possible world, but only of "counterparts" of Nixon. "Some people in other possible worlds have dogs whom they call 'Checkers'. Others favor the ABM but do not have any dog called Checkers. There are various people who resemble Nixon more or less, but none of them can really be said to be Nixon ; they are only *counterparts* of Nixon, and you choose which one is the best counterpart by noting which resembles Nixon the most closely, according to your favorite criteria." "Counterpart Theory and Quantified Modal Logic" in Journal of Philosophy, vol. 65,1968

can the term referring to the object be known to be a rigid designator. Kripke counters this objection, that it takes "the metaphor of possible worlds much too seriously in some way". I do not want to be involved any further in the problem of whether Kripke's theory of designators is circular or not. What I want to give attention to is the fact that Kripke's theory does not acknowledge intensional entities, particularly in relation to statements of identity.

Kripke does not deny the usefulness of a description to fix a reference. He objects to the tendency of taking a description as the meaning of an expression, and the tendency "to misconstrue the relation between a name and a description used to fix its reference, to take them to be synonyms". We can fix the reference of the term 'Cicero' by using some descriptive phrases, such as 'the author of these works'. But once the reference is fixed, 'Cicero' rigidly designates

"the man who in fact we have identified by his authorship of these works. We do not use it to designate whoever would have written these works in place of Cicero, if someone else wrote them. It might have been the case that the man who wrote these works was not the man who denounced Catiline. Cassius might have written these works. But we would not then say that Cicero would have been Cassius, unless we were speaking in a very loose and metaphorical way. We would say that Cicero, whom we may have identified and come to know by his works, would not have written them, and that someone else, say Cassius, would have written them in his place".

If it is conceded that the extension of a term is determined by the intension which is given to it by the conjunction or disjunctions<sup>55</sup> of identifying descriptions associated with the term, we have to acknowledge intensional entities as parts of the universe of our discourse. But in Kripke's theory, reference need not be determined by intension. It is determined by "causal chains"<sup>56</sup>.

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<sup>55</sup> Kripke cites Russell and Frege's semantics as conjunction theory according to which meaning of a term is given by a conjunction of identifying descriptions associated with the term and the reference of the term is the unique thing that satisfies the descriptions, and he cites Wittgenstein and Searle as cluster theorists according to whom meaning of a term is not given by conjunction of descriptions but by a cluster or disjunction of the descriptions.

<sup>56</sup> Of "causal chains", it is said, "a name is given to a person in a "baptism" or an initial use with the referent present. It is then handed on from speaker to speaker. As long as we have the right sort of causal chain, that is, as long as the later speakers in the chain intend to use the name with the same reference as the earlier, reference

In Kripke's theory a proper name must refer to its reference independently of identifying descriptions associated with the designator. For the descriptions are nonrigid, that is, they refer to whatever the descriptions fit. But a proper name, as a rigid designator, must refer to one and the same thing in all possible worlds. We can fix the reference of a rigid designator by identifying descriptions associated with the term. This, however, does not mean that we speak of whoever in a counterfactual situation satisfies the descriptions. He says,

"Let us suppose that we do fix the reference of a name by a description. Even if we do so, we do not then make the name *synonymous* with the description, but instead we use the name *rigidly* to refer to the object so named, even in talking about counterfactual situations where the thing named would not satisfy the description in question. --- And so, even though we can imagine a case where the man who wrote these works would not have been the man who denounced Catiline, we should not say that that would be a case in which Cicero would not have been Tully. We should say that it is a case in which Cicero did not write these works, but rather that Cassius did. And the identity of Cicero and Tully still holds".

Kripke distinguishes between using a description to give a meaning and using it to fix a reference. In his preface to Naming and Necessity, he rejects "the conventional description theory as an account of meaning, though its validity as an account of the fixing of a reference was left untouched". Kripke criticizes Frege on the grounds that Frege takes the sense of a designator to be the way its reference is determined and from this Frege supposes that the sense is given by definite descriptions associated with the designator. If so, as said above, all designators must be nonrigid, that is, every designator refers to whatever or whoever fits the descriptions. We do not say 'Moses did not exist' simply from the fact that descriptions about Moses are not found fulfilled by anyone. Rather we would say 'Moses did not do such and such things'. We can use a description related with a designator to fix the reference in this actual world. After fixing it, the designator refers to the same thing, which is identified by the

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to the person "baptized" is accomplished by use of the name. In this way reference to the initial referent of the name can be achieved even though the later user of the name knows no descriptions uniquely specifying the referent". (S. P. Schwartz, Introduction to Naming, Necessity and Natural Kinds (Cornell Univ. Press, 1977) p.32)

description in the actual world, in all possible worlds. It does not refer to whomever whatever fits the description in each of the other worlds. But if we acknowledge sense as an objective entity associated with a linguistic expression, and as the way its reference is found in every other world in which the description is used, a designator refers to whoever or whatever fits the description in every other world, that is, we have to treat all designators as nonrigid. Classifying all designators as nonrigid, however, does not fit our language habits very well, as shown in the Moses example. Kripke undermines one principal reason for postulating intensional entities.

Quine also confines his ontology to extensional entities. Only two kinds of things, physical objects and classes, exist in his ontology.<sup>57</sup> He thinks that the concept of intension is "foggy, mysterious and not really understandable". He takes classes as primitive and defines properties in terms of classes, rather than taking properties as primitive and defining classes in terms of properties.<sup>58</sup> Quine defines the meaning of an expression as the class of those expressions which are synonymous with it.<sup>59</sup> Terms are names of classes (Methods of Logic p.119) and

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<sup>57</sup> Quine is classified as extensionalist rather than nominalist, in the sense that he acknowledges abstract entities like classes, whereas a nominalist like N. Goodman recognizes only concrete individuals. Quine says, "[W]e do need to add abstract objects, if we are to accommodate science as currently instituted. Certain things we want to say in science compel us to admit into the range of values of the variables of quantification not only physical objects but also classes and relations of them; also numbers, functions and other objects of pure mathematics. For mathematics - not uninterpreted mathematics, but genuine set theory, logic, number theory, algebra of real and complex numbers, differential and integral calculus, and so on - is best looked upon as an integral part of science, on a par with physics, economics, etc., in which mathematics is said to receive its applications. Researches in the foundations of mathematics have made it clear that all of mathematics in the above sense can be got down to logic and set theory, and that the objects needed for mathematics in this sense can be got down to a single category, that of classes - including classes of classes, classes of classes of classes, and so on. Our tentative ontology for science, our tentative range of values for the variables of quantification, comes therefore to this : physical objects, classes of them, classes in turn of the elements of this combined domain, and so on up". "The Scope and Language of Science" in The Ways of Paradox and Other Essays (Random House, New York, 1966) pp.229-31

<sup>58</sup> It is to be remarked again that classes and properties are both abstract, but classes are extensions and properties are intensions.

<sup>59</sup> "Notes on Existence and Necessity" in Journal of Philosophy vol.40, 1943 p.120, Quine explains the concept of synonymy without committing himself to intensional entities like meaning. This will be explained later.

'⊃' is a sign of class inclusion (*Ibid* p.185), and language deals with individuals and classes. Quine's ontology avoids multiplication of intensional entities.

Quine's ontology does not admit intensional entities. This is not because intensional entities are abstract. Classes are abstract entities also. Quine thinks that introduction of "foggy" intensional entities to the ontology of individuals and classes is of no advantage. It does not give more explanatory power or simplicity to a scientific theory. It serves no purpose in science and philosophy. If so, we had better remain parsimonious in our commitment to entities, as Ockham admonishes.

In his Willard Van Orman Quine, A. Orenstein summarizes the grounds on which Quine objects to the recognition of intensional entities as follows. Quine's objection to intensional entities is based on (1) his reluctance to posit abstract entities if they are not really necessary ; (2) the absence of a precise theory of intensions, especially the lack of identity condition for intensional entities ; (3) referential opacity of intensional contexts. For (1), the concept of synonymy can be taken as an example. Intensionalists assume that we have to admit meanings as entities to explain this notion. Quine, however, does not see any necessity to posit intensions as entities in addition to his ontology of linguistic entities and human behaviour with regard to these linguistic entities, to explain the concept of synonymy. He analyzes meaning in terms of human behaviour. He says, "Meanings are, first and foremost, meanings of language. Language is a social act which we all acquire on the evidence solely of other people's overt behaviour under publicly recognizable circumstances. Meanings, therefore, those very models of mental entities, end up as grist for the behaviourist's mill".<sup>60</sup> Instead of explaining synonymy in terms of meanings expressed by linguistic expressions, two linguistic expressions can be quite well explained to be synonymous in terms only of language and human behaviour with regard to the language. If we react to different linguistic expressions in the same or similar way, these two expressions are synonymous. Synonymy can be well

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<sup>60</sup> "Ontological Relativity" in Ontological Relativity and Other Essays (Columbia Univ. Press, New York, 1969) p.26



explained without positing intensional entities.

Further, Quine asks how to give identity conditions for intensional entities. "Individuals are said to be identical when whatever is true of one is true of the other, and classes identical when they have the same members." But what about intensional entities? If we treat two properties as identical when they not only belong to the same individuals but do so necessarily, the notion of necessity must be fixed. If the concept of necessity is also "foggy", as Quine actually thinks, that they "necessarily belong to the same object" cannot be a satisfactory identity condition for properties. It is the same even if "analyticity" is tried as the criterion.

Another problem arises from modalities and propositional attitudes<sup>61</sup> which are called intensional contexts. These are referentially opaque contexts in which the ordinary logic of identity does not work. Names in contexts like 'I believe ---' and 'Necessarily ---' do not refer to objects in the world, and Leibniz's *salva veritate* principle of identity is not observed in these contexts. Referential opacity of intensional contexts will be explained a little further in 2.2.2.1. According to Quine, if we are going to introduce these contexts, we have to revise our logic. But to abandon these contexts is simpler than to revise our logic.

A merit of an extensional semantics seems to be its ontological parsimony as explained by Quine. If our language works well without supposing intensional entities, we need not introduce them within our ontological boundary. If Ockham's admonition is worthwhile to observe, we had better remain as parsimonious as possible so far as the ontological boundary of the universe of discourse is concerned. If we can do well enough without intensional entities, we do not have to complicate the universe of our discourse by introducing these entities.

A theological implication of an extensional semantics may be found when it is applied, as a meta theory, to Anselm's Pros.II argument for the existence of God. If we resolve to be

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<sup>61</sup> Quine, "Propositional Objects" in *Ontological Relativity and Other Essays*, pp.139-160

ontologically parsimonious, and so acknowledge only linguistic and extensional entities as existing in our ontological boundary, Anselm's argument in Pros.II turns out to be a valid argument. When we imposed Fregean 3 level semantics in section 1.3., Anselm's Pros.II argument was not valid, since the inference in [6] ("Even the Fool, then, is forced to argue that something-than-which-nothing-greater-can-be-thought exists in the mind, since he understands this when he hears it, and whatever is understood is in the mind.") was not valid. If, however, we introduce an extensional semantics, the whole argument turns out to be a valid one. We will see this in the next section.

### 1.5. An Interpretation of Proslogion Chap.II Argument

It has been argued in section 1.3. that the truth of [6] ("Even the Fool, then, is forced to argue that something-than-which-nothing-greater-can-be-thought exists in the mind, since he understands this when he hears it, and whatever is understood is in the mind.") is crucial for the argument to stand as a valid argument. But [6] turns out to be an invalid inference if we impose Fregean 3 level semantics. [6] was explained to be invalid on the grounds that what is argued to be in the Fool's mind in the main clause of [6] is the thing than which nothing greater can be thought, while the since-clause of [6] ([1] and [2]) confirms that the meaning of 'aliquid quo maius nihil cogitari potest' is in the Fool's mind. But the situation is quite different if we change the ontological boundary of our discourse.

If we accept an extensional semantics to interpret Pros.II argument, that is, if we confine our ontology only to linguistic entities and extensional entities referred to by the linguistic entities, what is in the Fool's understanding in sentence [2] of Pros.II ("what he understands is in his mind, even if he does not understand that it actually exists.") is the thing than which nothing greater can be thought. Assuming that linguistic expressions do not exist in the Fool's mind, we have to admit that the thing than which nothing greater can be conceived is understood by the Fool and is in the Fool's mind, unless we are going to discard [1] and [2] as nonsensical (as said repeatedly, premises [1] and [2] should be true for the whole argument to be appreciated). When we adopted Fregean intensional semantics in section 1.3., what is in the Fool's mind was either a linguistic entity or the meaning of it, supposing my interpretation of sentence [1] to be relevant. In the circumstance that a linguistic entity does not exist in the Fool's mind, we could take the meaning of the linguistic expression to be what the Fool understands and is in his mind. But in extensional semantics, what is in the Fool's mind is either a linguistic entity or a reference of it. In the circumstance that <sup>the</sup> linguistic entity does not exist in the Fool's mind, we cannot but take the thing designated by the linguistic expression as what the Fool understands and has in his mind in [1] and [2]. From this constraint that what is

understood is an object referred to by the expression, [1] must be interpreted as Charlesworth and Deane do. The choice of an extensional semantics as a meta theory strongly supports Charlesworth's translation of [1].

If it should be conceded, on the adoption of an extensional semantics as a meta theory, that the thing than which nothing greater can be thought exists in the Fool's mind in [1] and [2], the inference in [6] ("Even the Fool, then, is forced to argue that something-than-which-nothing-greater-can-be-thought exists in the mind, since he understands this when he hears it, and whatever is understood is in the mind.") is valid. The inference, "the Fool understands the thing than which nothing greater can be thought, what he understands is in his mind, therefore the thing than which nothing greater can be thought is in the Fool's mind", is valid. We cannot but establish the truth of [6] on the adoption of an extensional semantics. An extensional semantics, when chosen as a meta theory, confines our universe of discourse to extensional and linguistic entities. So what is in the Fool's mind is either an extensional entity or a linguistic one. Taking [1] and [2] together as a categorical claim that something is in the Fool's mind (see, note 6 in p.5), and taking this claim to be true, we should acknowledge an extensional entity as the thing which is in the Fool's mind, assuming a linguistic entity does not exist in the mind. Now, this identification of an extensional entity as what is in the Fool's mind makes the inference in [6] valid, and confirms that the thing than which nothing greater can be thought is in the Fool's mind.

Assuming [8] ("For if it exists solely in the mind even, it can be thought to exist in reality also, which is greater.") and [9] ("If then that-than-which-a-greater-cannot-be-thought exists in the mind alone, this same that-than-which-a-greater-cannot-be-thought is that-than-which-a-greater-can-be-thought.") to be true, Anselm's reductio argument for the existence of God in Proslogion Chap.II is valid. As said in section 1.3. above, [8] and [9] establish the fact that it is not the case that God exists in the Fool's mind alone, and [6] establishes that God exists in the mind. From these, follows that God exists both in the mind and in reality. Extensional

semantics, and the postulation of [1], [2], [8] and [9] being true, together, make the argument in Pros.II valid.

## 2. An Analysis of Necessity

### 2.1. Introduction

It is well known that N. Malcolm and C. Hartshorne have the view that there are two different arguments for the existence of God in Anselm's Proslogion. In his "Anselm's Ontological Argument", Malcolm contends that a good deal of light may be shed on the philosophical problem of "the ontological argument" for the existence of God in Anselm's Proslogion, if we distinguish two different pieces of reasoning which Anselm himself did not distinguish from each other. These two different arguments are an argument in Chap.II and another argument in Chap.III. The first part of Chap.III is as follows,

And certainly this being so truly exists that it cannot be even thought not to exist. For something can be thought to exist that cannot be thought not to exist, and this is greater than that which can be thought not to exist. Hence, if that-than-which-a-greater-cannot-be-thought can be thought not to exist, then that-than-which-a-greater-cannot-be-thought is not the same as that-than-which-a-greater-cannot-be-thought, which is absurd. Something-than-which-a-greater-cannot-be-thought exists so truly then, that it cannot be even thought not to exist. (Charlesworth's translation)

According to Malcolm, Anselm's first argument in Chap.II fails, since sentence [8] is not true. [8] goes, "For if it exists solely in the mind, it can be thought to exist in reality also, which is greater". Malcolm interprets this sentence as saying that existence is a perfection, that is, a thing is greater if it exists than if it does not exist. Since existence is not a perfection or a greatness, [8] is false. So the whole argument fails. Malcolm's interpretation continues as follows. Anselm's second proof in Chap.III, however, employs a different principle, that necessary existence is a perfection, that is, a thing is greater if it necessarily exists than if it does not necessarily exist. "A being whose nonexistence is logically impossible is greater than a being whose nonexistence is logically possible." From the fact that God is a being than which a greater cannot be conceived, we know that God exists necessarily. What Anselm proves here is that the notion of contingent existence or contingent nonexistence cannot be applied to God. "His existence must either be logically necessary or logically impossible." If God exists, He exists necessarily. His existence is either necessary or impossible. But it can

be the latter only if the concept of such a being is self-contradictory. If the concept of "that than which nothing greater can be conceived" is not self-contradictory, God necessarily exists. As Plantinga says, if it is even possible that God exists, then it is true that He exists, and necessarily true that He does exist. Hartshorne has a similar interpretation<sup>1</sup>.

K. Barth<sup>2</sup> thinks that in Chap.II Anselm devised a proof for the existence of God in the restricted sense in which things that are different from God also exist, and in Chap.III Anselm is concerned with God's unique existence as God, that is, in Chap.III, Anselm is concerned "to lift the concept of God's existence right out of the plane of the general concept of existence". Anselm, in Chap.III, is concerned not simply with the existence of God but with the special

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<sup>1</sup> R. L. Purtill formalizes Hartshorne's interpretation in his "Hartshorne's Modal Proof" (The Journal of Philosophy vol.63, 1966) as follows. Three principles of modal logic i)  $\Box p \rightarrow p$ , ii)  $\Diamond p \rightarrow \Box \Diamond p$ , iii)  $(p \rightarrow q) \rightarrow (\Box \neg q \rightarrow \Box \neg p)$ , the definition  $\Diamond p =_{\text{def}} \neg \Box \neg p$ , a rule of substitution, the rule of conditional proof, and a rule for replacement of equivalents are needed to get a theorem: "If a statement is such that if it is true at all then it is necessarily true, then if that statement is possibly true then it is true", or in symbols :  $(p \rightarrow \Box p) \supset (\Diamond p \rightarrow p)$ . Purtill proves this theorem from the needed conditions step by step, but I omit the steps. From this theorem Purtill formalizes and proves Hartshorne's construction of Proslogion Chap.III. We need two assumptions : "If the statement 'an absolutely perfect being exists' is true at all it is necessarily true", in symbols  $(Ex)(Px) \rightarrow \Box (Ex)(Px)$ , and "It is possible that the statement 'an absolutely perfect being exists' is true", in symbols  $\Diamond(Ex)(Px)$ . So far we get,

1.  $(p \rightarrow \Box p) \supset (\Diamond p \rightarrow p)$ .
2.  $(Ex)(Px) \rightarrow \Box (Ex)(Px)$ .
3.  $\Diamond(Ex)(Px)$ . Substitute '(Ex)(Px)' for 'p' in theorem1 :
4.  $((Ex)(Px) \rightarrow \Box (Ex)(Px)) (\Diamond(Ex)(Px) \rightarrow (Ex)(Px))$ . Apply modus ponens to obtain from 2 and 4 :
5.  $\Diamond(Ex)(Px) \rightarrow (Ex)(Px)$ . Apply modus ponens again with 3 and 5 to obtain :
6.  $(Ex)(Px)$ . "An absolutely perfect being exists."

The argument is valid ; so anyone who wishes to deny its conclusion must :

- (A) deny the theorem, which will involve denying one or more of the three modal principles, or
- (B) deny the possibility of the existence of an absolutely perfect being, or
- (C) deny that if the statement "an absolutely perfect being exists" is true, then it is necessarily true. But we are in the situation that :

(a) We are free to define 'absolutely perfect being' in the required way.

(b) If we do so define this term, then the two required assumptions,  $(Ex)(Px) \rightarrow \Box (Ex)(Px)$  and  $\Diamond(Ex)(Px)$  follow directly from the definition. These two assumptions are sufficient to prove  $(Ex)(Px)$ . Hartshorne fully accepts this formalization.

<sup>2</sup> Barth, K.; Anselm : Fides Quaerens Intellectum (SCM, London, 1960)

mode of God's existence. God's existence is such that He exists so truly that He cannot even be thought not to exist. This is the main point Anselm wants to show in his arguments for the existence of God in the whole Proslogion. R. Brecher<sup>3</sup> has a similar line of thought. According to him, the central part of the ontological argument must be an analysis of a peculiar idea, that is, to show what must be the nature of the entity if there is an instantiation of the idea, rather than being a movement from thought to reality.<sup>4</sup> If Chap.III is concerned about the modality of God's existence, and if it proves that God is such that "If God exists, He exists necessarily"<sup>5</sup>, the real significance of the ontological argument, which is to show what must be the peculiar nature of an entity, lies in Chap.III.<sup>6</sup>

The argument in Proslogion Chap.III is thought to be a successful argument for the existence of God, or at least thought to be a more important and prior part of Anselm's argument for the existence of God in Proslogion. This is because Chap.III is concerned with the peculiar mode of God's existence, the necessity of God's existence.

Criticisms of the Hartshorne-Malcolm tradition are centered on the question of whether the notion of necessity employed by these authors is consistent. Purtill argues that even if the argument in Chap.III, as reconstructed by Hartshorne, is a formally valid inference, it fails to be a valid argument for the existence of God because of an ambiguity in the meaning of 'necessity'. Since the meaning of necessity is shifted in the process of the reconstruction, Hartshorne's interpretation is not valid. Purtill says, "although there are senses of 'necessity'

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<sup>3</sup> Brecher, R.; Anselm's Argument -The Logic of Divine Existence- (Gower, Great Britain, 1985)

<sup>4</sup> D. Z. Phillips also argues that we have to decide what sort of an entity God is supposed to be first of all, for the meaning of terms like 'fact', 'exist' and 'real' is dependent on contexts. (The Concept of Prayer RKP, 1965, p.13ff)

<sup>5</sup> According to Malcolm, if it is established that "If God exists, He exists necessarily", the only way to argue that God does not exist is to show that the concept of God is self-contradictory. If the concept is not self-contradictory, it leads to the conclusion that God exists.

<sup>6</sup> In fact, Brecher interprets the modal status of God's existence in terms of eternity and self-sufficiency. But Chap.III is not concerned about the modal status in this sense. So, on Brecher's interpretation of the modal status of God's existence, Chap.III may not be "the repository of Anselm's argument for the existence of God", as Hartshorne and Malcolm contend.



that can be legitimately connected with existence, and senses of necessity for which the ontological argument is valid or sound, there is no sense of necessity that can be legitimately connected with existence *and* for which the ontological argument is valid"<sup>7</sup>. According to Purtill, Hartshorne can contend that Chap.III is a valid argument, and so a successful proof for the existence of God, only because Hartshorne is confused in his use of 'necessity'. J. Hick also criticizes authors in the Hartshorne-Malcolm tradition for confusing two totally different notions of necessity. It is true, Hick argues, that the concept of necessity is attributed to the existence of God both in biblical tradition and Anselm's thought. But the necessity which is attributed to God is not logical necessity but factual or ontological necessity. God's existence is necessary only in the sense that God's existence is temporally unlimited and He exists from himself. Even from the view point of modern empiricism, the notion of logically necessary existence "is not permissible and cannot be employed as the foundation of a valid theistic argument". If there are people who claim that Chap.III is a successful proof for God's existence, it is because they are confusing the eternity and aseity of God, a factual necessity, and logical necessity. What we have to keep in mind when we appreciate pro Chap.III authors is that the meaning of necessity attributed to God's existence must not be shifted, but be consistent, in the process of argument. Hick argues that the concept of the necessary existence of God, which is said to be central in Chap.III, can be significant only when necessity is interpreted as factual necessity, that is, in the sense of eternity and aseity. If we keep to this meaning of necessity, we cannot say that an a priori proof for God's necessary existence is successful. Hick criticizes the Hartshorne-Malcolm interpretation :

"They observe (rightly) that while "existence" is not a real predicate, "necessary existence" in the ontological sense is a real predicate and can be a constituent element in the concept of deity. However, having established that ontological necessity is a real predicate, they proceed as though what they had established is the quite different conclusion that logically necessary existence is a real predicate. From this point they have no difficulty in proceeding by "due process" to the conclusion that since God has logically necessary existence, he must and therefore does exist. The argument is, however, fatally disrupted by the illicit shift of meaning between logical and ontological necessity".<sup>8</sup>

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<sup>7</sup> Purtill; *op.cit.* p.409

<sup>8</sup> Hick, J.; "A Critique of the "Second Argument"" in Many-Faced Argument (ed. J.Hick and A.C.McGill,

Now, I would like to ask if Hick and Purtill's criticism of Hartshorne and Malcolm's way of vindicating the validity of the Pros.III argument is really cogent. Is it really true that the Pros.III argument cannot be counted as a valid argument without committing an improper conceptual oscillation between different meanings of necessity ? Can there really be no concept of necessity which can be held consistently throughout the whole argument in Pros.III *and* can be meaningfully connected with existence *and* for which the argument is valid ? To answer this question, and to evaluate Hick and Purtill's criticism of Hartshorne and Malcolm's interpretation of the Pros.III argument, we need an analysis of 'existence' in addition to a full conceptual analysis of 'necessity', under the situation that not only 'necessity' but also 'existence' are used in many different ways in various human discourse. If, with full analyses of 'necessity' and 'existence', it turns out that there can be notions of necessity and existence which can be held consistently throughout the argument in Pros.III *and* are meaningful when they are connected together *and* for which the ontological argument is valid, Purtill and Hick's criticism of Hartshorne and Malcolm's interpretation of Pros.III may not stand as undermining the reasoning in the interpretation.

We can accept Hick and Purtill's principle that, for a proper interpretation of Pros.III, 'necessity' should be used consistently, and be meaningful when combined with 'existence', and be suitable as a subject for an a priori argument. But the acceptance does not directly lead to falsifying Hartshorne and Malcolm's interpretation of the Pros.III argument. There may be notions of necessity which can be employed in the Pros.III argument but are not considered by Purtill and Hick *and* are consistent with certain concepts of existence *and* for which the ontological argument is valid. It seems to me that Purtill and Hick's criticism of Hartshorne and Malcolm can be challenged in two directions. First, their analysis of 'necessity' is not sufficient enough to argue that "there is no sense of necessity that can be legitimately connected with existence *and* for which the ontological argument is valid", and second, they do not pay

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Macmillan, London, 1968) p.348

any attention to the possibility that there are many concepts of existence which can be employed in Pros.III.

In this Chapter, I will concentrate on analyzing possible concepts of necessity as the first step for evaluating Purtill and Hick's criticism of Hartshorne and Malcolm's interpretation of the Pros.III argument. To see if there is any concept of necessity which can be employed in the Pros.III argument and will satisfy the condition demanded by Purtill, first of all, we have to examine different ways in which we use the word 'necessity'. And, if 'necessity' turns out to be used in many distinguishable ways, we have to articulate these different meanings of necessity. A historical survey may well do for this task. By studying how philosophers and scientists have employed the word 'necessity', we may find out possible explicatus of 'necessity'. We can identify meanings of 'necessity' through analyzing the contexts in which 'necessity' is used in various human discourse throughout history. So, as the first step for evaluating Purtill's criticism against Hartshorne and Malcolm, I will study what meanings of 'necessity' are employed by traditional and contemporary philosophers, by Anselm, and in quantum physics. But I will not dare to be involved in detailed evaluation or comparative assessments of theories of necessity developed by these authors. What I need here is simply to see what has been meant by 'necessity', and to see what are the contexts in which people use the word 'necessity'.

If it turns out that there are several conceptually different explicatus for 'necessity', and the Hartshorne-Malcolm interpretation is nothing but a conceptual blunder caused by an oscillation between these different meanings of necessity, as is asserted by Hick and Purtill, we had better give different names to the mutually independent explicatus in order not to create the confusion allegedly caused by Hartshorne-Malcolm authors, i.e. we had better treat 'necessity' as a disguised single representation of many explicanda. It is ludicrous for conceptual confusion to be caused by different concepts' chancing to have the same name.

Upon this analysis of 'necessity', and with an analysis of 'existence' which will be undertaken

in the next Chapter, we have to see whether the claim that "although there are senses of 'necessity' that can be legitimately connected with existence, and senses of necessity for which the ontological argument is valid or sound, there is no sense of necessity that can be legitimately connected with existence *and* for which the ontological argument is valid" is really true. If there could be concepts of necessity and existence which satisfy the conditions demanded by Purtill, Purtill and Hick's criticism will not be a successful refutation of the Hartshorne-Malcolm interpretation, and it should be acknowledged that the argument for the existence of God in Pros.III, at least in the form of the Hartshorne-Malcolm interpretation, is a valid argument for the existence of God.

## 2.2. Meanings of Necessity

### 2.2.1. Traditional views

#### 2.2.1.1. Leibniz

Leibniz endeavours to draw a clear distinction between necessary and contingent truths, as did other philosophers of the seventeenth and eighteenth centuries.<sup>9</sup> Generally, Leibniz treats the category of necessity as logically equivalent to the category of analyticity. He presents, as examples of necessary truths, identity statements of the form "A is A" and "AB is A" (for example, "An unmarried man is unmarried."), mathematical statements, and "disparities" like "Heat is not colour". These are also called "truths of reason", "eternal truth", "metaphysical truth", and "logical truth" by him. These truths are necessary since "the opposite implies a contradiction". He says,

"There are also two kinds of truths, truths of reason and the truths of fact. Truths of reason are necessary, and their opposite is impossible. Truths of fact are contingent, and their opposite is possible. When a truth is necessary, the reason for it can be found by analysis, resolving it into more simple ideas and truths until we reach the primary. --  
- Primary principles cannot be proved, and indeed have no need of proof ; and these are identical propositions, whose opposite involves an express contradiction."<sup>10</sup>

"Hence we now learn that propositions which pertain to the essences and those which pertain to the existences of things are different. Essential surely are those which can be demonstrated from the resolution of terms, that is, which are necessary, or virtually identical, and the opposite of which is impossible or virtually contradictory. These are the eternal truths. Not only will they hold as long as the world exists, but also they would have held if God had created the world according to a different plan. But existential or contingent truths differ from these entirely. Their truth is grasped a priori by the infinite mind alone, and they cannot be demonstrated by any resolution."<sup>11</sup>

When a sentence is necessarily true, the sentence shows a truth which cannot be opposed. This is because analysis of the terms reaches to the demonstration of identity statement. Since

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<sup>9</sup> Mates, B.; *The Philosophy of Leibniz Metaphysics and Language* (Oxford Univ. Press, 1986) p.105

<sup>10</sup> Leibniz; *Die philosophischen Schriften* (ed C.I.Gerhardt, Berlin, 1875-1890) vol.VI p.612 This is cited from Mates's book.

<sup>11</sup> This is citation from Mates's book p.107.

negation of this identity statement is a self contradictory statement, the negation of a sentence by which an identity statement is made cannot express more than a self contradictory state of affairs. So opposition to a truth shown by a necessarily true sentence is impossible. We see here that the resolution of terms, i.e. the analyticity of the sentence, is the foundation for necessity. A necessary truth "cannot be opposed", since it is, or is reduced to, an analytic truth of the form "A is A" or "AB is A".

Leibniz refines his theory to define a necessary truth as one that can be reduced to an unopposable identity statement in a finite number of steps, whereas a contingent truth is one for which the reduction has to go on to infinity. He had to refine his theory of necessity because of his theory of truth. According to Leibniz, a sentence is true if and only if the predicate is contained in the concept of the subject. The problem is how it is possible for a sentence to be other than necessary if its predicate is contained in its subject. Leibniz solved this problem by introducing the notions of "to be reduced to an identity statement in finite steps" and "to be reduced to an identity statement only in infinite steps".

"Having recognized the contingency of things, I raised the further question of a clear concept of truth, for I had a reasonable hope of throwing some light from this upon the problem of distinguishing necessary from contingent truths. I saw that in every true affirmative proposition, whether universal or singular, necessary or contingent, the predicate inheres in the subject or that the concept of the predicate is in some way involved in the concept of the subject. I saw too that this is the source of infallibility for him who knows everything a priori. But this fact seemed to increase the difficulty, for, if at any particular time the concept of the predicate inheres in the concept of the subject, how can the predicate ever be denied of the subject without contradiction and impossibility, or without destroying the subject concept? A new and unexpected light arose at last, however, where I least expected it, namely, from mathematical considerations of the nature of the infinite---"<sup>12</sup>

"The criterion for distinguishing necessary from contingent truths emerges from the following features, which only those who have in them a tincture of mathematics will easily understand: in the case of necessary truths an identical equation will be reached by carrying the analysis sufficiently far, which amounts to demonstrating the truth with geometrical rigor."<sup>13</sup>

<sup>12</sup> This is citation from Mates's book p.108

"In contingent truths, however, though the predicate inheres in the subject, we can never demonstrate this, nor can the proposition ever be reduced to an equation or an identity, but the analysis proceeds to infinity, only God being able to see, not the end of the analysis, since indeed there is no end, but the nexus of terms or the inclusion of the predicate in the subject, since he sees everything which is in the series."<sup>14</sup>

If a statement reduces to an identity statement in finite steps, the truth asserted by the statement is necessary. If it can only approach to an identity statement through further and further analysis, it is contingent. For example, we can say, metaphorically, that 3 is contained in 9 in the sense that 9 is three times 3. There is the ratio between 3 and 9 which is given in an integer. Let us compare 10 and 3. In this case also, we can say that 3 is contained in 10 in the sense that there is a ratio between these two numbers. Even though this ratio is not given in an integer or definite decimal,  $(3 + 0.3 + 0.03 + 0.003 + \dots) \times 3$  becomes closer to 10 as the summation of terms from the left in the series proceeds. Similarly, in a contingent truth "A is B", the concept B is contained in the concept A by the continuous analysis of the predicate and subject, but the analysis goes on to infinity. Let us assume that 'A bachelor is fastidious' is a contingently true sentence. 'Bachelor' can be analyzed into 'unmarried man', 'man who has no experience of marriage', 'man who has no experience of a community life', ---, 'man who has no experience of a life which asks one not to be too critical to other people', 'man who has no experience of a life which asks one not to be too hard to be pleased by other people's actions, behaviour, etc.', gradually. And 'fastidious' can be analyzed into 'hard to be pleased'.<sup>15</sup> Assuming these analyses to be acceptable in standard English, we can find the predicate concept in the subject. Leibniz seems to believe that the sentence is necessary if the final

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<sup>13</sup> *Ibid* p.109

<sup>14</sup> This is citation from note 16 in Mates's book p.109

<sup>15</sup> I illustrated a slightly different example from Leibniz's original intention. According to Leibniz, a contingent truth is a truth shown by a sentence which reaches to an identity sentence only in infinite steps of analysis. In my example, however, the identity statement is pretended to be already achieved. Presuming my analyses to be not meticulous enough, if we can get to the identity statement by inserting a finite number of mediating steps between my steps to the standard of a good English speaker, it is necessary. If we can get to the identity statement only by adding an infinite number of steps, it is contingent. I take this measure because I am not very sure of English synonyms, that is, I am unable to make my analyses to be strict analytic expansion of the previous steps.

identity sentence is reached in finite steps of analysis, contingent if only in infinite steps. In the case of the contingent, the more the number of steps increase, the closer the sentence approaches to an identity sentence.

If a sentence is necessarily true, the process of such linguistic analysis will eventually end in an identity statement. The difference between a necessary and contingent truth, in Leibniz, is only marked by the difference in the analyses of terms employed. In this sense, the category of necessity is logically equivalent to the category of analyticity. A necessary truth cannot be opposed because it is an analytic truth.

Leibniz includes the categories of physical necessity and moral necessity in his category of necessity. He gives the name "absolute necessity" to necessity in the sense of analyticity, and "hypothetical necessity" to physical necessity. But it is to be conceded that the absolute necessity is primarily meant by 'necessity' in Leibniz. Especially, as far as God's existence is concerned, only absolute necessity has relevance in Leibniz.<sup>16</sup>

#### 2.2.1.2. Kant

In his introduction to the second edition of Critique of Pure Reason, Kant says,

"What we here require is a criterion by which to distinguish with certainty between pure and empirical knowledge. Experience teaches us that a thing is so and so, but not that it cannot be otherwise. First, then, if we have a proposition which in being thought is thought as *necessary*, it is an *a priori* judgement ; and if, besides, it is not derived from any proposition except one which also has the validity of a necessary judgement<sup>17</sup>, it is an absolutely *a priori* judgement. Secondly, experience never

<sup>16</sup> Leibniz gives as examples of necessary truths that God exists, that all right angles are equal to each other, and as examples of contingent truths that I exist, that there are bodies which show an actual right angle. ( Ibid vol.III p.400)

<sup>17</sup> My note; The original text is " --- ist er überdem auch von keinem abgeleitet, als der selbst wiederum als ein notwendiger Satz gültig ist". For this clause Schmidt gives a footnote that "Erdmann : usw. "nämlich einem solchen, der selbst""(Kritik der Reinen Vernunft published by R. Schmidt Leipzig, 1926, p.40). From



confers on its judgements true or strict, but only assumed and comparative *universality*, through induction. We can properly only say, therefore, that, so far as we have hitherto observed, there is no exception to this or that rule. If, then, a judgement is thought with strict universality, that is, in such manner that no exception is allowed as possible, it is not derived from experience, but is valid absolutely *a priori*. Empirical universality is only an arbitrary extension of a validity holding in most cases to one which holds in all, for instance, in the proposition, 'all bodies are heavy'. When, on the other hand, strict universality is essential to a judgement, this indicates a special source of knowledge, namely, a faculty of *a priori* knowledge. Necessity and strict universality are thus sure criteria of *a priori* knowledge, and are inseparable from one another".<sup>18</sup>

A judgement is *a priori* if the ground on which it is accepted is not empirical. For Kant, the criteria from which we can distinguish *a priori* knowledge from empirical are necessity and strict universality. As said in the above quotation, all necessary propositions are *a priori*. With this and the remark that "all *a priori* statements are necessary"<sup>19</sup>, we can conclude that for Kant the necessary is equivalent to the *a priori*. This equivalence between the two categories is supported from other contexts in the Critique. Kant says,

"The categories of modality have the peculiarity that, in determining an object, they do not in the least enlarge the concept to which they are attached as predicates. They only express the relation of the concept to the function of knowledge"<sup>20</sup>.

Modality is relevant only to the way a piece of knowledge is acquired, i.e. the concepts of possibility, actuality and necessity are of epistemology as is the concept of *apriority*. For Kant, 'It is necessary' and 'It is *a priori*' have the same truth value, given that the demonstrative 'it' is homogeneously substituted. Necessity and *apriority* are equivalent concepts.

Examples of necessary, and so *a priori*, judgements given by Kant are judgements made by the propositions of mathematics. Mathematical propositions, if true, are necessarily true, and they

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this note, A. Pap seems to translate this clause as "if, furthermore, it is not derived from any other proposition which is itself necessarily valid".

<sup>18</sup> Kant; Immanuel Kant's Critique of Pure Reason (tr. N. K. Smith, Macmillan, 1929) pp.43-44

<sup>19</sup> Kant; Werke viii 228-9 Akad. Ausg. This is cited from R. Robinson's "Necessary Propositions" in The First Critique (ed. T. Penelhum and J. J. MacIntosh, Wadsworth Pub. Co. California, 1969) p.22

<sup>20</sup> Kant; Immanuel Kant's Critique of Pure Reason p.239

are strictly universal. This is not because they are analytic as in Leibniz. For Leibniz, a truth is necessary, since it is analytic. As is well known, however, for Kant, mathematical propositions are synthetic a priori or synthetic necessary propositions. The certainty in mathematical propositions does not come from analyticity. But another example of necessary proposition, given by Kant, is the proposition that every change must have a cause. The necessity in this proposition seems to be the necessity in Leibniz's sense of analyticity. He says,

"Now it is easy to show that there actually are in human knowledge judgements which are necessary and in the strictest sense universal, and which are therefore pure *a priori* judgements. If an example from the sciences be desired, we have only to look to any of the propositions of mathematics ; if we seek an example from the understanding in its quite ordinary employment, the proposition, 'every alteration must have a cause', will serve our purpose. In the latter case, indeed, the very concept of a cause so manifestly contains the concept of a necessity of connection with an effect and of the strict universality of the rule, that the concept would be altogether lost if we attempted to derive it, as Hume has done, from a repeated association of that which happens with that which precedes, and from a custom of connecting representations, a custom originating in this repeated association, and constituting therefore a merely subjective necessity".<sup>21</sup>

Kant himself said, about the necessity in the proposition that every change has a cause, that "the very concept of a cause so manifestly contains the concept of a necessity of connection with an effect and of the strict universality of the rule". Sometimes Kant meant apriority by 'necessity', but some other times he meant analyticity by 'necessity'.

Further, Kant distinguishes between material and logical necessity. Under the section, "The Postulates of Empirical Thought", Kant says, "Lastly, as regards the third postulate (of necessity, my parenthesis), it concerns material necessity in existence, and not merely formal and logical necessity in the connection of concepts". Kant gives the name of "logical necessity" to the necessity in the connection of concepts. This is necessity in Leibniz's sense, analyticity. On the other hand, material necessity is existence of an object at all times.<sup>22</sup>

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<sup>21</sup> *Ibid* p.44

<sup>22</sup> "The schema of necessity is existence of an object at all times." *Ibid* p.185

Hick's contention that "the distinction between logical and factual necessity was apparently first drawn by Kant in the Critique of Pure Reason" seems to be supported by these contexts.<sup>23</sup>

The view that the concept of necessity is a muddle and this muddle began with Kant<sup>24</sup> is quite understandable. As Robinson contends, Kant's concept of necessity is nothing definite, but a confused conceptual compound of apriority, analyticity, and eternity.

### 2.2.1.3. Locke

In his An Essay Concerning Human Understanding (ed. J.W. Yolton, J.M. Dent and Sons, London, 1961), Locke distinguishes between two sorts of "trifling" propositions. Book IV Chap. VIII Section 3 is about the first sort of trifling propositions. Propositions of the form "A law is a law", "Obligation is obligation" are trifling in the sense that they "bring no increase to our knowledge". Locke calls these propositions identical propositions. In identical propositions, "the same term importing the same idea is affirmed of itself". Locke says,

"For at this rate, any very ignorant person, who can but make a proposition and knows what he means when he says aye or no, may make a million of propositions of whose truths he may be infallibly certain, and yet not know one thing in the world thereby".  
(IV.8.3.)

Another sort of trifling proposition is that in which "a part of the complex idea is predicated of the name of the whole : a part of the definition of the word defined". Propositions like "Lead is a metal" are trifling in this sense. These are propositions "wherein the genus is predicated of the species, or more comprehensive of less comprehensive terms". About the knowledge these propositions carry, Locke says,

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<sup>23</sup> Hick says, "He derives the category of necessity from the necessary or analytic proposition in formal logic. But the schema of this category in time is, he says, the existence of an object throughout all time ; and the corresponding 'postulate of empirical thought' is called by Kant "die materiale Notwendigkeit" and is equivalent to what is sometimes termed causal necessity, i.e. being a part of the universal causal system of nature". "God as Necessary Being" in The Journal of Philosophy, vol. 57, 1960, p.726

<sup>24</sup> Robinson, R.; "Necessary Propositions" in The First Critique (ed. T. Penelhum and J.J. MacIntosh, Wadsworth Pub. Co., California, 1969) p.22

"Indeed, to a man that knows the signification of the word metal, and not of the word lead, it is a shorter way to explain the signification of the word lead, by saying it is a metal, which at once expresses several of its simple ideas, than to enumerate them one by one, telling him it is a body very heavy, fusible and malleable". (IV.8.4.)

Similarly, propositions of the form "All gold is fusible" are "to predicate any other part of the definition of the term defined, or to affirm any one of the simple ideas of a complex one, of the name of the whole complex idea". These propositions "cannot but be counted trifling" since they "carry no knowledge with them but of signification of words".

Locke's account of trifling propositions is very similar to Leibniz's account of necessary truths. For Leibniz, a necessary truth cannot be opposed since it is an analytic truth of the form "A is A" or "AB is A". Locke's first category of trifling propositions is of the form "A is A", and second, "AB is A". It is quite acceptable to say that Locke's trifling propositions are nothing but analytic propositions, and so they are necessary.<sup>25</sup> We can say that, without changing Locke's original intention, the proposition that lead is a metal is trifling and necessary because the concept of metal is contained in the concept of lead, i.e. the proposition is analytically true.

Locke speaks of trifling propositions as "infallibly certain" in the sense that they are necessarily true.<sup>26</sup> Whilst all trifling (analytic) propositions are certain (necessary), not all certain propositions are trifling. Locke says,

"We can know then the truth of two sorts of propositions with perfect certainty. The one is, of those trifling propositions which have a certainty in them, but it is only a verbal certainty, but not instructive. And secondly, we can know the truth, and so may be certain in propositions, which affirm something of another, which is a necessary consequence of its precise complex idea, but not contained in it : as that the external angle of all triangles is bigger than either of the opposite internal angles ; which relation of the outward angle to either of the opposite internal angles, making no part of the

<sup>25</sup> Woolhouse, R.S.; Locke's Philosophy of Science and Knowledge (Basil Blackwell, 1971) p.3

<sup>26</sup> Ibid p.13

According to A. Pap, "unlike Kant and Leibniz, Locke nowhere speaks of "necessary" truths (or propositions) in contrast to contingent ones, but instead contrasts certainty of knowledge with mere probability. By "certain truth", then, Locke meant --- nothing else than "necessary truth"". (Semantics and Necessary Truth (Yale Univ. Press, 1969) pp.49-50)

complex idea signified by the name triangle, this is a real truth, and conveys with it instructive real knowledge". (IV.8.8.)

For Locke, not all certain propositions are trifling, i.e. Locke does not take the certain and the trifling as equivalent ; the necessary and the analytic are not equivalent categories. There is something more than analyticity in his notion of certainty and necessity. It is certainty in propositions of mathematics. Propositions which are not trifling can be certain also, that is, the synthetic necessary is an acceptable category in Locke, as shown in the proposition of geometry above. The certainty in geometry is quite different from analyticity. For Locke, our knowledge in mathematics is certain in that it does not need experience. What has made geometers and mathematicians into real scientists is that they have acquired "the art of finding proofs" and have developed a priori methods. Propositions of mathematics are necessarily true, if true, because their truth is proved in an a priori manner. For Locke, not only analytic truths but also a priori truths are necessary.

The certainty in mathematical propositions is certainty derived from the way in which a truth is known. Knowledge which is acquired "only in our thoughts and consists barely in the contemplation of our own abstract ideas"(IV.6.13) is certain. He says,

"It is fit to observe that certainty is two fold ; certainty of truth, and certainty of knowledge. Certainty of truth is when words are so put together in propositions as exactly to express the agreement or disagreement of the ideas they stand for as really it is. Certainty of knowledge is to perceive the agreement or disagreement of ideas as expressed in any proposition". (IV.6.3)

For Locke, human cognition is certain when it is acquired from "the contemplation of our own abstract ideas". On the other hand, what is acquired from experience of "the nature of things themselves" is only probable. Locke calls what is acquired a priori, and so certain, "knowledge", and calls what is acquired through experience, and so uncertain, "belief" or "opinion". The certain/uncertain (necessary/contingent) distinction in this respect is the distinction between a priori and empirical. Certainty in this sense is an epistemological category. The certainty in mathematical propositions is a certainty derived from the way in which a cognition is acquired, not about certainty in terms of the analyticity of a proposition.

Locke seems to admit the possibility that propositions about the natural world can be certainly true even if they are based on experience, and not on an a priori basis. It is true that Locke is less emphatic and explicit about whether there are empirically certain propositions. But it is a possibility he allows.<sup>27</sup> He allows that, even if we do not have certainty about a proposition in the epistemological sense, the proposition can still be certain in terms of the "certainty of truth". Here uncertainty in empirical propositions is only uncertainty in the epistemological sense, that is, the propositions are uncertain in that they are empirical. If empirical propositions are uncertain, they are so only in terms of "the weakness of our faculties", our weakness in not being able to dispense with observation for empirical truths. Locke does not argue that there is no necessary connection between the idea of fire and that of warmth, but that there is no connection visible to us between them. It is uncertain only to us.

What is obvious is that the concept of certainty or necessity, when it is said that empirical propositions are not certain, is just that of apriority.

For Locke, certainty or necessity is a conceptual conglomeration of analyticity and apriority. Certainty of knowledge (epistemological certainty) is logically equivalent to apriority ; certain knowledge in the epistemological sense is certain in that it is a priori. Trifling propositions are certain because they are analytic ; certainty in this sense is equivalent to analyticity. It is to be accepted that for Locke necessity can mean analyticity on the one hand, and apriority on the other.

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<sup>27</sup> Woolhouse; *op.cit.*, p.21

#### 2.2.1.4. Hume

In his Enquiries Concerning the Human Understanding and Concerning the Principles of Morals (Selby-Bigge 2nd ed., Clarendon, Oxford, 1961, hereafter Enquiries), Hume says;

"All the objects of human reason or enquiry may naturally be divided into two kinds, to wit, Relations of Ideas, and Matters of Fact. Of the first kind are the sciences of geometry, algebra, and arithmetic; and in short, every affirmation which is either intuitively or demonstratively certain. --- Propositions of this kind are discoverable by the mere operation of thought, without dependence on what is anywhere existent in the universe.--- Matters of fact, which are the second objects of human reason, are not ascertained in the same manner ; nor is our evidence of their truth, however great, of a like nature with the foregoing. The contrary of every matter of fact is still possible; because it can never imply a contradiction, and is conceived by the mind with the same facility and distinctness, as if ever so conformable to reality." (Section IV Part I 20-21)

Hume's division of "the objects of human enquiry" into "relations of ideas" and "matters of fact" is illustrated in the discussion of "seven different kinds of philosophical relation," at the beginning of Part 3 of Book 1 of the Treatise (A Treatise of Human Nature, Selby-Bigge 2nd ed., Clarendon, Oxford, 1978, hereafter Treatise). Resemblance, contrariety, degrees in quality, and proportions in quantity or number are said to be relations "which, depending solely upon ideas, can be the objects of knowledge and certainty"; they are contrasted with identity, relations of time and place, and causation, "which may be changed without any change in the ideas". For example, let us compare a judgement of equality and a judgement of spatial relation; " $2+2=4$ " vs. "Body A is one mile away from body B". What Hume meant by saying that the relation of proportions in quantity or number "depends solely upon ideas" is probably that the equality of 4 and  $2+2$  is proved only from the meanings of the terms "4" and " $2+2$ ", while the judgement of spatial distance cannot be established by merely reflecting on the meanings of "body A" and "body B".<sup>28</sup> Similarly, "A causes B" is neither proved nor disproved by reflecting upon ideas of A and B.

Two kinds of reasoning corresponding respectively to Hume's "relations of ideas" and "matters

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<sup>28</sup> This example is in Pap's book, p.73. Semantics and Necessary Truth (Yale Univ. Press, 1958)

of fact" are demonstrative reasoning, which consists in the comparison of ideas, and moral reasoning, which is founded upon experience. Demonstrative reasoning is of necessity and certain, since it involves "every affirmation which is either intuitively or demonstratively certain". Since demonstrative reasoning is perfectly certain through demonstration of agreement or disagreement between ideas, our assent to this reasoning cannot be otherwise without changing definitions of terms employed.

"Wherein consists the difference betwixt believing and disbelieving any proposition ? The answer is easy with regard to propositions, that are provided by intuition or demonstration. In that case, the person, who assents, not only conceives the ideas according to the propositions, but is necessarily determined to conceive them in that particular manner." (Treatise I. III. VII., p.95)

Demonstrative reasoning is necessary since it is about agreement or disagreement between ideas. Demonstrative reasoning is founded only upon the relations of ideas, and so, it is always certain. Hume says, "All certainty arises from the comparison of ideas". Moral reasoning, however, is based upon experience and upon the custom or habit which experience gradually produces.<sup>29</sup> Hence it does not have the certainty of demonstrative reasoning. In the Treatise, it is said that "even geometry falls short of this high standard of certainty because its first principles are drawn from the general appearance of objects. Hence it must be classed, along with the empirical sciences, as a merely probable science".<sup>30</sup>

The kind of reasoning which applies to real existence or matter of fact is moral reasoning - our reasoning from causes to effects. "All reasonings concerning matter of fact seem to be founded on the relation of Cause and Effect." (Enquiries IV. I. 21., p.26) As is well known, according to Hume, our reasoning in causation cannot be certain. Reasoning which is founded upon the relations of ideas is certain. But, since there is no such thing as an impression<sup>31</sup> of a causal

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<sup>29</sup> Ibid pp.140-141

<sup>30</sup> Ibid p.141

<sup>31</sup> Here I would like to cite some remarks for the understanding of "idea" and "impression" in Hume's philosophy. Hume says,

"That all our simple ideas in their first appearance are derived from simple impressions, which are correspondent



relation<sup>32</sup>, we can only know cause and effect from experience. The experience required for the relation of causation is the experience of constant conjunction of events. When, in experience, two objects are constantly conjoined, we infer one from the other. "The sight of A causes the expectation of B, and so leads us to believe that there is a necessary connection between A and B. The inference is not determined by reason --- but only inferred from experience." When we infer 'A causes B', can we mean only that A and B are constantly conjoined in fact, not that there is some necessary connection between them. Our reasoning from causes to effects is not certain in this sense. It is impossible to know certainly that "any thing or sort of thing either must be or cannot be the cause of any other thing or sort of thing".

"It is a general maxim in philosophy that whatever begins to exist must have a cause of existence. This is commonly taken for granted in all reasonings, without any proof given or demanded. It is supposed to be founded on intuition, and to be one of those maxims which, though they may be denied with the lips, it is impossible for men in their hearts really to doubt of. But, if we examine this maxim by the idea of knowledge above explained, we shall discover in it no mark of any such intuitive certainty ; but, on the contrary, we shall find that it is of a nature quite foreign to that species of conviction. (Treatise I.III.III)"

Moral reasoning is not certain, since it is founded not on relations of ideas, but on experience.

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to them, and which they exactly represent." (Treatise I.I.I)

"Every idea is derived from some impression, which is exactly similar to it." (Treatise I.II.III)

"Now since all ideas are derived from impressions, and are nothing but copies and representations of them, whatever is true of the one must be acknowledged concerning the other. Impressions and ideas differ only in their strength and vivacity." (Treatise I.I.VII.)

"Any impression either of the mind or body is constantly followed by an idea, which resembles it, and is only different in the degrees of force and liveliness." (Treatise I.I.I.)

"Those perceptions, which enter with most force and violence, we may name impressions.--- By ideas I mean the faint images of these in thinking and reasoning." (Treatise I.I.I.)

For Hume's "impression," Anderson (Anderson, R.F.; Hume's First Principles (Univ. of Nebraska Press, 1966)) says, "Hume employs "impression" in two distinct senses. According to his own initial stipulation, and according to his more frequent usage, an impression is merely the perception in the mind or soul. In a less frequent usage, however, an impression appears to be a pressure, or patterns of light, or other means whereby objects are applied to the external organs of sense."

<sup>32</sup> "We can perceive, by mere observation of A and B, that A is above B, or to the right of B, but not that A causes B."

Here we can see that the context in which Hume used 'certainty' gives 'certainty' the meaning of either analyticity or apriority as in Locke. According to Hume, a piece of demonstrative reasoning is certain and necessary since it is about a comparison of ideas. A piece of demonstrative reasoning is founded upon relations of ideas, and so it is absolutely certain. "All certainty arises from the comparison of ideas." A piece of moral reasoning, on the other hand, is not certain, since it is founded upon experience. Our reasoning from causes to effects is not certain because it is based upon the custom or habit which experience gradually produces. Now, if certainty is only in reasonings of relations of ideas, we can say that this certainty derives from analytic relations between ideas. Demonstration of agreement or disagreement between ideas can be understood as demonstration of agreement or disagreement between meanings of the terms employed. Hume identifies meanings of words with ideas annexed to the words. If there is an idea annexed to a word, the word is meaningful. So, we can say that the certainty in a demonstrative reasoning is nothing but analyticity in the terms employed in the reasoning. On the other hand, when he denies certainty in a piece of moral reasoning, it is on the account that a piece of moral reasoning is founded on experience. Since a piece of moral reasoning is not a priori, it is not certain. Even geometry must be classed as a mere probable science with other empirical sciences, because its principles are drawn from "the general appearance of objects". If a piece of reasoning is empirical, it cannot be certain. When Hume acknowledges certainty in a piece of demonstrative reasoning and denies certainty in a piece of moral reasoning, what he means by 'certainty' or 'necessity' is analyticity and apriority, respectively. For Hume, necessity means either the semantic concept of analyticity or the epistemological concept of apriority.

## 2.2.2. Quine and Other Contemporary Authors

### 2.2.2.1. W. V. O. Quine

Quine has a negative view of the concept of necessity. It has been mentioned earlier that 'necessity' is one of the expressions that make nonextensional or intensional contexts. Modal contexts and belief contexts were called intensional. They are distinguished from other contexts in the respect that substitution of coreferential expressions - materially equivalent sentences or coextensive predicates or names with the same denotation - sometimes results in a change of truth value of the sentence. Leibniz's *salva veritate* principle fails in these contexts. These contexts require intensional entities in that sentences of the form 'Necessarily ---' or 'I believe ---' are not about extensions but about intensions like meanings, and so Leibniz's *salva veritate* principle of identity which is one of the most important principles in logic does not hold in these contexts. An identity criterion for intensional entities is required to save the *salva veritate* principle in intensional contexts. Quine thinks that extensional entities and extensional contexts which require only extensional entities, are enough for the sake of science and philosophy. We need not complicate our universe of discourse and system of logic by introducing intensional entities if we can dispense with them.

Quine opposes modal contexts not only because they require intensional entities and make our system of logic complicated but because they are not referring contexts. He makes a stronger claim that modal contexts do not only not follow Leibniz's *salva veritate* principle, and so are intensional, but also words in these contexts do not have a referring function.<sup>33</sup> If our science

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<sup>33</sup> It could be thought that extensionality - the success of the *salva veritate* principle - and intensionality - the failure of the *salva veritate* principle - are criteria to determine whether a context has the function of referring or not. So the claim of intensionality and that of referential opacity are equivalent. But if we replace 'morning star' in the sentence "Morning star has eleven letters" with 'evening star', the sentence does not change its truth value. In this case, however, we do not contend that words in quotation marks have a referring function. So, the criterion of referential transparency is stronger than that of extensionality. It seems that in Quine referential transparency is a sufficient condition for extensionality, and so intensionality is a sufficient condition for referential opacity. It is said that Quine does not rule out intensionality without referential opacity. But it does not seem too simplified to say that generally intensionality is a sufficient condition for referential opacity.

and philosophy can be done with language which has only a referring function, and so which has only extensional contexts<sup>34</sup>, we need not introduce contexts which do not have referring functions<sup>35</sup>.

In his paper "Reference and Modality", Quine contends that modal contexts violate Leibniz's principle, and words in these contexts do not refer to objects in the world, i.e. these contexts are referentially opaque, as is the context of quotation. Firstly, Quine shows that the salva veritate principle does not hold in the context of quotation. The two sentences

(1) Cicero = Tully, and

(2) 'Cicero' has six letters

are true. But the replacement of the first name by the second makes (2) false. This is because "(2) is not a statement about the person Cicero, but simply about the word 'Cicero'". Names, or words, between quotation marks do not have a referring function. They do not refer to objects, whether concrete or abstract, in the world. If they do refer to objects, the salva veritate principle must hold in the context, for "it is clear that whatever can be affirmed about the object remains true when we refer to the object by any other name". Failure of substitutivity reveals that the truth value of (2) depends not on the object in the world but "on form of name". Words within quotation contexts do not designate things in the world. Quine calls these

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What is obvious is that extensionality is not a sufficient condition for referential transparency as shown in the above example. P. Gochet has an unacceptable view. He claims that the criterion of referential transparency (opacity) is the salva veritate principle and so transparency is stronger than extensionality. (*Ascent to Truth* (Philosophia Verlag, München, 1986) p. 151) But I think these two claims cannot be consistent with each other. For it is widely accepted that the criterion between the extensional/intensional is the salva veritate principle (Russell, Whitehead, C. I. Lewis, and S. Haack have this view.). If Gochet does not give any other criterion for the extensional/intensional division than this traditional view, it should be conceded that the criterion of extensionality is the salva veritate principle. If so, if the criterion of referential transparency is the salva veritate principle as asserted in Gochet's first claim, then transparency is equivalent to extensionality, not stronger than extensionality. But I think his conclusion that transparency (opacity) is a stronger claim than extensionality (intensionality) is acceptable on the basis of my example above.

<sup>34</sup> In above note 33, it is shown that referential transparency is a sufficient condition for extensionality.

<sup>35</sup> According to Frege, these contexts are "oblique contexts" in which reference and sense are changed. The reference in these contexts, the oblique reference, is the same as its ordinary sense. But Quine, anyway, describes these contexts as non-referential.

contexts "referentially opaque". Contexts in which words have the pure function of referring to objects are called "referentially transparent" contexts.

According to Quine and Tarski, an expression obtained by writing quotation marks around an expression is an indivisible unit. A personal name, which occurs between quotation marks, as shown in the above example of "'Cicero' has six letters", thus occurs as a fragment of a longer name which contains, beside this fragment, the two quotation marks. The name between quotation marks does not refer to a person. It is just a part of an expression which consists of the name and quotation marks. "To make a substitution upon a personal name, within such a context, would be no more justifiable than to make a substitution upon the term 'cat' within the context 'cattle'".<sup>36</sup> Quotation context is one category among many kinds of referentially opaque contexts. Referential opacity of this kind afflicts modal contexts and propositional attitudes, too. Quine says,

"[T]he modes of intensional composition of statements are, in fact, subject to the same defects as the context of quotes. --- It follows that the context 'necessarily ---' --- is similar to the context of single quotes ---". ("Notes on Existence and Necessity" in Journal of Philosophy vol.40, 1943, p.123)

Quine gives a detailed explanation of the opacity of modal contexts in his "Reference and Modality". He argues,

"It will be next shown that referential opacity afflicts also the so-called modal contexts 'Necessarily ---' and 'Possibly ---,' at least when those are given the sense of strict necessity and possibility as in Lewis's modal logic. According to the strict sense of 'necessarily' and 'possibly', these statements would be regarded as true:

(15) 9 is necessarily greater than 7,

(16) Necessarily if there is life on the Evening Star then there is life on the Evening Star,

(17) The number of planets is possibly less than 7,

and these as false:

(18) The number of planet is necessarily greater than 7,

(19) Necessarily if there is life on the Evening Star then there is life on the Morning

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<sup>36</sup> Quine; "Reference and Modality" in Reference and Modality (ed. by Linsky, Oxford Univ. Press, 1971) p.18

Star,

(20) 9 is possibly lesser than 7.

The general idea of strict modalities is based on the putative notion of analyticity as follows: a statement of the form 'Necessarily ---' is true if and only if the component statement which 'necessarily' governs is analytic, and a statement of the form 'Possibly ---' is false if and only if the negation of the component statement which 'possibly' governs is analytic. Thus (15) - (17) could be paraphrased as follows:

(21) '9 > 7' is analytic,

(22) 'If there is life on the Evening Star then there is life on the Evening Star' is analytic,

(23) 'The number of planets is not lesser than 7' is not analytic

and correspondingly for (18) - (20).

That the contexts 'Necessarily ---' and 'Possibly ---' are referentially opaque can now be quickly seen; for substitution on the basis of the true identities:

(24) The number of planets = 9,

(25) The Evening Star = the Morning Star

turns the truths (15) - (17) into the falsehoods (18) - (20).

Note that the fact that (15) - (17) are equivalent to (21) - (23), and the fact that '9' and 'Evening Star' and 'the number of planets' occur within quotations in (21) - (23), would not of themselves have justified us in concluding that '9' and 'Evening Star' and 'the number of planets' occur irreferentially in (15) - (17). --- What shows the occurrences of '9,' 'Evening Star,' and 'the number of planets' to be irreferential in (15) - (17) (and in (18) - (20)) is the fact that substitution by (24) - (25) turns the truth (15) - (17) into falsehood (and the falsehoods (18) - (20) into truths).

--- [M]any will like to think of (15) - (17) as receiving their more fundamental expressions in (21) - (23). But this is again unnecessary. --- we need not view (21) - (23) as more basic than (15) - (17). What is important is to appreciate that the contexts 'Necessarily---' and 'Possibly ---' are, like quotation and 'is unaware that---' and 'believes that ---,' referentially opaque." ("Reference and Modality" in Linsky ed. Reference and Modality pp.20-22)

We see that Quine has in mind the concept of analyticity when he accuses modal contexts, especially the context of 'Necessarily ---', of referential opacity. He assumes that sentences of the form, 'Necessarily ---', are synonymous with sentences of the form, '---' is analytic'. Quine accepts interpreting (15) - (17) to be equivalent to (21) - (23) as a general idea, and he starts his criticism about modality from this general idea. 'Necessity' means, first, analyticity in Quine, regardless of whether his antagonism to modal contexts is acceptable or not.

The phenomenon of referential opacity in modal contexts was explained in terms of the behaviour of singular terms. These contexts made singular terms irreferential. But in Quine's philosophy, singular terms are eliminable through quantification. So, "if referential opacity is an infirmity worth worrying about, it must show symptoms in connection with quantification as well as in connection with singular terms"<sup>37</sup>. If a context makes a singular term irreferential, that context must make the related quantification irrelevant or meaningless or false.

Classical logic is committed to some existential claims. One of the assumptions is that all singular terms denote, which is embodied in such a theorem as " $Fa \supset (\exists x)Fx$ ".<sup>38</sup> This is the law of existential generalization. According to Quine, the principle embodied in the law of existential generalization is "the link between quantifications and the singular statements that are related to them as instances", and the principle holds only in the case when a term refers to something. "It is simply the logical content of the idea that a given occurrence is referential. The principle, for this reason, is anomalous as an adjunct to the purely logical theory of quantification."<sup>39</sup> What we gain from the consideration of the law of existential generalization is the fact that the failure of existential generalization is a clue to determine referentiality of a context. If existential generalization does not apply to a context, if the elimination of a singular term through quantification leads to irrelevance or meaninglessness or falsity, the singular term is irreferential, and the context in which the term is used is referentially opaque.

The idea behind existential generalization is, according to Quine, that "whatever is true of the object named by a given singular term is true of something", and it "loses its justification when the singular term in question does not happen to name". For example, from the statement,

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<sup>37</sup> Quine; "Reference and Modality" p.22

<sup>38</sup> This is cited from S. Haack's *Deviant Logic* (Cambridge Univ. Press) p.126

<sup>39</sup> But Quine does not call for any modification of logic. S. Haack puts Quine's position like this; classical predicate calculus may not be quite right, but it is less cumbersome than any modification which would cope with the empty domain, and it is always possible to tell where it is not quite right. Haack; *Deviant Logic* (Cambridge Univ. Press) pp.129-130

"There is no such thing as Pegasus", we do not infer, "(Ex) (there is no such thing as x)", which is as meaningless a sentence as 'There is something which there is no such thing as' or 'There is something which there is not'. And the existential generalization of "Giorgione was so-called because of its size" would be "(Ex) (x was so-called because of its size)", which says, 'something was so-called because of its size'. This is meaningless, since there is no longer any suitable antecedent for 'so-called'. Further if we applied existential quantification to the occurrence of the personal name in "'Cicero' has six letters", the existential generalization of "'Cicero' has six letters" would be a false sentence "(Ex) ('x' contains six letters.)", which reads as "Something' contains six letters'.

If we try to apply existential generalization or quantification to modal statements of (15) and (16) above, we have the following consequences:

(30) (Ex) (x is necessarily greater than 7)

(31) (Ex) (Necessarily if there is life on the Evening Star then there is life on x).

Quine argues,

"What is this number which, according to (30), is necessarily greater than 7 ? According to (15), from which (30) was inferred, it was 9, that is, the number of planets; but to suppose this would conflict with the fact that (18) is false. In a word, to be necessarily greater than 7 is not a trait of a number. --- Whatever is greater than 7 is a number, and any given number x greater than 7 can be uniquely determined by any of various conditions. Some of which have 'x > 7' as a necessary consequence and some of which do not. One and the same number x is uniquely determined by the condition;

$$(32) x = \sqrt{x} + \sqrt{x} + \sqrt{x} = x$$

and by the condition;

(33) There are exactly x planets,

but (32) has 'x > 7' as a necessary consequence while (33) does not. *Necessary* greatness than 7 makes no sense as applied to a *number* x; necessity attaches only to the connection between 'x > 7' and the particular method (32), as opposed to (33), of specifying x. --- Again, what is the thing x whose existence is affirmed in (31) ? According to (16), from which (31) was inferred, it was the Evening Star, that is, the Morning Star; but to suppose this would conflict with the fact that (19) is false. --- Similarly (31) was meaningless because the sort of thing which fulfills the condition;

(34) If there is life on the Evening Star then there is life on x,



namely, a physical object, can be uniquely determined by any of various conditions, not all of which have (34) as a necessary consequence. *Necessary* fulfillment of (34) makes no sense as applied to a physical object  $x$ ; necessity attaches, at best, only to the connection between (34) and one or another particular means of specifying  $x$ ". ("Reference and Modality" pp.25-26)

For Quine, being necessarily or possibly thus and so is in general "not a trait of the object concerned, but depends on the manner of referring to the object".

"If to a referentially opaque context of a variable we apply a quantifier with the intention that it govern that variable from outside the referentially opaque context, then what we commonly end up with is unintended sense or nonsense of the type (26) - (31). In a word, we cannot in general properly quantify into referentially opaque contexts. The context of quotation and further contexts '---was so called,' 'is unaware that ---,' 'believes that ---,' 'Necessarily ---,' and 'Possibly ---' were found referentially opaque --- by consideration of the failure of substitutivity of identity as applied to singular terms --- by a criterion having to do no longer with singular terms, but with the miscarriage of quantification." ("Reference and Modality" p.25)

Since existential quantification miscarries in modal contexts, modal contexts are referentially opaque. What we can observe in Quine's argument against modal concepts is that the concept of necessity he now objects to is the concept of *de re* necessity, the concept of an essential property of an object. He argued, "to be necessarily greater than 7 is not a trait of a number", and "necessary greatness than 7 makes no sense as applied to a number  $x$  ; necessity attaches only to the connection between ' $x > 7$ ' and the particular method of specifying  $x$ ". According to Quine being necessarily thus and so is "not a trait of the object concerned, but depends on the manner of referring to the object". What Quine has in mind, when he objects to the concept of necessity in this context, is that there are no such things as necessary properties in objects in the world. Objects do not have essential properties. Necessity, if any, is only in the way in which we describe an object. He emphasizes that we should not confuse (30) and (31) with

Necessarily  $(\exists x) (x > 7)$ ,

Necessarily  $(\exists x)$  (if there is life on the Evening Star then there is life on  $x$ ).

He explains the difference by giving an example: in a game of a type admitting no tie it is

necessary that one of the players will win, but there is no one player of whom it may be said to be necessary that he win. Here he seems to admit the so-called de dicto, verbal, necessity, while he stands in opposition to the so-called de re necessity. He says, "Necessity does not properly apply to the fulfillment of conditions by objects, apart from special ways of specifying them".

When we acknowledge that a concept of necessity objected to by Quine is de re necessity, we can understand his contention that to make modality significant, most of all, Aristotelian essentialism is required. On the provision that the concept of necessity concerned is de re necessity, we can agree with Quine that most of the logicians, semanticists, and analytical philosophers who talk of modalities betray a failure to appreciate that they thereby imply a metaphysical position, i.e. an essentialism, which they themselves would scarcely condone.

Føllesdal also, like Quine, argues that modality is related to Aristotelian essentialism. He says,

" --- Aristotelian essentialism is just what the unrestricted substitutivity of identity in modal contexts amounts to ; if an attribute is necessary of an object, it is necessary of the object regardless of the way in which the object is referred to. --- To make sense of Aristotelian essentialism and to make sense of open sentence with an 'N' prefixed are one and the same problem." (Citation from Gochet's book p.157)<sup>\*</sup>

On the provision that 'necessity' means de re necessity, Føllesdal's argument that modal contexts commit us to Aristotelian essentialism can be cogent.

Quine does not criticize those who distinguish between an object's essential and accidental traits in relation to the way in which that object is specified ; he only criticizes those who claim to be able to draw this distinction absolutely. An illustration in his Word and Object (p.199) is well known:

"Perhaps I can evoke the appropriate sense of bewilderment as follows. Mathematicians may conceivably be said to be necessarily rational and not necessarily two-legged; and cyclists necessarily two-legged and not necessarily rational. But what of an individual who counts among his eccentricities both mathematics and cycling ? Is this concrete individual necessarily rational and contingently two-legged or vice versa ? Just insofar as we are talking referentially of the object, with no special bias toward a background grouping of mathematicians as against cyclists or vice versa, there is no

<sup>\*</sup> Ascent to Truth (Philosophia Verlag, München, 1986) 74

semblance of sense in rating some of his attributes as necessary and others as contingent. Some of his attributes count as important and others as unimportant, yes; some as enduring and others as fleeting; but none as necessary and contingent."

According to Quine, 'necessarily greater than seven' applies to the number nine only as designated by 'nine' but not as designated by 'the number of planets'. If we accept Aristotelian essentialism, the number 9 is greater than 7 in all possible worlds whether it is referred to by the singular term '9' or by the definite description 'the number of the planets'. Whether Quine's view is agreed with or not, what we see in his argument is that a concept of necessity to which he objects is the so called *de re* necessity.

For physical necessity, he says, "What has been said of modality relates only to strict modality. For other sorts, for example, physical necessity and possibility, the first problem would be to formulate the notions clearly and exactly."

Quine's objection to the concept of necessity is primarily about necessity in the sense of analyticity. Next he attacks the concept of necessity on the grounds that we do not know what is an essential property in an object. That is, he objects to necessity in the sense of *de re* necessity. Further, Quine says he does not deny the significance of physical necessity. But it is not set out clearly what is the difference between physical necessity and *de re* necessity.<sup>40</sup> Quine accepts *de dicto* necessity, but he does not give any explanation about the difference between *de dicto* necessity and analyticity, which he denies.

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<sup>40</sup> It may be suggested that in Quine *de re* necessity may be supposed to be logical necessity in the sense of a priori necessity. It is plausible to argue that Quine is opposed to necessity claimed a priori but not to necessity claimed empirically (physical necessity). If so, it leads to the conclusion that Quine's objection to Aristotelian essentialism should be in terms that Aristotelian essentialism is maintained in an a priori manner.

### 2.2.2.2. Barcan Marcus

Ruth Barcan Marcus, who is called the author of the first full blown system of quantified modal logic (QM), is concerned about de re necessity in her system of modal logic. Marcus' understanding of the concept of necessity is seen in her argument against Quine's suspicion about the concept of necessity. When she argues, against Quine, that the concept of necessity is not bewildering in QM, she advocates primarily the concept of so-called de re necessity. In "Essentialism in Modal Logic" (Noûs 1 (1967)), Marcus considers Quine's assertion that the significance of modality is related to Aristotelian essentialism and that any system of QM is not sound on the ground that talk of necessary attributes is bewildering, senseless and indefensible. Marcus argues that there is essentialism in QM but this is not essentialism as conceived by Quine in his example of cyclist mathematicians. Essential attributes in QM are attributes essential to every object, but the necessary attribute in Quine's example or in Aristotelian essentialism is not of this kind. Two-leggedness in Quine's example is not a necessary attribute relevant to QM. Quine's example cannot be an objection to the significance of de re necessity, even if it can be an objection to Aristotelian essentialism.

According to Quine, the inference

- (1) Cyclists are necessarily two-legged
- (2) a is a cyclist
- therefore (3) a is necessarily two-legged

is bewildering if a is a mathematician, and so any system of logic which employs modal concepts is not sound. Marcus, however, argues that Quine's objection can be sustained if it is that sort of attribute (two-leggedness owned by a specific person a) which QM attributes necessarily to objects. Marcus argues, however, that an attribute owned by an individual, like two-leggedness, is not affirmed as a necessary attribute in QM.

Marcus explains, an attribute is called non-referential with respect to an object if it is represented by a notion which does not mention the object, e.g. the attribute of "to be identical

with itself" is non-referential. Otherwise it is referential with respect to an object, e.g. the attribute of "to be identical with Socrates" is referential. Now, although a number of attributes can be necessarily assigned to an object in QM, these are all non-referential attributes, i.e. they are necessary attributes which every object in the world possesses. But the implicit assumption of traditional essentialism, which Quine has in mind when he says that a cyclist is necessarily two-legged, is that such attributes are necessary to some objects but not to all. Necessary attributes in Aristotelian essentialism are referential, but necessary attributes in QM are non-referential. QM, even if it acknowledges necessary attributes, has nothing to do with Aristotelian essentialism. So to accuse a theory of committing Aristotelian essentialism is not relevant to QM. Quine's suspicion about traditional essentialism, even if it is justified, cannot be a reason for opposing the concept of de re necessity and QM which employs the notion of de re necessity.

My aim in Part 2.2. is to identify the various meanings of 'necessity' in human discourse. So I am not primarily concerned about the consistency, exactness, and explanatory power of theories of necessity. What I want to notice in this section is the fact that Marcus treats de re necessity, i.e. of essential properties in objects, as a kind of necessity objected to by Quine, and she sets out to establish QM on the ground that de re modality is not the same as Aristotelian essentialism which is confused with de re necessity by Quine.

### 2.2.2.3. W. Kneale

Kneale criticizes some positivists for equating the notion of necessity with the notion of conventionality. He argues, against positivists like Carnap, that necessary truths are not true by convention, that necessity cannot be merely a product of linguistic conventions. In his The Development of Logic, Kneale explains conventionalism as follows ;

"When philosophers say that necessary truths are all established by linguistic

convention they seem to have at the back of their minds that the notion that --- what men call necessary truths are no more than shadows or projections of the rules they themselves have adopted for speaking and writing. --- There are, they say, no alternatives to a necessary truth within the speaker's language, but only because he himself has limited his language in that way."<sup>41</sup>

So, from a conventionalist's viewpoint, there can be alternatives to a necessary truth, if we change the rules of our language.

This conventionalism, according to Kneale, however, cannot stand as a satisfactory theory of necessary truth, since there is self-contradiction in the theory. He says,

"Admittedly the phrase "necessary truth" belongs to philosopher's jargon rather than to common speech, but its origin is clear enough. Philosophers say that a proposition is a necessary truth if it is impossible that it should not be true, i.e. if there is no possible alternative. But in common usage the phrase "by convention" always implies the possibility of an alternative. --- It seems clear, therefore, that anyone who speaks of necessary truths as true by convention is guilty of self-contradiction. --- [H]is statement means that truths without alternatives nevertheless have alternatives".<sup>42</sup>

The positivists may object to Kneale on the grounds that developments of mathematics have seen some alternative systems to Euclidean geometry, and therefore it is not self-contradictory for a necessary truth to have alternatives. Kneale replies to this objection that if the truth value of a necessary truth is changed through the alteration of linguistic conventions for the language employed, the new proposition expressed in accordance with the altered rules is not the same proposition as the previous one. The proposition expressed under the new rules is not the same as the original proposition. So we cannot say that the one is an alternative to the other, they are totally different. Kneale explains,

"The proposition that  $2+2=4$  is not itself a set of symbols, although we must use symbols from some language in order to refer to it. If, then, anyone supposes that the truth value of this proposition could be altered by an alteration of the rules for the use of the symbols "2", "+", "=", and "4", he must be assuming in a muddled way that a change of rules of usage which sufficed to alter the truth value of the clause " $2+2=4$ "

<sup>41</sup> The Development of Logic (Clarendon, Oxford, 1984) p.638

<sup>42</sup> "Are Necessary Truths True by Convention" in Aristotelian Society Supplementary Volume 21, 1947, pp.118-119

might nevertheless leave it still expressing the proposition that  $2+2=4$ . --- If it is the doctrine that we could vary all the rules of usage of our symbols while leaving their meanings unchanged, it is absurd".<sup>43</sup>

Since the symbols "2", "+", etc. do not mean the same in the two different systems of conventions in which the proposition  $2+2=4$  has different truth values, it does not make any sense to talk as if there are necessary truths which permit alternatives. The truth value of a proposition is not affected by changing conventions of the same symbol. So, if a proposition is necessarily true, it means that there is no alternative to the truth value of the proposition.

In Kneale's argument against conventionalism, we can see that Kneale means "necessity in propositions" by 'necessity'. Further, we can see that the "necessity in propositions" is reduced to the concept of necessity traditionally called *de re* necessity. If the proposition  $2+2=4$  is necessarily true, and if therefore there cannot be any alternative to the truth value of the proposition, it may be because of intrinsic properties of the number 2 and the number 4, assuming numbers to be objects. Essential properties of numbers make the propositions of algebra necessarily true. If there is nothing else than essential properties of objects to make the proposition  $2+2=4$  necessarily true, we may say that the concept of necessity with which Kneale argues  $2+2=4$  to be necessarily true is nothing but the notion of *de re* necessity.

#### 2.2.2.4. A. Plantinga

The tradition of dividing modality into two categories, *de re* and *de dicto*, and to give both of them the status of well-formed logical notions goes back to Aristotle, and this tradition was

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<sup>43</sup> *Ibid* pp.122-123

In *The Development of Logic*, he explains similarly, "It is, of course, an historical accident that the sounds 'red', 'yellow', 'green', and 'blue' are used as they are in communication by speakers of the English language, and a truism that any language in which we can find exact renderings for the four English words must contain sounds subject to rules like those holding in English for 'red', 'yellow', 'green', and 'blue'. But it is neither an historical accident nor a truism (at least in the pejorative sense of that word) that there is a range of distinct hues which can be divided as we divide it by use of our colour words". (p.639)

developed by Aquinas and other medievals.<sup>44</sup> Contemporary authors like Moore and Malcolm, too, acknowledge the meaningfulness of de re necessity ; they are "in support of the thesis that objects typically have both essential and accidental properties"<sup>45</sup>. Quine, however, objected to de re necessity. Plantinga examines Quine's view that only de dicto necessity is meaningful.<sup>46</sup> Plantinga interprets Quine's contention that "necessity resides in the way we talk about things, not in the things we talk about" (Ways of Paradox p.174) as "According to the de re thesis a given object must be said to have certain of its properties essentially and others accidentally, despite the fact that the latter follow from certain ways of specifying the object just as the former do from others". Plantinga says,

"The real depth of Quine's objection, as I understand it, is this : I think he believes that "A's are necessarily B's" must, if it means anything at all, mean something like "*All A's are B's is necessary*"". ("De Re et De Dicto" p.247)

Plantinga sides with the tradition which admits the meaningfulness of de re necessity, or , at least, he insists that de dicto modality is not more basic or fundamental than de re necessity. He tries to show that we cannot accept de dicto necessity while rejecting de re necessity as a conceptual confusion. For this task, Plantinga establishes a rule by which we can find, for each de re necessary proposition, an equivalent<sup>47</sup> de dicto necessary proposition. He says,

"I promised earlier to explain the de re via the de dicto, glossing that reasonably enigmatic phrase as follows : to explain the de re via the de dicto is to provide a rule enabling us to find, for each de re proposition, an equivalent de dicto proposition - alternatively, to provide a rule enabling us to eliminate any sentence containing a de re expression in favor of an equivalent sentence containing de dicto but no de re expressions." ("De Re et De Dicto" p.254)

If this rule can be established, we cannot say that de re necessity is not meaningful while de

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<sup>44</sup> Plantinga, A.; "Existence, Necessity, and God" in New Scholasticism vol.50, 1976, pp.61-72

<sup>45</sup> Plantinga, A.; "De Re et De Dicto" in Nous vol.3, 1969, pp.235-258

<sup>46</sup> With above two papers, The Nature of Necessity (Clarendon, Oxford, 1978)

<sup>47</sup> Plantinga says this equivalence is of broadly logical sense. (The Nature of Necessity p.33) He says about the relation of equivalence, "a pair of propositions are equivalent if their biconditional is necessary in the broadly logical sense". (Ibid p.29) Broadly logical necessity is wider than logical necessity in the narrow sense which is in truth of logic. Broadly logical necessity is in truths of set theory, arithmetic, mathematics and "disparities" in Leibniz's sense. (Ibid pp.1-2)



dicto is, since de re necessary proposition is equivalent to a certain de dicto proposition. Plantinga sets up this rule with his "kernel proposition". The rule is that "x has P necessarily if and only if x has P and  $K(x,P)$  is necessarily false", where 'x' and 'P' are object and property variable respectively, and  $K(x,P)$  is read as "x has the complement of P". This rule is a function which maps a de re necessity to a de dicto necessity which is equivalent to the de re necessity. If this function is possible, given that de dicto necessity is meaningful, corresponding de re necessity must be meaningful, since these two are equivalent. For example, given that the rule is relevant, 'Socrates is necessarily a person' is equivalent to 'Socrates is a person and the proposition *Socrates has the property of being a non-person* is necessarily false'<sup>48</sup>.

What Plantinga tries to do with this rule is to show that de re necessity makes sense if de dicto does, by "pointing out that the de re proposition is equivalent to the conjunction of a non-modal proposition with one whose modality is de dicto". He does not say, however, that he has provided a general way to tell whether an object has a property necessarily.<sup>49</sup> His task is just to show that "de re modality is intelligible" to the same degree as de dicto modality.

Plantinga's scheme could be misunderstood as implying that Plantinga accepts, at least, the conceptual priority of de dicto modality to de re modality, for he establishes the meaning of de re necessity in terms of de dicto necessity. Plantinga's rule, however, must not be interpreted as part of a view that de dicto modality is more basic and fundamental. Plantinga adopts this manoeuvre since his task is simply to show the people who accept de dicto necessity while rejecting de re necessity, that de re necessity is also meaningful. He explains de re necessity in terms of de dicto necessity only because these people accept the intelligibility of de dicto necessity. He says,

"My aim was to show the de re skeptic that he can understand de re modality if he understands de dicto; if de dicto modality is intelligible, the same must be said for de re". ("Existence, Necessity, and God" p.62)

"I aimed to show that if you understand de dicto modality, you must concede that de re

<sup>48</sup> "Existence, Necessity, and God" pp.62-63

<sup>49</sup> Plantinga accuses Purtill of committing this confusion.

modality makes sense too. Accordingly, I suggested a means of finding, for any de re proposition, an equivalent proposition the skeptic understands." (Ibid)

"I hope by now this is clear; the idea is --- to show the skeptic that de re modality is intelligible if de dicto is". (Ibid p.63)

"If the above is successful, we have found a general rule correlating propositions that express modality de re with propositions expressing modality de dicto, such that for any proposition of the former sort we can find one of the latter equivalent to it. Does this show, then, that modality de dicto is somehow more basic or fundamental than modality de re, or that an expression of modality de re is really a misleading expression of modality de dicto ? It is not easy to see why we should think so. Every proposition attributing a property to an object (an assertion de re, we might say) is equivalent to some proposition ascribing truth to a proposition (an assertion de dicto). Does it follow that propositions about propositions are somehow more basic or fundamental than propositions about other objects ? Surely not. Similarly here. Nor can I think of any other reason for supposing the one more fundamental than the other" ("De Re et De Dicto" p.257)

For Plantinga, 'de re necessary' means to be essential in the sense that, if an object has a certain property essentially, "the object couldn't conceivably lack the property in question; that under no possible circumstances could that object have failed to possess that property"<sup>50</sup>. This notion of de re necessity is as meaningful as de dicto necessity, if the latter is meaningful.

It was shown in 2.2.1. that the concepts meant by 'necessity' by some traditional philosophers are such as analyticity, apriority and eternity. Now the concepts meant by 'necessity' by some contemporary philosophers are such as analyticity, de re necessity, de dicto necessity and physical necessity. Sometimes when contemporary authors claim a proposition to be necessarily true, it may mean that the proposition is analytically true. And sometimes when modal concepts are either approved or denied by contemporary authors, they either approve or deny essential properties in objects. And sometimes the concepts of de dicto necessity and physical necessity are meant by 'necessity'. In the next section, I will survey meanings of necessity in a natural science. It may be thought that natural scientists generally try to find out

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<sup>50</sup> "De Re et De Dicto" p.236

universal causal laws in the world. Quantum physics, however, shows that the concept of necessity in natural sciences is not that simple. We hear that quantum physics denies necessity in the world. When quantum physicists argue that probability governs the world, they do not simply mean that there is no universal causal law which will predict the motion of a particle. The concepts of necessity denied in quantum physics enable us to comprehend the concepts of necessity which may be employed in scientific discourse.

### 2.2.3. Necessity in Quantum Physics

It is usually thought that the necessity that is the concern of the natural sciences must be causal necessity in the world. Quantum physics, however, shows that it is not that simple.

According to the Newtonian view of the physical world, every physical state is represented as systems of bodies or particles, and their trajectories can be continuously known, since there is causality in the world ; there is the possibility of "extrapolating from the history of the universe up to a given time to its whole sequence of future states".<sup>1</sup> The main tenor of quantum mechanics, however, is that the state of a physical system can be represented by a set of waves, by a  $\Psi$ -function. An electron in an atom can be treated not only as a particle but as the oscillating charge distribution in the atom. It can be treated not as a substance confined to a small volume, but as a field spread out over a large space. And any set of waves, which is a superimposition of waves on each other, can be regarded as a single wave. Now what is the significance of the "waves"? Answers to this question are known as "interpretations" of quantum mechanics.

An interpretation which is acknowledged as the first in the history of quantum physics is the "de Broglie interpretation of quantum mechanics". According to this interpretation, the "waves" are ordinary waves, and an electron as a corpuscle is identified as an energy concentration in the singularity region of the solution of the wave equation, which is guided by the wave. In this interpretation, the position of a particle is not certain, because a particle is also a wave. The particle as energy concentration in the singularity point of the wave may be located anywhere in the region occupied by the wave. That is, the uncertainty concerning the position of a particle is represented by the volume occupied by the wave corresponding to the particle. Thus a particle whose position is known with high accuracy corresponds to a wave that is concentrated in a very small volume - a wave packet - whereas a particle whose position

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<sup>1</sup> Putnam, H.; Mathematics, matter and method (2nd ed. Cambridge Univ. Press, 1979) p.130

is known with low accuracy corresponds to a wave that is spread out over a large volume. After observation is made for a particle whose position was known with low accuracy before the observation, the position will be known with high accuracy. The change of state produced by the observation is such that a very spread out wave suddenly jumped into the form of a wave packet. In other words, the wave suddenly vanished almost everywhere, but at one place the intensity suddenly increased. This reduction of the wave packet constitutes very strange behaviour if this is really to be thought of as a physical wave.<sup>2</sup>

The second interpretation of quantum mechanics is called "Born interpretation". Max Born proposed a "probability interpretation" of the wave function. The wave is not a real wave but a probability wave. According to this interpretation, the elementary particles are particles in the classical sense - point masses, having at each instant both a definite position and a definite velocity - though not obeying Newtonian laws. The wave corresponding to a system of particles does not represent the state of the system itself, but rather our knowledge of the state, which is always incomplete.<sup>3</sup> In Born's probabilistic interpretation, the  $\Psi$ -function assigns numerical values to the points of an abstract space, and the squared absolute value of the wave in a given volume measures the probability density of finding the particle within the volume, the particle being conceived as a point mass. And contrary to de Broglie and Schrödinger's interpretation,  $\Psi$  does not represent the physical system nor any of its physical attributes but only our knowledge concerning the system. It is not a three-dimensional wave, like elastic or radio waves, but a wave in the many-dimensional configurative space, and therefore a rather abstract mathematical quantity.<sup>4</sup> Here the dependence of the  $\Psi$ -function upon the choice of the variables used for its information or, in short, its representation-dependency has to be expected, since the knowledge of position gained from the position representation is naturally different from the knowledge about momentum gained from the momentum representation.<sup>5</sup>

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<sup>2</sup> Putnam, *op.cit.*, p. 133-135

<sup>3</sup> Putnam p.135

<sup>4</sup> Heisenberg, W.; *Physics and Philosophy* (Allen & Unwin, 1959) p.42-43

<sup>5</sup> Jammer, M.; *The Philosophy of Quantum Mechanics* (A Wiley - Interscience Publication, New York, 1974) p.43

In the position representation, the  $\Psi$ -function is in position space, and in the momentum representation the  $\Psi$ -function is in momentum space.

In quantum mechanics, we can say both

(1) when a system S is in state C, 60 percent of the atoms have property R, and

(2) when a system S is in state C, 60 percent of the atoms have property T,

even if R and T are properties which are mutually incompatible. These predictions can be borne out by experiment. In classical physics, these two propositions cannot be true together. How is this possible in quantum mechanics? According to Born's interpretation, this is possible because it is impossible to test both statement (1) and (2) experimentally in the case of the same system S at the same time. Given a system S that has been prepared in the state C, we can perform an experiment that checks (1). But then it is physically impossible to check proposition (2). And similarly, we can check proposition (2), but then we must disturb the system in such a way that there is no way to check statement (1). We cannot perform a measurement which gives us highly accurately information about both R and T simultaneously, because our measurement is bound to just one property.

In Born's interpretation, proposition (1) and (2) can be both true, because we cannot perform an experiment which gives us highly accurate information about both R and T. In this sense our knowledge of the state must be incomplete, that is, one cannot measure position and momentum simultaneously with high accuracy, even if we can know the position or momentum separately with high accuracy. For a particle whose position and momentum were both known with virtually perfect accuracy would have to correspond to a wave that had the property of being "packet-like" in both "position representation" and "momentum representation". But there are no such waves,<sup>6</sup> because of the representation-dependency of the wave.

Born's interpretation solved the wave packet problem of the de Broglie interpretation, by

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<sup>6</sup> Putnam p.135

saying that quantum mechanical waves are not physical waves but are about our knowledge of physical states. That is, the wave packet makes sense only when we say that the waves are not physical waves, but only "probability waves." Since the wave is not supposed to be a physical wave, but only a device for representing probabilities of our knowledge, the reduction of the wave packet is no puzzle, for it represents not an instantaneous change in the state of a whole, spread out physical wave, which is supposed to take place the moment the measurement is over, but an instantaneous change in our knowledge of the state of a physical state, which takes place the instance we learn the result of the measurement. The wave that represents my knowledge of the position of the particle, which occupies the entire huge volume until the result of the measurement is learned, is replaced by a wave packet concentrated in the appropriate submicroscopic dimension. But a physical "something" does not thereby contract from macroscopic to submicroscopic dimensions ; all that contracts is human ignorance.<sup>7</sup>

It may be accepted that Born's interpretation is of epistemology rather than of metaphysics which concerns the world in its absolute sense. Uncertainty concerned here is not about the real world but only about our knowledge of the world. If so, we can quite legitimately ask a question ; "But what happens "really" in an atomic event ?<sup>8</sup> Even if, when the probability wave is spread out, we do not know accurately what is proceeding in nature, must there not be something actually proceeding in nature? Even if our knowledge of nature is of probability, why is it not possible that nature is operating under conditions of certainty ? Even if we can know only the position or the momentum with high accuracy, but never both at the same time, is it not the case that the elementary particles should have both position and momentum at every instant ? Even if we cannot prepare a measurement for checking both R and T simultaneously, must there not be both determined R and determined T metaphysically in nature ?

Now, another somewhat counter intuitive interpretation is possible.

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<sup>7</sup> Putnam p.135-136

<sup>8</sup> Heisenberg, op. cit., p.51

The most widely held interpretation among contemporary physicists is referred to as the "Copenhagen interpretation", after Bohr and Heisenberg who worked in Copenhagen for many years. It is in many ways a modification of the Born interpretation. Born's principle that the squared amplitude of the wave is to be interpreted as a probability on the human epistemological side is fundamental to it. What the Copenhagen interpretation (abbreviated hereafter "CI") says is that "observables" such as position and momentum exist only when a suitable measurement is actually being made. Classically, a particle is thought of as having a position even when no position measurement is taking place. In quantum mechanics with the CI a particle is something that has, at most times, no such property as a definite position, but only a propensity to have a position if a suitable experimental arrangement is introduced. CI denies that an observable has any value before a suitable measurement is made.

Even if Born's interpretation says that propositions (1) and (2) above can be both true, and this is actually held to be true in quantum mechanics, the impossibility of (1) and (2)'s being true simultaneously is a matter of simple arithmetic plus the incompatibility of R and T. To solve this apparent contradiction, that is, to keep the truth of both (1) and (2), a few physicists and philosophers have proposed to change the logic used in physics. Philip Frank and Moritz Schlick together expressed the view that, under certain conditions, the conjunction of two meaningful statements in physics should be considered meaningless. Martin Strauss held that, even if we can verify A and B separately, we cannot verify the compound 'A and B', that the conjunction of A and B should be taken as meaningless. As a result, Strauss maintained, the formation rules of the language of physics should be modified.<sup>9</sup> There is, however, another possible way to understand this contradictory situation of (1) and (2)'s being simultaneously true. If we change the propositions (1) and (2) into

(1') When S is in C and an R-measurement is made, 60 percent of the atoms have property R  
and

(2') When S is in C and a T-measurement is made, 60 percent of the atoms have property T,

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<sup>9</sup> Carnap, R.; Philosophical Foundations of Physics (Basic Book Inc, New York, 1966) p.284



the incompatibility vanishes. We do not see any incompatibility of both (1') and (2)'s being true simultaneously, because of the measurement component in the propositions. We can see that measurements achieve something very important ; they make the incompatibility of (1) and (2) vanish. The incompatibility disappears if we say that a system has one or the other property only when a measurement of that property is actually taking place. In this sense the principle of no disturbance, that the measurement does not disturb the observable measured, which Born's interpretation assumed, is put into question. Measurement changes the observable, or more than that, measurement makes the observable begin to exist. Born's principle can be retained, but with a modification ; the squared amplitude of the wave measures not the probability that the particle is in a certain place, but the probability that it will be found in that place if a position measurement is made.

According to Heisenberg,

"The concept of the probability function does not allow a description of what happens between two observations. Any attempt to find such a description would lead to contradictions ; this must mean that the term 'happens' is restricted to the observation".<sup>10</sup> And

"What we observe is not nature in itself but nature exposed to our method of questioning".<sup>11</sup>

There is no way of describing what happens between two consecutive observations. For, without observation, there is no observable at all. We may imagine that the electron must have been somewhere between the two observations and that therefore the electron must have described some kind of path or orbit even if we do not know the path. But, according to CI, to ask about the trajectory an electron makes between two observations is a misuse of language, even if it would be a meaningful question in classical physics.<sup>12</sup> The transition from the "possible" to the "actual" takes place as soon as the measuring device has come into play. Heisenberg thought it necessary not to regard  $\Psi$ -waves as merely a mathematical fiction but to ascribe them some kind of physical reality. He conceived these waves as a quantitative

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<sup>10</sup> Heisenberg p.52

<sup>11</sup> Heisenberg p.57

<sup>12</sup> Heisenberg p.49

formulation of the concept of  $\delta\upsilon\nu\alpha\mu\iota\varsigma$  [possibility], or *potentia*, in Aristotle's philosophy.<sup>13</sup> Heisenberg says,

"Probability --- means a statement about our degree of knowledge of the actual situation. In throwing dice we do not know the fine details of the motion of our hands which determine the fall of the dice and therefore we say that the probability for throwing a special number is just one in six. The probability wave of Bohr, Kramers, Slater, however, meant more than that ; it meant a tendency for something. It was a quantitative version of the old concept of 'potentia' in Aristotelian philosophy. It introduced something standing in the middle between the idea of an event and the actual event, a strange kind of physical reality just in the middle between possibility and reality".<sup>14</sup>

The reason we have only probability about fall of dice is not that we do not have fine details of dice and mechanics involved in throwing of dice. "Aristotle's concept that events are not determined in a peremptory manner, but that the possibility or "tendency" for an event to take place has a kind of reality - a certain intermediate layer of reality, halfway between the massive reality of matter and the intellectual reality of the idea or the image - takes on a new form in this interpretation."<sup>15</sup>

Even if the CI has merits against the de Broglie and Born interpretations, it seems extremely repugnant to common sense to say that such observables as position and momentum exist only when we are measuring them. Does it make any sense to our common sense to say that a rocket ship together with its contents in interstellar space begins to exist only when it becomes observable from the earth or other outside system ?<sup>16</sup> Or to say that the rocket ship has only such a propensity ? Bohr and Heisenberg do not think that their interpretation has to be restricted to micro-observables, and they do not think that the relative sharpness of macro-observables is an underived and independent assumption of their theory.<sup>17</sup> Since macro world is derived anyway from micro world, the above questions would not be irrelevant to the implication of their theory. Actually, physicists like London, Bauer and von Neumann hold

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<sup>13</sup> Jammer p.44

<sup>14</sup> Heisenberg, p.42

<sup>15</sup> Jammer p.44

<sup>16</sup> Putnam, op. cit., p.149

<sup>17</sup> Putnam, op. cit., p.150

that all observables, whether micro or macro, can only have unsharp values unless measured by a consciousness.<sup>18</sup> Existence of the world needs consciousness to observe it.

In classical physics, science started from the belief that we could describe the world without any reference to ourselves. We know that the Moon exists whether we see it or not. It may be said that classical physics is just that idealization in which we can speak about parts of the world without any reference to ourselves.<sup>19</sup> Objectivity has become the first criterion for the value of any scientific method. But in the Copenhagen interpretation, epistemological and metaphysical problems cannot be divided. The transition from the possible to the actual takes place during the act of observation. When we describe what happens in an atomic event, the word 'happens' is relevant only in the context of an observation. Without human epistemology, there is no metaphysical entity. According to CI, entities in the world should be entities created by human epistemic activity.

Now what do they mean when quantum physicists say, "Not necessity but probability governs the world" ? First of all, the uncertainty in quantum physics is not due to the imperfections of measuring instruments, and cannot be reduced by improvements in measuring techniques. The fact that quantum physicists have been eagerly participating in epistemological discussions<sup>20</sup> shows that this is not a simple matter.

According to the de Broglie interpretation, the position of an electron as an energy concentration in singularity is metaphysically uncertain, because the  $\Psi$ -function which is a state itself gives only statistical information. There is no universal causal law which will predict the motion of an electron accurately. Necessity objected by the de Broglie interpretation is the necessity of universal causal laws which govern the motion of a particle.

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<sup>18</sup> Putnam op. cit., p.150

<sup>19</sup> Heisenberg, op. cit., p.55

<sup>20</sup> Popper, K.R.; The logic of scientific discovery (Hutchinson, London, 1980) p.215

In Born's interpretation, the wave is not a real but a probability wave of our knowledge of a state. We cannot have a measurement which gives highly accurate information about both position and momentum, because measurement is bound to one representation. Uncertainty is of human epistemology, not of the metaphysical state of nature. Born says, "The motion of particles conforms to the laws of probability, but the probability itself is propagated in accordance of the law of causality".<sup>21</sup> I hear this proposition as saying "Even if we know the motion of particles in probability, there is something necessary and certain in the world, which makes the probability to be just that probability rather than the other one". I remember Margenau's view that quantum mechanics does not deny causal necessity in nature<sup>22</sup>. The necessity which is denied in Born's interpretation is certainty on the human epistemic side (like "certainty of knowledge" in Locke), but the causal necessity in the world is not denied in the interpretation (as "certainty of truth" is not denied to propositions about the natural world in Locke).

In the Copenhagen interpretation, the uncertainty lies in the fact that an observable does not have any value before measurement. The observation makes the observable exist. When CI denies necessity in the world, it means that the world exists only when there is a consciousness to observe the world.

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<sup>21</sup> Jammer p.40

<sup>22</sup> Margenau, H.; Physics and Philosophy (D. Reidel Pub. Co., Dordrecht, 1978) pp.36-37

#### 2.2.4. Anselm's Use of 'Necessity'

R. Brecher analyzes <sup>the</sup> meanings of 'necessity' in Anselm's three major works, Monologion, Proslogion, and Cur Deus Homo (hereafter CDH).<sup>23</sup> According to Brecher, Anselm distinguishes between "antecedent necessity", "subsequent necessity", and "inferential necessity".

Antecedent necessity is necessity in terms of "coercion or constraint".<sup>24</sup> When Anselm says, "the will of God does nothing by any necessity, but of its own power", it means that the will of God cannot be coerced or constrained. If something is under antecedent necessity, it means that it is under some "external imposition". That is, it is done by either causal necessity or a constraint from previous activity by a person like a promise. Antecedent necessity can be called causal necessity in both a mental and physical sense. Anselm says,

"Indeed, all necessity is either a compulsion or a prevention. These two kinds of necessity are mutually convertible contraries". (CDH II. XVII. in Anselm of Canterbury ed. Hopkins (The Edwin Mellen Press, Toronto, 1976) vol.III, p.126 ; this chapter is edited as Chap XVIII(a) in Deane's edition.)

The title of this chapter implies that antecedent necessity is not the only notion of necessity in Anselm. The title goes, "In God there is neither necessity nor impossibility. There is a necessity which compels and a necessity which does not compel". Anselm says in this chapter,

"For there is a necessity which precedes and is the cause of a thing's being the case; and there is a necessity which succeeds and is caused by the thing's very being the case. When the heavens are said to revolve because it is necessary for them to revolve, there is a necessity which precedes and sufficiently causes. But when I say that because you are speaking, you are - necessarily - speaking, this is a necessity which is subsequent and does not efficiently cause anything but, instead, is caused. For when I make this statement, I signify that nothing can cause it to be the case that while you are speaking, you are not speaking; I do not signify that anything is compelling you to

<sup>23</sup> Brecher, R.; Anselm's Argument Chap.II

<sup>24</sup> This is the translation of Deane. Hopkins translates these two words as "compulsion or prevention". Original words are "Omnis quippe necessitas est aut coactio aut prohibitio".

speak. For although the force of their natural state compels the heavens to revolve, no necessity causes you to speak. Now, whenever there is antecedent necessity there is also subsequent necessity; but it is not the case that where there is subsequent necessity there must be antecedent necessity. For example, we can say "Because the heavens are revolving, they are - necessarily - revolving"; but it is not also true that you are speaking because it is necessary for you to speak.

Subsequent necessity applies to all tenses, in the following manner : whatever has been, necessarily has been; whatever is, necessarily is and necessarily was going to be; whatever is going to be, necessarily is going to be. This is the necessity which (when Aristotle deals with singular and future propositions) seems to deny that there are several alternatives and to affirm that all things occur of necessity. --- In terms of this necessity, He (Christ, my parenthesis) became a man; in terms of this necessity He did and suffered whatever He did and suffered; in terms of this necessity He willed whatever He willed". (Hopkins' tr.)

It seems that what Anselm has in mind with "subsequent necessity" is the principle of identity to the effect that, for all p, it is true that if p then p (p is a propositional variable).<sup>25</sup> If we interpret 'necessity' in this sense, necessary existence, if any, is not a unique property of a certain being. For 'God exists of necessity' means only that 'If God exists, then God exists' is true. "Subsequent necessity pertains to everything."<sup>26</sup> For every object x, 'If x exists, then x exists' is true.

The third notion of necessity in Anselm's three major works , according to Brecher, is "inferential necessity". This is the necessity in the conclusion of a valid argument.

This notion of necessity is prominent in Monologion and Reply by Brecher. When Anselm says, in Monologion Chap.22, "How, then, will these two conclusions - so contradictory according to their utterance, so necessary according to their proof - be rendered consistent with each other ?", inferential necessity is meant by 'necessary'. What is achieved from inferential necessity is that the conclusion

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<sup>25</sup> Henry, D.P.; The Logic of Saint Anselm (Oxford Univ. Press, 1967) p.178

<sup>26</sup> This is Deane's translation of the sentence which Hopkins translates as 'Subsequent necessity applies to all tenses' in the above quotation. Original text is "sequens necessitas currit per omnia tempora".

follows validly from the premises.

I take Brecher's three distinctions of necessity as acceptable notions of necessity in Anselm's three works. In addition to Brecher's distinctions, we can find some other meanings of necessity in Anselm.

In Pros. Chap.XXIII, another use of 'necessity' is found. The title of this chapter is "That this good is equally Father and Son and Holy Spirit ; and that this is the one necessary being which is altogether and wholly and solely good". The last paragraph of the chapter shows in what sense a being is necessary. It goes, "Moreover, one thing is necessary.'[Luke X. 42] This is, moreover, that one thing necessary in which is every good, or rather, which is wholly and uniquely and completely and solely good". The word 'necessary' in Luke X verse 42 means to be needed.<sup>28</sup>

In De Concordia Praescientiae et Praedestinationis et Gratiae Dei Cum Libero Arbitrio (hereafter De Concordia), Anselm examines whether it is impossible for "God's foreknowledge (from which the necessity of future things seems to follow)" and human "freedom of choice (by which many actions are performed without any necessity)" to coexist. In Chap.I, Anselm argues,

"Now, on the assumption that some action is going to occur without necessity, God foreknows this, since He foreknows all future events. And that which is foreknown by God is, necessarily, going to occur, as is foreknown. Therefore, it is necessary that something be going to occur without necessity. Hence the foreknowledge from which necessity follows and the freedom of choice from which necessity is absent are here seen (for one who rightly understands it) to be not at all incompatible. For, on the one hand, it is necessary that what is foreknown by God be going to occur; and, on the other hand, God foreknows that something is going to occur without any necessity".  
(Hopkins' tr. in Anselm of Canterbury vol.II, p.182)

<sup>28</sup> Anselm, like most commentators of Luke, does not explain for what the one thing is needed. W. Kelly's comment on this verse may help us to imagine Anselm's intention. It reads, "To receive all for her soul from the Lord, instead of receiving Him into her house --- this was the one thing needed". (An Exposition of the Gospel of Luke (London, C.A.Hammond))

"And thus it follows that whether you sin or do not sin, in either case it will be without necessity; for God foreknows that what will occur will occur without necessity." (Ibid)

Anselm continues in Chap.II

"Similarly, then, I might say : "It is necessary that you are going to sin voluntarily" or "It is necessary that, voluntarily, you are not going to sin" - just as God foreknows. --- Therefore, no inconsistency prevents freedom of choice and God's foreknowledge from coexisting".

According to Anselm, the proposition "it is necessary that something be going to occur without necessity" is not self-contradictory. For 'necessity' in the latter means compulsion or prevention, the antecedent necessity, whereas 'necessary' in the former means to be foreknown by God. And for these two notions of necessity are not equivalent concepts. This example shows that analysis of meanings of 'necessity' is important to disentangle conceptual confusions in some theological discourse, whether Anselm's explanation is acceptable or not.

In his "Necessity and Unfittingness in Anselm's *Cur Deus Homo*" (Scottish Journal of Theology vol.39, 1986), M. Root asserts that Anselm derives the concept of necessity from "unfittingness (*inconveniens*)" in CDH. According to Root, the fact that an act is fitting means only that God can perform such an act. However, if an act is unfitting, it means that "God necessarily will not perform such an act". Root says, "The necessary means --- that they are the only possible means. ---Why are the other means impossible ? Because they all involve the ascription of some unfittingness to God".

Other possible meanings of necessity in the concept of necessary existence in *Pros.Chap.III* were briefly mentioned, in 2.1. Introduction, to be eternity and aseity. I will discuss this matter later.



### 2.3. An Analysis of Necessity

We have seen that the word 'necessity' has many meanings. What is meant by 'necessity' differs radically from author to author, or even in an author. For Leibniz, that a truth is necessary means that it is an analytic or tautological truth. For Kant, 'necessity' means either apriority, or analyticity, or eternity. For Locke and Hume, 'to be certain' means either to be analytic or to be a priori. For Quine, 'necessity' means analyticity, or de re necessity which is reduced to Aristotelian essentialism, or causality, or de dicto necessity, even if he is opposed to some of these. According to Marcus, the concept of necessity concerned in a system of modal logic is de re necessity, but it has nothing to do with Aristotelian essentialism. Kneale's concept of necessity is also de re necessity. Plantinga has the notions of analyticity and essentialism in his mind when he uses 'necessity'. Anselm adds one more concept of 'necessity' ; necessity in the sense that the conclusion of a logically valid argument is necessarily true. When quantum physics is said to object to the assertion of necessity in the world, it means either that there is no universal causal law which will predict natural phenomena accurately, or that there is no epistemic certainty even if there is causal necessity in the world, or that the world exists only when there is a consciousness to observe it. And Hick argues that the biblical and Anselmian concepts of necessity are eternity and aseity.

When we use the term 'necessity', we use it in many different ways. This is not in the sense that there are many explicatus for the single explicandum 'necessity', but in the sense that 'necessity' is not a single explicandum but an apparently single representation of many explicanda.

A question is why we have to treat 'necessity' as a single explicandum. Are there logical relations between analyticity and causality, between apriority and aseity, between apriority and analyticity, etc. ? Marcus criticized Quine's suspicion of modal concepts. But her criticism of Quine has relevance only when de re necessity is concerned. Her argument can, at most,

advocate the concept of de re necessity. So, even if Marcus' criticism is reasonable, Quine still can respond to her with other notions of necessity, i.e. analyticity or causality. It is like an endless tag game. I can have multiple meanings of necessity, and when my theory of necessity is objected to, I can say 'No, I did not mean that sense of 'necessity''. It is like a game in which we can apply several rules freely to one's advantage. I do not know whether this inconsistency in using the word 'necessity' began with Kant, as Robinson says. What is obvious is that there must be a possibility of conceptual confusion if we mean several different concepts with one word. What kind of necessity, from these many possible meanings of necessity, do we mean when "necessary existence" is discussed? It is quite understandable that Hartshorne and Malcolm might have been confused over the use of 'necessity', as is alleged by Hick and Purtill. It is incredible that many authors, who used 'necessity', have not tried to distinguish these different senses of 'necessity' and have not given them different names to warn us not to commit conceptual confusions.<sup>1</sup>

I argued in the introduction to this chapter that Purtill and Hick's criticism of the Malcolm-Hartshorne interpretation can be in turn criticized for insufficient analysis of 'necessity'. I tried to show, in 2.2., that there are many possible meanings of necessity which are not considered by Purtill and Hick and can be employed in the Pros.III argument. Now we should be careful not to confuse these different meanings of necessity when we interpret the Chap.III argument, as Hartshorne and Malcolm are said to have done. A possible way not to commit improper conceptual confusion between many different meanings of necessity is to give different names to these different notions of necessity.

For this purpose, I suggest that we should treat 'necessity' as an apparent single representation of many different explicanda.<sup>2</sup> I suggest that we take 'necessity<sub>1</sub>', 'necessity<sub>2</sub>', etc. as our

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<sup>1</sup> Carnap tried it for 'probability'.

<sup>2</sup> This is not a strange thing to do. For example, The word 'row' is treated as an apparent single representation for five unrelated explicanda in Chambers 20th Century Dictionary (New Edition, 1983). Row<sub>1</sub> means a line or rank, row<sub>2</sub> means to propel with an oar, row<sub>3</sub> means a noisy squabble, row<sub>4</sub> is a Scots form of roll, row<sub>5</sub> is an obsolete form of rough. It seems to be reasonable to treat 'row' as a single representation of

vocables rather than 'necessity'. These explicanda do not have enough resemblance in meaning to be different explicatus for a single explicandum. What I have in mind as different explicanda are these : 1) conventionality 2) certainty from causality 3) certainty without causality 4) apriority 5) logical validity 6) eternity 7) aseity 8) to be needed. I do not see any conceptual resemblance between the meanings of these terms. For example, conventionality is normative, or prescriptive, or of "sollen", whereas certainty is descriptive, or of "sein". I distinguish these explicanda by putting subscripts under 'necessity' as Carnap did for the word 'probability'<sup>3</sup>.

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many explicanda by subscribing numerals to 'row', because there are no conceptual common factors between 'row<sub>1</sub>' to 'row<sub>5</sub>'. But in the dictionary, 'second' is explained to mean 1) next after the first 2) the 60th part of a minute of time, without introducing two different explicanda 'second<sub>1</sub>' and 'second<sub>2</sub>', even if there is no conceptual similarity between "next after the first" and "the 60th part of a minute of time". The decision between single representation of many explicanda and single explicandum of many explicatus will be difficult to give. The criterion would vary in accordance with editing policies of dictionary publishing companies. Actually the Shorter Oxford English Dictionary vol.2 (1978 ed.) treats 'second' as an apparent single representation for two different explicanda. What I can say at most is that if it is clear that there is no resemblance in meaning between explicatus, we had better treat them as different explicanda, rather than different explicatus, as shown in the Oxford Dictionary. The words 'clearly no resemblance in meaning' can evoke semantical controversies, but at present I can do no more than say that it conforms to common sense. If someone says that I cannot move forward until I settle this starting point, I have no rejoinder to him. But if adopting this criterion can be helpful to the understanding of a human discourse, I have some legitimacy in moving forward, saying that this demarcation between different explicandum and different explicatus may contribute to resolve confusions in the use of 'necessity' in specific fields of discourse, as Carnap did for the word 'probability'.

<sup>3</sup> Carnap explains, "The various theories of probability are attempts at an explication of what is regarded as the prescientific concept of probability. In fact, however, there are two fundamentally different concepts for which the term 'probability' is in general use. The two concepts are as follows, here distinguished by subscripts.

(i) Probability<sub>1</sub> is the degree of confirmation of a hypothesis *h* with respect to an evidence statement *e*, e.g., an observational report. This is a logical, semantic concept. A sentence about this concept is based, not on observation of facts, but on logical analysis ; if it is true, it is L-true (analytic).

(ii) Probability<sub>2</sub> is the relative frequency (in the long run) of one property of events or things with respect to another. A sentence about this concept is factual, empirical.

Both concepts are important for science. Many authors who take one of the two concepts as explicandum are not aware of the importance or even of the existence of the other concept. This has led to futile controversy". (Logical Foundations of Probability (RKP, 1951) p.19)

Necessity<sub>1</sub> is necessity as conventionality.

Necessity<sub>2</sub> is necessity as certainty from causality.

Necessity<sub>3</sub> is necessity as certainty without causality.

Necessity<sub>4</sub> is necessity as apriority.

Necessity<sub>5</sub> is necessity as logical validity.

Necessity<sub>6</sub> is necessity as eternity.

Necessity<sub>7</sub> is necessity as aseity.

Necessity<sub>8</sub> is necessity as to be needed.

When we say a proposition is necessarily true, we mean, first, that the truth of the proposition is conventional, or the proposition is analytic or tautological. The truth of a proposition can be confirmed by the meanings of the words employed in the proposition, or we may have a convention to call a proposition true. In this respect, I think, necessity<sub>1</sub> and analyticity are one and the same category. Complexity of theories about the relationship between categories of analyticity and necessity might be caused from treating 'necessity' as a single explicandum. If we treat necessity<sub>1</sub> as our explicandum, we can definitely say that necessity<sub>1</sub> is logically equivalent to analyticity. Necessity<sub>1</sub> is what is explained as relations of ideas in Hume's theory of knowledge and probability. According to Hume, propositions about relations of ideas constitute our knowledge. And the truth of a proposition which can be confirmed by experience is called probable because it is not about relations of ideas. From the fact that necessity<sub>1</sub> is meant in Hume's literature, the traditional view that Hume makes analytic/synthetic distinction to be identical with necessary/contingent distinction finds its validity. But if we include the meaning of necessity<sub>2</sub> or necessity<sub>3</sub> etc. in our explicandum, no consistent theory can stand about the relation between those categories, for we have introduced mutually independent concepts into our explicandum. If a clear theory of the relation between analyticity and necessity cannot stand, it is not because there are essential conceptual complexities between these categories, but because we have actually taken many mutually different explicanda under the word 'necessity' which only appears to be a single explicandum. We need not complicate our thought by mixing different explicanda into one representation.

We seem to be sometimes confused by treating a word which is actually a single representation of many explicanda as a single explicandum which has many explicatus. So if we determine what is our explicandum, there can be a clear theory of the relation between analyticity and necessity. An example is that, if we take necessity<sub>1</sub> as our explicandum, these two categories are logically identical.

Necessity<sub>1</sub> might be called semantical necessity, conventional necessity, tautological necessity, or, in some positivists' view, logical necessity. When we say that a proposition is necessarily<sub>1</sub> true, it may mean that the truth is confirmed only by our convention about the meanings of the words employed. Carnap calls propositions which are necessarily<sub>1</sub> true meaning postulates. Necessity<sub>1</sub> is conventionality.

Necessity<sub>2</sub> is certainty from causality. Sometimes when we say that the truth of a proposition is necessary, we do not directly suppose that the truth comes from our linguistic convention. If someone says "An iron kettle necessarily becomes hot on fire", he means that it is a causal law in the world that an iron kettle becomes hot on fire. Necessity<sub>2</sub> might mean "being in universal causal connections". Kant speaks of material necessity in existence. This material necessity is equivalent to what is termed 'causal necessity' in the sense that this necessity arises from participation in the universal causal system of nature.

Necessity<sub>3</sub> is the certainty which is not from a causal law. As examples of necessarily<sub>3</sub> true proposition, we may introduce the proposition that 9 is composite, assuming numbers are objects, or, as Kripke argues, the proposition that water is H<sub>2</sub>O. These propositions are certainly true because of essential properties of numbers and natural kinds in the world. When people who have a platonic realistic view of numbers argue that '9 is composite' is necessarily true, they neither mean that we have a convention to call '9 is composite' true, nor that the proposition is proved in an a priori manner, nor that there is a causal law that 9 is composite. Similarly, when Kripke argues that 'Water is H<sub>2</sub>O' is necessarily true, he does not mean that

the truth of the proposition comes from universal causal laws. Those propositions are certainly true because they are about essential properties of objects in the world.

When a philosopher says, "God exists necessarily" or "God cannot not exist" as in Pros. Chap.III, he might mean any of the following propositions ; 1) It is conventional to take 'God exists' as true. 2) 'God exists' is a conclusion of a valid argument. 3) We a priori know that God exists. When a religious man says, "God exists necessarily", he might mean one of the following three propositions; 4) God exists certainly, it cannot be otherwise, but it is not that God and existence are in causal connection. 5) God exists eternally, without beginning and end, God's existence is temporally unlimited. 6) God exists from himself, a se, not ab alio. 7) We need God's existence for our salvation.

Anselm's remark that "For in fact all those things that have a beginning or end --- can be thought as not existing. Only that being in which there is neither beginning nor end nor conjunction of parts --- cannot be thought as not existing"<sup>4</sup> is an example (5). Kant also speaks of necessity which is different from necessity<sub>2</sub> of causality. This is the notion of necessary existence as existence through all time, that is, a temporally unlimited being. On the other hand, Aquinas' remark that "The Supreme Substance, then does not exist through any efficient agent, and does not derive existence from any matter ---" is an example of (6). In Proslogion Chap.XXIII, Anselm says, "That this good is equally Father and Son and Holy Spirit ; and that this is the one necessary being which is altogether and wholly and solely good". The last paragraph of the chapter shows in what sense a being is necessary. It goes, "Moreover, one thing is necessary. [Luke X. 42] This is, moreover, that one thing necessary in which is every good, or rather, which is wholly and uniquely and completely and solely good". The word 'necessary' in Luke X verse 42 means 'to be needed'. Anselm sometimes uses the concept of necessity as meaning to be needed or indispensable following biblical tradition. This is necessity<sub>g</sub>.

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4 Anselm; A Reply to Gaunilo. Chap.I, Charlesworth's translation

There have been classifications of concepts of necessity. But my method seems to be more simple and clear as a guide to avoiding conceptual confusions in the use of 'necessity'. In contemporary logical theory, it is thought that categories of analytic/synthetic, necessary/contingent, and a priori/empirical are semantic, metaphysical and epistemological categories respectively.<sup>5</sup> The category of necessity is usually divided into sub categories of physical (causal, natural, factual, or ontological) necessity and logical necessity. 'An iron kettle becomes hot on fire' and 'Water is H<sub>2</sub>O' are usually taken to be necessarily true in the sense of physical necessity, and the truth of the sentence 'A bachelor is not married' is taken to be an example of logical necessity. In this division analyticity is thought to explain the ground of logical necessity. If a sentence is logically necessarily true, it is true solely in virtue of meanings of words employed in the sentence. It coincides with the Fregean account of analyticity that a sentence is analytically true if and only if either the sentence is logically true or the sentence is reducible to logical truth by substitution of synonyms for synonyms. Necessity which is called logical necessity by some logical positivists is necessity<sub>1</sub> in my classification. Necessity in this sense shows no more than our linguistic convention for the words employed in a sentence. It seems that necessity<sub>2</sub> (certainty from causality ; e.g. "An iron kettle becomes hot on fire"), necessity<sub>3</sub> (certainty without causality ; e.g. "Water is H<sub>2</sub>O"), necessity<sub>6</sub> (eternity), and necessity<sub>7</sub> (aseity) in my classification are often subsumed under the category of physical necessity. Hick means necessity<sub>2</sub>, necessity<sub>6</sub> , and necessity<sub>7</sub> by "factual necessity". But he says "necessary existence" is meaningful only when necessity is interpreted in the sense of eternity and aseity. I do not see why he takes "factual necessity" as a single explicandum. It would be simple to say that necessity<sub>6</sub> and necessity<sub>7</sub> give sense to 'necessary existence', rather than to say that factual necessity not in the sense of causal connection gives sense to 'necessary existence'. Moreover what about necessity<sub>3</sub> of certainty without causality in my classification? He seems not to pay any attention to the possibility of necessity<sub>3</sub>. If he had noted the possibility that necessity<sub>3</sub> could be subsumed under the category of factual necessity, his argument would have been more complicated to exclude that kind of necessity from factual

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<sup>5</sup> S. Haack, S. Kripke, A. C. Grayling and A. Plantinga agree to this classification.

Haack; Philosophy of Logics (Cambridge Univ. Press, 1979), Kripke; "Identity and Necessity" in Naming, Necessity and Natural Kinds (ed. S. P. Schwartz), Grayling; An Introduction to Philosophical Logic (Harvest, Brighton, 1982), Plantinga; The Nature of Necessity (Clarendon, Oxford, 1978)

necessity to establish the significance of necessary existence. I do not see any reason to treat 'factual necessity' as a single explicandum except that its alleged explicatus are not about our linguistic convention .

It is also common to make another distinction for the concept of necessity. It is the distinction between necessity de dicto and necessity de re. A sentence expressing necessity de dicto is one in which the concept of necessity is predicated of some other sentence, whereas a sentence expressing necessity de re says that a property belongs necessarily or essentially to an object. Thus when we assert necessity de dicto, we are saying that a certain sentence is bound to be true or false, while in asserting necessity de re we are saying that a certain object is bound to have or not have a certain property . 'It is necessary that a bachelor is not married', 'It is necessary that an iron kettle becomes hot on fire' and 'It is necessary that water is H<sub>2</sub>O' are examples of de dicto necessary truth. On the other hand, 'A bachelor is necessarily not married', 'An iron kettle necessarily becomes hot on fire' and 'Water is necessarily H<sub>2</sub>O' show de re necessity. This division is about the scope of the modal operator. The scope of de dicto necessity is wider than that of de re necessity. The reason to introduce the division of necessity in terms of its scope is to clarify the meaning of necessity. From this division, some authors, like Quine, think that only de dicto necessity has clear meaning. But this division is not enough to give clarification of the concept of necessity. For not only the de re/de dicto distinction is needed. As we have seen above, the logical/physical distinction is employed by many authors for the clarification of logical difference in the meanings of necessity, too. If these two distinctions are both needed and significant for the illumination of the notion of necessity, that is, if the category of logical necessity is different from de dicto necessity and the category of physical necessity is different from de re necessity, we have to introduce four different categories of necessity. These are de re logical, de re physical, de dicto logical, and de dicto physical necessity. But it seems that these four categories are sometimes redundant and sometimes not yet sharp enough to differentiate a heterogeneous conceptual compound into mutually independent conceptual elements. The process of the clarification of the concept of necessity can be done more simply and thoroughly. If we adopt my classification, there need



not be the division of logical and physical necessity, or the division in terms of the scope of modal operator. For necessity<sub>1</sub> to necessity<sub>g</sub> inherently show their scope and what they are about. The clarification of the notion of necessity is done more easily and radically if we treat 'necessity' as an apparent single representation of many explicanda.

There is no conceptual difference between de dicto logical necessity and de re logical necessity, if logical necessity is necessity in the sense of analyticity. Logical necessity, whether de dicto or de re, has nothing to do with facts in the world, if logical necessity is secured through linguistic conventions. So, in this case, i.e. if logical necessity is reduced to analyticity, there is no difference in the scope of modal operators.<sup>6</sup> Necessity de dicto logical and de re logical are the same category as necessity<sub>1</sub> in my division. Alleged de re factual necessity shown in sentences 'An iron kettle necessarily becomes hot on fire' and 'Water is necessarily H<sub>2</sub>O' seems to contain two different categories. The necessity we see in the fact that an iron kettle becomes hot on fire is the necessity which is experienced as a universal causal law. It is certain that an iron kettle becomes hot on fire since it is an instance of universal causal law. But the necessity in 'Water is necessarily H<sub>2</sub>O' is different from certainty from universal causality. De re factual necessity is a mixture of two different categories, that is, necessity<sub>2</sub> of certainty from causality and necessity<sub>3</sub> of certainty without causality in my classification.

My classification can be helpful for understanding the concepts of necessity employed by authors, and for establishing the relation between categories of analytic/synthetic, necessary/contingent, and a priori /empirical in these authors. My classification can also help to avoid any conceptual confusion in discourse about "necessary existence".

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<sup>6</sup> Plantinga's remarks about Malcolm, even if Plantinga himself would not agree, are an example of this view. "A normal inclination would be to understand the assertion "God's existence is logically necessary" as equivalent to the assertion "The proposition 'God exists' is logically necessary". - - - It is a requirement of our conception of God that He is omnipotent ; it is merely putting this point a different way, I believe, to say that the proposition "God is omnipotent" is logically necessary". "A Valid Ontological Argument" in Philosophical Review, vol.70, 1961, p.94

Many authors hold that only necessity<sub>6</sub> of eternity and necessity<sub>7</sub> of aseity give meaning to 'necessary existence', and they even think that necessary existence is a contradictory concept if necessity<sub>1</sub> of conventionality is meant. They show that these kinds of necessity, necessity<sub>6</sub> and necessity<sub>7</sub>, have been central concepts in the history of the Christian faith. And concerning the argument for necessary existence, they think that, because 'necessary existence' is meaningful only when necessity is interpreted as necessity which is experienced as eternity and aseity, "ontological argument" for necessary existence cannot stand if it intends to prove God's existence in an a priori manner (Necessity<sub>4</sub>). If necessary existence makes sense at all, it must be interpreted as eternal existence or a se existence. God's existence is eternal and a se, but still the problem of whether he exists or not cannot be settled a priori. His existence is necessary<sub>6</sub> and necessary<sub>7</sub>, but not necessary<sub>4</sub>. Hick argues that Malcolm and Hartshorne interchange these necessities freely. What they are proving is necessity<sub>6</sub> and necessity<sub>7</sub>, but they claim to settle the problem in the sense of necessity<sub>4</sub> in their conclusion. If we use 'necessity<sub>1</sub>' to 'necessity<sub>8</sub>' as terms of our discourse rather than 'necessity', it will be easier for us not to incur conceptual confusion in discourse about "necessary existence".

### 3. Necessary Existence and Proslogion Chap.III

#### 3.1. On Existence

##### 3.1.1. 'Existence' is not a predicate

It is well known that Kant objected to an ontological argument for the reason that 'existence' is not a predicate. If one wishes to show that a human being is rational from the property of humanity, one has to assume that rationality is a property. It should be assumed that rationality is a property which is owned by some objects, in order to agree or disagree with an argument trying to show that a human being is rational. Similarly, if an ontological argument is to establish the existence of God from the analysis of the concept of God<sup>1</sup>, it is to be assumed that existence is a property or 'existence' is a predicate<sup>2</sup>. Kant's view that existence is not a property<sup>3</sup> purports to undermine the foundation of an ontological argument.

"I should have hoped to put an end to these idle and fruitless disputations in a direct manner, by an accurate determination of the concept of the existence. --- 'Being' is obviously not a real predicate ; that is, it is not a concept of something which could be added to the concept of a thing. It is merely the positing of a thing, or of certain determinations, as existing in themselves. Logically, it is merely the copula of a judgement. --- By whatever and by however many predicates we may think a thing - even if we completely determine it - we do not make the least addition to the thing when we further declare that this thing is. Otherwise, it could not be exactly the same thing that exists, but something more than we had thought in the concept ; and we could not,

<sup>1</sup> Kant understands <sup>the</sup> ontological argument in the following manner : " --- there is one concept, and indeed only one, in reference to which the not-being or rejection of its object is in itself contradictory, namely, the concept of the ens realissimum. It is declared that it possesses all reality, and that we are justified in assuming that such a being is possible. Now [the argument proceeds] 'all reality' includes existence ; existence is therefore contained in the concept of thing that is possible". Critique of Pure Reason (tr. by N. K. Smith, Macmillan, London, 1929) p.503

<sup>2</sup> Kant distinguishes between logical and real or determining predicate. "Anything we please can be made to serve as a logical predicate ; the subject can even be predicated to itself ; for logic abstracts from all context. But a determining predicate is a predicate which is added to the concept of the subject and enlarges it consequently, it must not be already contained in the concept". Ibid p.504

<sup>3</sup> W. Kneale says, "That some philosophers have taken the word "existence" to stand for a predicate in the logical sense, i.e., for an attribute, may be seen from their use of the ontological argument to prove the existence of God". "Is Existence a Predicate?" in Readings in Philosophical Analysis (ed. H Feigl and W. Sellars, Appleton-Century-Crofts Inc., New York, 1949) pp.29-43

therefore, say that the exact object of my concept exists." (Critique of Pure Reason pp.504-505)

For Kant, since existence does not and should not modify the subject in a judgement, 'existence' is not a real predicate.

The dictum 'Existence' is not a predicate' has support from many authors. C. H. Kahn advocates Kant's view that 'to be' is just the copula in a judgement. According to Kahn, in early Indo-European languages, there was no verb such as 'to exist', and all existential claims are made by the word 'to be'. Further, such existential claims as 'X is' or 'X is not' were not made "to assert existence in general or absolutely but to provide a subject for further predication".<sup>4</sup> Existence is not a real property to modify the subject in a judgement, but an incomplete conceptual instrument to introduce a real predicate to the subject. We can say sentences of the form 'x exists' or 'x does not exist' are not well formed sentences, since there are not yet predicates.

Kneale criticizes Descartes' argument for the existence of God that it is a confusion "based on the assumption that 'God exists' is a proposition of the same sort as a theorem of geometry". Descartes' argument goes, "existence can no more be separated from the essence of God than can its having three angles equal to two right angles be separated from the essence of a rectilinear triangle". Kneale argues that Descartes assumes something is predicated of the subject in both propositions of "God exists" and "Triangle has three angles equal to two right ones". If, however, existence is not an attribute of anything at all, Descartes' argument collapses from the beginning. According to Kneale, the word 'exist' is "only a logical auxiliary symbol". He says, "The sentence "tame tigers exist" is just one way of expressing the proposition 'for some x, x is tame and x is a tiger'. Other ways of expressing the same proposition are "some tigers are tame" and "something is a tame tiger""<sup>5</sup>.

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<sup>4</sup> Kahn, C.H.; "On the Theory of the Verb "To Be"" in Logic and Ontology (ed. M. K. Munitz, New York Univ. Press, 1973) pp.1-20

<sup>5</sup> Kneale, W.; op. cit., p.36

Quine also holds the view that existence is not a modifying feature of anything. It is the property which everything in the universe owns.<sup>6</sup> His view is expressed by his famous words that "To be is to be the value of a variable". According to Quine's thesis, 'x exists' means the same as 'x is a value of a bound variable' or 'x is a member of the universe of discourse'. Since everything in the universe can be a value of a bound variable, i.e. the universe of discourse is the range of values of variables, we can say that everything exists. Existence cannot constitute a defining property of anything because it is common to everything in the universe.

P. F. Strawson pays attention to a peculiar feature of 'existence' in terms of presupposition. A statement S is said to presuppose another statement S' if and only if S is neither true nor false unless S' is true. There is a relation of presupposition between S and S' if the truth of S' is "a precondition of the truth or falsity of S"<sup>7</sup>. The statement made by 'John's children are asleep' presupposes the truth of the statement made by 'there exist John's children' for it to have any truth value. Here the relation of presupposition is distinguished from the relation of entailment. When A entails B, the conjunction of A and the denial of B make a contradiction ; the truth of B is a necessary condition for the truth of A. When S presupposes S', however, the truth of S' is a necessary condition for the truth or falsity of S. Generally the presupposed statement for a subject-predicate sentence 'S is P' is that S exists.<sup>8</sup> Now, if we take 'exists' as the predicate, we should face the result that the question of its truth or falsity arises only when it is true.<sup>9</sup> On the assumption that every subject-predicate type statement presupposes

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<sup>6</sup> G. Nakhnikian and W. Salmon hold the same view. "Every conception involves the predicate "exists". Thus, not only God's essence but every essence implies existence". "Exists' as a Predicate" in Philosophical Review, vol.66,1957, p.541

<sup>7</sup> Strawson, P. F.; Introduction to Logical Theory (Methuen & Co. Ltd., London, 1960) p.175

<sup>8</sup> Or, for sentences like 'Socrates is wise', the presupposed statement is that Socrates existed. (Individuals (Methuen, London, 1959) pp.190-192) M. K. Munitz explains of Strawson's theory of presupposition that "when a meaningful sentence is uttered by a speaker of the language on a certain occasion, then a necessary condition for the statement thus made to have a truth value is that the (main) referring expression in the sentence has, on that occasion, a reference". ("Existence and Presupposition" in Logic and Ontology (ed. Munitz, M.K., New York Univ. Press, 1973) p.86)

<sup>9</sup> Ibid p.191

another statement which makes an existential claim, the presupposed statement for the statement made by 'S exists' will be the same statement that S exists. If the presupposed statement that S exists is false, the original presupposing statement cannot be either true or false. The question of whether 'S exists' is true or false can arise only when it is true. This is absurd. So the relation of presupposition does not hold when the predicate is 'exist'. In this respect, 'exist' is different from other predicates. We can refute the assumption that every original subject-predicate statement presupposes another statement expressing an existence claim, and we can reformulate the assumption as that every statement except one made by 'S exists' presupposes an existential statement. This revision will be the same as saying that the relation of presupposition does not hold for existential claims. Whether the assumption is accepted or reformulated as above, we can see that 'exist' has a quite peculiar feature different from any other predicate. 'Exist' is different from grammatically similar expressions.

### 3.1.2. 'Existence' is a second-order predicate

C. D. Broad, like Kant, believes that elucidation of the logical status of 'existence' is crucial for appreciating an ontological argument. He says,

"It is evident, then, that the ontological argument must be rejected. Probably most people feel that there is something wrong with it ; but the important and interesting and not too easy task is to put one's finger on the precise points at which it goes wrong<sup>\*</sup> .

The first point at which an ontological argument goes wrong, Broad argues, is in the fact that "existential propositions" and "characterizing propositions" are treated as having the same logical form by "many people of the highest intelligence, such as St. Anselm, Descartes and Leibniz". Existential propositions and characterizing propositions are expressed by sentences of the same grammatical form. The grammatical similarity between 'S exists' and 'S is red' misled people to assume that an ontological argument is sound and successful as a proof for the existence of God. Broad argues that these two propositions, in spite of grammatical similarity,

<sup>\*</sup> "Arguments for the Existence of God" in Journal of Theological Studies vol.40 1939

have different logical forms.

"Let us begin with the two negative propositions Cats do not bark and Dragons do not exist. It is obvious that the first is about cats. But, if the second be true, it is certain that it cannot be about dragons ; for there will be no such things as dragons for it to be about. The first might be expressed, on the conditional interpretation, by the sentence 'If there were any cats, none of them would bark'. On the instantial interpretation it might be expressed by the sentence 'There are cats, and none of them bark'. Suppose you try to express the negative existential proposition in the same way. On the first alternative it would be expressed by the sentence 'If there were any dragons, none of them would exist'. On the second alternative it would be expressed by the sentence 'There are dragons, and none of them exist'. Both these sentences are self-contradictory and meaningless. So, if you try to analyze negative existential propositions, you will find that they are self-contradictory. But it is plain that Dragons do not exist is not self-contradictory. It is not only logically possible but is almost certainly true.

Now consider the two affirmative propositions Cats scratch and Cats exist. On the conditional interpretation the former would be expressed by the sentence 'If there were any cats, none of them would fail to scratch'. On the instantial interpretation it would be expressed by the sentence 'There are cats, and none of them fail to scratch'. Suppose you try to express the affirmative existential proposition in the same way. On the first alternative it would be expressed by the sentence 'If there were any cats, none of them would fail to exist'. On the second alternative it would be expressed by the sentence 'There are cats, and none of them fail to exist'. Now both these sentences are mere platitudes. So, if you try to analyze affirmative existential propositions in the same way as affirmative characterizing propositions, you will find that they are all platitudes. It is a substantial proposition which might very well be doubted by a person who had never seen a cat. So it is certain that existential propositions need a different kind of analysis.

The right analysis, as is now well known, is somewhat as follows. These propositions are not about cats or dragons, i.e. about things which have the cat-characteristics or the dragon-characteristics. They are about these characteristics themselves. What they assert is that these characteristics do apply to something or that they do not apply to anything, as the case may be. 'Cats exist' is equivalent to 'The defining characteristics of the word "cat" apply to something. Again 'Dragons do not exist ' is equivalent to 'The defining characteristics of the word "dragon" do not apply to anything'. Suppose, e.g. that a 'dragon' is defined as a reptile which flies and breathes fire. Then the statement that dragons do not exist is equivalent to the statement that nothing combines

the three properties of being a reptile, of flying, and of breathing fire. Such statements are neither tautologies nor contradictions.

It only remains to apply this analysis to statements about the existence or non-existence of a most perfect being. To say that a most perfect being exists is equivalent to saying that something has all positive characteristics to the highest possible degree."<sup>10</sup>

Broad's view is backed up by Frege's and Russell's explanations of existence. As is well known, Frege argues that number is a property not of objects but of concepts. It is a second-order property which can only be predicated of a concept, not of an individual. Frege says,

"This suggests --- that the content of a statement of number is an assertion about a concept. This is perhaps clearest with the number 0. If I say "Venus has 0 moons", there simply does not exist any moon or agglomeration of moons for anything to be asserted of ; but what happens is that a property is assigned to the concept "moons of Venus", namely that of including nothing under it".<sup>11</sup>

Frege argues that existence is also a second-order property to be predicated only of a concept.

"In this respect existence is analogous to number. Affirmation of existence is in fact nothing but denial of the number nought. Because existence is a property of concepts the ontological argument for the existence of God breaks down."<sup>12</sup>

If 'God' is a name and 'exists' is a second-order predicate, the sentence 'God exists' is not a well formed sentence. If 'God exists' is ill formed, an ontological argument which is said to try to establish the truth of the sentence will collapse from the start.

Russell also has the similar view that "existence is essentially a property of a propositional function" and " it is of a propositional function that you can assert or deny existence ", and that it is a fallacy to apply a predicate which is applied only to a propositional function to the individual which satisfies a propositional function.<sup>13</sup> According to Russell, 'to exist' has no clear meaning when it is applied not to a description but to a proper name. If we say "Mr. Russell exists", we may mean that "there is one and only one man who wrote An Introduction

<sup>10</sup> Broad, C.D.; "Arguments for the Existence of God" in Journal of Theological Studies, vol.40, 1939, pp.23-24

<sup>11</sup> Frege, G.; The Foundations of Arithmetic (tr. by J. L. Austin, 2nd ed., Basil Blackwell, 1986) §46

<sup>12</sup> Ibid §53

<sup>13</sup> Russell, B.; "The Philosophy of Logical Atomism" Monist vol.29, 1919, pp.195-197



to Mathematical Philosophy, etc., and is called Mr. Russell"<sup>14</sup>. This is meaningful. But in this case, 'Mr. Russell' functions as a description.

### 3.1.3. Tautological Existence and Nontautological Existence

Carnap distinguishes between two sorts of questions of existence. He argues that, in order to understand clearly the nature of existential questions, such as "Is there a black swan?" or "Are there things?", it is necessary to recognize a fundamental difference between two kinds of questions concerning the existence or reality of entities. He names these two kinds of questions as internal and external.

"If someone wishes to speak in his language about a new kind of entities, he has to introduce a system of new ways of speaking, subject to new rules ; we shall call this procedure the construction of a linguistic framework for the new entities in question. And now we must distinguish two kinds of questions of existence : first, questions of the existence of certain entities of the new kind within the framework ; we call them internal questions ; and second, questions concerning the existence or reality of the system of entities as a whole, called external questions."<sup>15</sup>

If we have accepted the physicalistic framework, that is, if we accept that there are physical objects, we can raise and answer internal questions like "Is there a black swan?". These questions are to be answered by empirical investigations. But if we take a phenomenological or sense-data language as our framework, the question "Is there a black swan?" cannot be accommodated in the frame and cannot be raised and answered. The existence concerned in internal questions which are formulated in accordance with a framework is empirical.<sup>16</sup> Internal questions of existence are subjects of various special sciences and they exhaust all theoretically significant questions concerning any given sort of entity.

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<sup>14</sup> This example is quoted from Kneale's paper "Is Existence a Predicate?"

<sup>15</sup> Carnap, R.; Meaning and Necessity (The Univ. of Chicago Press, 1956) p.206, and also in "Empiricism, Semantics and Ontology" in Revue Internationale de Philosophie vol.4, 1950, p.21

<sup>16</sup> If the framework is a logical one, an answer to an internal question is given by purely logical methods. Ibid

External questions concern the existence of a system of entities as a whole, i.e. they purport to deal with the basic categories or ultimate constituents of reality itself. For Carnap, external questions are not theoretical but rather pragmatic. A question about a physicalistic framework itself, such as "Are there things?", is not a theoretical question, even if it appears to be.

"To be real in the scientific sense means to be an element of the system ; hence this concept cannot be meaningfully applied to the system itself. Those who raise the question of the thing world itself have perhaps in mind not a theoretical question as their formulation seems to suggest, but rather a practical question, a matter of a practical decision concerning the structure of our language. We have to make the choice whether or not to accept and use the forms of expression in the framework in question."<sup>17</sup>

External questions are absolute philosophical questions in the sense that they are formulated without reference to any particular theory or framework. An introduction or discard of a frame does not need any justification from the framework itself. Only practical factors like "efficiency, fruitfulness and simplicity" can be decisive matters for choosing one among many frameworks.

Thus while Carnap thinks that people talk nonsense when they declare the truth of a framework, he grants a practical import to their remarks if construed as linguistic proposals concerning the comparative utility of given frameworks for specific purposes. Those philosophical theses about the truth of a framework, for example, nominalism and realism, physicalism and phenomenalism, are misleadingly formulated in the "material mode" of speech. These theses apparently disguised in material mode can be translated into the "formal mode" of speech, such as "Thing-language is simple" or "Sense-data language is efficient".

J. Shaffer, in his "Existence, Predication and the Ontological Argument"<sup>18</sup>, adopts Carnap's distinction between the concepts of external and internal existence, modifying the distinction for his own purpose, to evaluate the ontological argument for the existence of God. Shaffer

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<sup>17</sup> *Ibid* p.207

<sup>18</sup> In The Many-Faced Argument (ed. J. Hick and A. C. McGill, Macmillan, 1968)

changes the concept of external existence into the intensional or tautological concept of existence, and Carnap's concept of internal existence into the extensional or nontautological concept of existence. Shaffer understands Carnap's external question as concerning the problem of "whether or not to accept and use the forms of expression for the framework in question". Given the basic definitions and rules of a particular religious language, it may be a necessary statement that God exists. We may suppose a religious life in which 'God' plays an essential role, i.e. we may suppose a religious form of life which is not sustained without supposing that God exists. The existence of God is a basic framework in this form of religion. The problem of the existence of God in this sense is a matter of the framework and rules of a religious life.

Shaffer distinguishes between a tautological existential claim and a nontautological existential claim. Tautological existence, according to him, is existence demonstrated by a definition which comes from rules of a particular religious framework. We can define 'God' as 'an almighty being who is eternal' in a particular religious life. Given this definition, anyone who accepts the definition, i.e. who lives the particular religious life, and at the same time denies that God exists contradicts himself. Shaffer calls existence in this sense tautological existence. He says, "Their tautological character arises from nothing but the definition we have stipulated for the subject term". But existence demonstrated tautologically does not settle the question whether there actually is an object which satisfies the definition. The truth of the sentence 'God exists', in which existence is used at a tautological level, leaves still open the question whether there exists God. Shaffer argues that tautological existence is an intensional feature of words and nontautological existence is concerned about the extensional side.

"A word like "horse" has a particular meaning and is logically connected with other words like "animal". --- It is this intensional feature of words and their corresponding concepts which makes certain assertions like "A horse is an animal" tautological. But words and concepts are also applicable to things. It turns out to be the case that there have existed, do now exist, and will exist entities such that it is true of each of them that it is a horse, true of each of them that the concept of a horse applies to it. And this fact we may express by saying that the word "horse" or the concept of a horse has

extension. --- [I]f someone uses the sentence, "God exists", tautologically, he tells us only that being an existent is a logical requirement for being God. If, on the other hand, someone asserts, "God exists", nontautologically, then he claims that the term "God" has extension, applies to some existent."<sup>19</sup>

If existence employed in an ontological argument is the tautological existence throughout, it is meaningful as a conceptual analysis of 'God' or any other words for divinity in a particular religious form of life. In an ontological argument, "the only valid conclusion is an intensional statement about the meaning of the concept of God". If so, the conclusion must not be of <sup>an</sup> extensional feature of 'God', even if it is one which an author of <sup>an</sup> ontological argument wants to establish as conclusion. Shaffer attributes the prima facie plausibility of an ontological argument to the shift of meaning of existence between intensional and extensional. He says,

"The prima facie plausibility of the Argument comes from the use of a sentence intensionally when the typical use of that sentence is extensional. In this way it conceals the illicit move from an intensional to an extensional statement".

The most that an ontological argument can do, if existence employed in the ontological argument is the tautological existence, is to analyze the intension of 'God'. We need another measure to show that the concept of God has extension. Even if we have a tautological existential claim that God exists, it still remains open whether the concept of God has application extensionally.<sup>20</sup>

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<sup>19</sup> *Ibid* p.242

<sup>20</sup> Shaffer thinks that extensional existence cannot be proved by any ontological argument. "Why is it that extensional assertions cannot be tautological? Because they do not merely tell us what the requirements are for being an A but, starting with these requirements, tell us whether anything meets these requirements. Even if it is a conceptual requirement that the thing exists in order to be an instance of the concept, that in no way settles whether the requirement is met. And if we make it a tautological that the requirement is met, by framing a concept of a concept, then we are left with the open question whether the newly framed concept has extension. That is what is true in the thesis that no "existential" proposition can be analytic. (*Ibid* pp.243-244)

### 3.1.4. Being and Nonbeing Objects

There has been a view contending that it is due to our prejudice that we suppose that all objects must be actual. Alexius von Meinong is the author who is perhaps most easily associated with this view. He is said to have believed that he had discovered a whole realm of objects which had not been studied previously by philosophers or by scientists.<sup>21</sup> Meinong says,

"The totality of what exists, including what has existed and will exist, is infinitely small in comparison with the totality of the objects of knowledge. This fact easily goes unnoticed, probably because the lively interest in reality which is part of our nature tends to favor that exaggeration which finds the non-real a mere nothing --- or, more precisely, which finds the non-real to be something for which science has no application or at least no application of any worth"<sup>22</sup>.

We cannot deny that non actual beings are subjects of human intellectual enquiry. As Meinong points out, the figures with which geometry is concerned do not exist, nevertheless no one denies that they are objects of genuine scientific interest. To give ontological status to these nonexistent objects, he distinguishes between existents and subsistents. Existent objects are objects having location in space and time ; on the other hand objects which cannot be located in space and time but nevertheless have being are subsistent objects. He separates abstract objects, e.g. numbers, properties and propositions, from concrete objects. Abstract objects do not exist but they have a kind of being called subsistence. Roughly, it can be said that subsistence is the being of abstract objects, and existence is the being of concrete objects. For example, a green leaf exists ; and the difference between red and green is a real difference, but it does not exist in the sense in which a green leaf exists. Nor does the number two exist, although it is none the less real.<sup>23</sup> Meinong describes such real nonexistent objects as subsisting.

Having held that there are two kinds of being, namely, existence and subsistence, Meinong introduces the third mode of being to account for the ontological status of such entities as the golden mountain and the round square.<sup>24</sup> As is well known, Meinong introduces the concept

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<sup>21</sup> Parsons, T.; Nonexistent Objects (Yale Univ. Press, 1980) preface

<sup>22</sup> Meinong, A.; "On the Theory of Objects" in Realism and the Background of Phenomenology (ed. R. M. Chisholm, The Free Press, New York, 1960)

<sup>23</sup> These are examples of J. Passmore in his A Hundred Years of Philosophy.

of Aussersein to secure the references of these expressions. The assumption of these Aussersein objects is derived from the consideration of propositions about nonbeing objects.

G. E. Moore puts the case in the following way,

"How can a thing 'appear' or be 'thought of' unless it is there to appear or be thought of? To say that it appears or is thought of, and yet that there is no such thing, is plainly self-contradictory. A thing cannot have a property unless it is there to have it. --- When I think of a unicorn, what I am thinking of is certainly not nothing; if it were nothing then, when I think of a griffin, I should also be thinking of nothing, and there would be no difference between thinking of a griffin and thinking of a unicorn. But there certainly is a difference; and what can the difference be except that in the one case what I am thinking of is a unicorn, and in the other a griffin? And if the unicorn is what I am thinking of, then there certainly must *be* a unicorn, in spite of the fact that unicorns are unreal. In other words, though in one sense of the word there certainly *are* no unicorns - the sense, namely, in which to assert that there are would be equivalent to asserting that unicorns are real - yet there *must be some* other sense in which there are such things; since, if there were not, we could not think of them"<sup>25</sup>.

This is the truly distinctive view of Meinong.<sup>26</sup> The domain of nonbeings Meinong called Aussersein is literally the domain of objects outside of being.<sup>27</sup> Objects like the golden mountain, and impossible objects such as the round square are among Aussersein. Objects which have Aussersein are called pure objects, and these pure objects stand beyond being and nonbeing.<sup>28</sup> His theory of Aussersein is founded on the principle of the independence of Sosein from Sein. Meinong thinks that our thought about such a contradictory entity as the

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<sup>24</sup> Meinong thinks that grammar should play a major part in the development of the theory of objects. He considers the truth of such sentences as 'The round square is round' and 'Goldberg thinks of the perpetuum mobile'. Letting grammar be his guide, he concludes that 'the round square' and 'the perpetuum mobile' stand for objects. He thinks that there is no other way to account for the truth of the sentences. (K. Lambert, Meinong and the Principle of Independence (Cambridge Univ. Press, 1983) pp.2-37)

<sup>25</sup> Moore, G.E.; "The Conception of Reality" in Philosophical Studies 1922 p.215

<sup>26</sup> Lambert says, "What really sets Meinong apart from the majority of philosophers, however, is not the distinction between the two kinds of being an object might possess - a view, after all, advocated in one form or another by many philosophers from Aristotle on; rather, it is his belief in nonsubsistent objects, objects that have neither existence nor subsistence (nor any kind of being), that is truly distinctive." (op. cit., p.14)

<sup>27</sup> Ibid

<sup>28</sup> Grossman, R.; Meinong (RKP, 1974) pp.116-120

round square is possible because the nature of an object does not depend on its being. According to this principle, what an object is is a function of its nature, that is, that an object is what it is need not depend on its being. What an entity is, what properties it has, is independent of whether it has being. About the principle he says,

"The Sosein of an object is not affected by its Nichtsein. The fact is sufficiently important to be explicitly formulated as the principle of the independence of Sosein from Sein. The area of applicability of this principle is best illustrated by consideration of the following circumstance : the principle applies, not only to objects which do not exist in fact, but also to objects which could not exist because they are impossible. Not only is the much heralded gold mountain made of gold, but the round square is as surely round as it is square".<sup>29</sup>

"Now it would accord very well with the aforementioned prejudice in favor of existence to hold that we may speak of a Sosein only if a Sein is presupposed. There would, indeed, be little sense in calling a house large or small, a region fertile or unfertile, before one knew that the house or the land does exist, has existed, or will exist. However, the very science from which we were able to obtain the largest number of instances counter to this prejudice shows clearly that any such principle is untenable. As we know, the figures with which geometry is concerned do not exist. Nevertheless, their properties, and hence their Sosein, can be established. Doubtless, in the area of what can be known merely a posteriori, a claim as to Sosein will be completely unjustifiable if it is not based on knowledge of a Sein ; it is equally certain that a Sosein which does not rest on a Sein may often enough be utterly lacking in natural interest. None of this alters the fact that the Sosein of an object is not affected by its Nichtsein."<sup>30</sup>

According to Meinong, it is not the case that an object's having natures presupposes its being. The Sosein of an object is not affected by its Nichtsein (nonbeing).

The basic idea behind Meinong's theory of objects is that every thought is about an object - regardless of whether or not that object exists in the modified sense of existence. Russell interprets Meinong's view as follows ; in such a view every denoting expression may be thought of as a name, that is, it stands for an object.<sup>31</sup> Meinong holds that the phrase 'the

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<sup>29</sup> "On the Theory of Objects" p.82

<sup>30</sup> *Ibid*

<sup>31</sup> "This theory regards any grammatically correct denoting phrase as standing for an object. Thus "the present king of France", "the round square", etc., are supposed to be genuine objects. It is admitted that such objects do

golden mountain' refers to an object which is golden and is a mountain, and that the phrase 'the round square' refers to an object which is both round and square. The idea is that any denoting description refers to an object that satisfies the description, regardless of whether the object is an existent or subsistent or *Aussersein*.

### 3.1.5. Existence and Actuality

According to Hartshorne, Anselm's most important discoveries are the distinction between existence and actuality, and that there are two kinds of individuals, those whose existence and actuality are both contingent and those whose actuality but not existence is contingent. Hartshorne's opposition to the view that all existence is contingent is based on these discoveries. Of the distinction between existence and actuality, Hartshorne explains,

"Our discussion has implied --- a distinction between *existence* and *actuality*. Species or properties exist in individuals, individuals exist in concrete events or states. That a property exists means that there is at least one individual with the property ; that an individual exists means that there has occurred at least one event constituting a state of the individual. The state is the actuality. To exist is to be somehow actualized, in some individual and state. By 'actuality' is meant the how, the state, of actualization. With all properties except those equivalent to deity, that a property exists only means that there is some individual of the kind in question in some state or other ; just what individual being another question, requiring additional information. With all individuals, even God, in what actual state the individual exists is contingent. Actuality can in no case be necessary. This is the truth misstated in the dogma, 'existence is never a property'. Existence, being somehow actualized, can be a property ; but never actuality, the precise how of actualization".<sup>32</sup>

Any individual, including God, exists by virtue of a contingent concrete state. This, however, not subsist, but nevertheless they are supposed to be objects." Russell, "On Denoting" in *Mind* vol.14, 1905, pp.479-493

<sup>32</sup> Hartshorne, C.: Creative Synthesis and Philosophic Method (SCM, London, 1970) p.254



should not be interpreted as that God's existence is contingent. What is contingent is concrete actuality of God, not His existence. "God's existence is not itself an actuality and is as abstract as the concepts from which it is deduced".<sup>33</sup> He says,

"Let us call the concrete state of a thing its actuality. Then my proposition is, actuality is always more than bare existence. Existence is that the defined abstract nature is somehow concretely actualized ; but how it is actualized, in what particular state, with what particular content not deducible from the abstract definition, constitutes the actuality".<sup>34</sup>

On R. M. Martin's criticism that Hartshorne's distinction between actuality and existence is not clear<sup>35</sup>, Hartshorne replies,

"I think it is fairly clear and immensely important. I exist, for example, so long as my individual identifying traits are *somehow* exemplified in actual entities. My actuality now is *how*, or in *just what states* this exemplification has, up to now, occurred. I am unenlightened by the objection that the how is distinct from the result, partly because of Whitehead's principle of process, that the being is not abstractable from the becoming, and partly because of my stipulation, *how* or in *what*, in contrast to *somehow* or in *some* actual state or other. I fail to see what is left out in this formulation. I exist now, experiencing my self typing, I could have existed now not typing. The somehow is less definite than the how or in what"<sup>36</sup>.

To exist is "to be *somehow actualized* in a suitable concrete (and contingent) reality". The existence of an "essence" or "coherent idea" shows that this "essence" or "coherent idea" is somehow actualized or instantiated. In ordinary cases of contingently existent objects, not only the particular concrete reality is contingent, but also it is contingent that there is any concrete reality for an existent object. Hartshorne points out that here is the difference between necessary and contingent existence. He says, "In the divine case however, the predicate is to be thought of as inevitably actualized somehow, that is, in some suitable concrete reality".<sup>37</sup> He explains, "Thus contingency has two forms ; either (1) both *that* and *how* the predicate is

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<sup>33</sup> Hartshorne, C.; Anselm's Discovery (Open Court, La Salle, 1965) p.259

<sup>34</sup> Hartshorne, C.; "What Did Anselm Discover ?" in Many-Faced Argument p.329

<sup>35</sup> Martin, R.M.; "On the Language of Theology" in Existence and Actuality (ed. J.B. Cobb Jr. and F.I. Gamwell, The Univ. of Chicago Press, 1984) pp.43-65

<sup>36</sup> Ibid p.75

<sup>37</sup> Anselm's Discovery (Open Court, La Salle, 1965) p.38

actualized or concretized are accidental, or (2) only the *how* is accidental, while the *that* is necessary"<sup>38</sup>. The mode of being taken by individuals which are in category (1) is contingent existence, whereas the mode (2) is necessary existence<sup>39</sup>. The concrete actuality of necessarily existent being, i.e. the Divine, is always contingent.<sup>40</sup>

From the distinction between actuality and existence, Hartshorne believes, the concept of necessary existence can have a clear meaning.<sup>41</sup> He thinks that since "existence only requires the nonemptiness of the appropriate class of actualities, a class can be necessarily nonempty even though it has only contingent members". This necessary nonemptiness of the class is what is asserted by 'necessary existence'.<sup>42</sup>

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<sup>38</sup> Anselm's Discovery (Open Court, La Salle, 1965) p.38

<sup>39</sup> Of the existence of necessarily existent being, it is said "Although divinity is truly individual, incapable of coexisting with another in its class, yet its bare existence, its being 'somehow actualized', is quite as abstract, quite as nonspecific or noncompetitive, as 'reality as such'". Anselm's Discovery (Open Court, La Salle, 1965) p.57

<sup>40</sup> Creative Synthesis and Philosophic Method (SCM, London, 1970) p.291

<sup>41</sup> Hartshorne applies his division to Anselm's ontological argument in the following way. "Applying the distinction even to God enables me to say that instead of the dogma that all existence is contingent, the true statement is, all actuality is contingent. God necessarily exists somehow or in some state, but the actual state is contingent, for instance, knowing me now typing, which might not have been there to be known. So the divine actuality is contingent but not the divine existence, I rather hope to be remembered for this distinction" (Ibid p.75) "What Anselm had discovered, or almost discovered, was that existence and actuality (or concreteness) are in principle distinct, and that two kinds of individuals may be conceived, those whose existence and actuality, although distinct, are both contingent and those - or that one- whose actuality but not existence is contingent, this second kind being superior to all others. According to this view, any individual, no matter how superior, exists by virtue of contingent concrete states ; but whereas with you or me it is always possible that there should be no such states at all, with God, though any such state is contingent, that there is some such state is necessary." (Anselm's Discovery (Open Court, La Salle, 1965) p.40)

<sup>42</sup> Hartshorne explains about necessary existence as follows ; "The existence which in the sole case of God is taken as a predicate is not simply existence in general, but a unique and superior form or manner of existing. This superior form is necessary existence or existence without conceivable alternative of failing to exist. Self-existence, existence through itself. --- In other words, ordinary existence is an inferior or comparatively 'untrue' form of existing, existence not through self but through another, always with the threat, the conceivable alternative, of not existing or of never having existed. The existence of all save God is precarious, accidental." (C. Hartshorne ; Anselm's Discovery (Open Court, La Salle, 1965) pp.33-34) Here we see that the concepts of necessity employed by Hartshorne are necessity<sub>3</sub> of certainty without causality and necessity<sub>7</sub> of aseity in my classification.

### 3.2. Necessary Existence and Pros.III

To the Kantian objection that an ontological argument collapses from the start since existence is not a property, Malcolm and Hartshorne reply that necessary existence is a property even though existence is not, and they interpret the argument for the existence of God in Pros.III as a valid argument. It is explained, in 2.1., that Malcolm and Hartshorne's interpretation of Pros.III is criticized as being invalid on the ground that there is an improper shift in the meaning of necessity, and that there is no concept of necessary existence which is both intelligible and at the same time suitable as a subject of an a priori argument, i.e. it is inevitable to commit an improper shift in the meaning of necessity to interpret the Pros.III argument as a valid argument. Purtill argued, "although there are senses of necessity that can be legitimately connected with existence, and senses of necessity for which the ontological argument is valid, there is no sense of necessity that can be legitimately connected with existence *and* for which the ontological argument is valid<sup>\*</sup>".

Hick criticizes Malcolm and Hartshorne by claiming that necessary existence is meaningful only when it is understood as eternal or a se existence, but the concept of necessity in the conclusion of Malcolm and Hartshorne's interpretation is logical necessity, and it is from this shift in the meaning of necessity that they contend that the Pros.III argument is a valid one. 'Necessary existence' in the sense of eternal existence or a se existence is meaningful enough, but necessary existence in this sense cannot be proved by an a priori argument. So the concept of necessity should be shifted to logical necessity in the conclusion of the argument. However, even if necessity in the sense of logical necessity is a suitable subject for an a priori argument, 'necessary existence' in the sense of logical necessity is not an intelligible concept. Hick criticizes Malcolm and Hartshorne as fluctuating between different senses of necessity as they please, and in this way interpreting the Pros.III argument as a valid argument. There is no possible way to interpret the Pros.III argument as valid, Hick claims, since there is no concept of necessity which is intelligible when combined with existence and at the same time suitable as

<sup>\*</sup>"Hartshorne's Modal Proof" in Journal of Philosophy vol.63 1966

a subject of an a priori argument. In a similar manner, Findlay sets up his "ontological disproof" of the existence of God.<sup>43</sup> He argues that if something is to be the object of religious worship, it must have logically necessary existence, but since necessary existence in this sense is a self contradictory concept like round square, he concludes that such a necessary being does not exist.

It is quite correct to analyze the concept of necessity to estimate the legitimacy of the concept of necessary existence, and the consistency of the concept throughout the whole argument. But it seems to me that Hick's and Purtill's criticism is also problematic. Hick and Purtill do not analyze the concept of existence when they accept the meaningfulness of a certain concept of necessary existence through the analysis of necessity. Now, if existence is as multi-meaning a concept as necessity as is shown in 3.1., it must be clarified what sense of existence is logically incompatible with the concept of logical necessity, and what sense of existence Anselm employs. Actually, Shaffer argues that there should be a shift in the meaning not of necessity but of existence, if an ontological argument is going to be valid. Whether Shaffer's argument is cogent or not, what is obvious is that the concept of existence is as various as that of necessity. Hick, Findlay and Purtill pay some attention to the clarification of the notion of necessity, but not of existence. Hartshorne and Malcolm are open to challenge that they do not exercise due care in their use of 'necessity'. Hick and Purtill should also be criticized for not paying attention to their use of 'existence' when they talk about necessary existence. If it is inevitable for the appreciation of Pros.III to ask what kind of necessity can coherently qualify existence, it should also be asked which concept of existence is employed in the concept of necessary existence, given that existence is not a univocally used term in the history of human discourse. To consider the Pros.III argument properly, and to evaluate Hick and Purtill's criticism that "although there are senses of necessity that can be legitimately connected with existence, and senses of necessity for which the ontological argument is valid, there is no sense

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<sup>43</sup> J.J.C. Smart; "The Existence of God" in New Essays in Philosophical Theology, Findlay; "Can God's Existence Be Disproved?" Ibid., J. Hick; "God as a Necessary Being" in Journal of Philosophy vol.57, 1960, "A Critique of Second Argument" in Many Faced Argument, T. Penelhum; "Divine Necessity" in Mind vol.69, 1960 pp.175-186, A.C.A. Rainer; "God and Necessity" in Mind vol.58, 1949, pp.75-77

of necessity that can be legitimately connected with existence *and* for which the ontological argument is valid", we have to analyze not only the concept of necessity but also the concept of existence. Actually, Malcolm advocates his own view by arguing that all assertions of existence do not have one and the same kind of meaning, that "there are as many kinds of existential propositions as there are kinds of subjects of discourse"<sup>44</sup>.

We have to scrutinize both different meanings of necessity and different meanings of existence, and possible conceptual combinations of necessity and existence, to see if there really is not a concept of necessary existence which will satisfy Hick and Purtill's demand.

Anselm is sometimes thought of as a medieval realist. Realism in medieval thought<sup>45</sup> is the doctrine that universals have objective existence. We can call this Platonic realism. According to Plato, knowledge must be of something constant. All the objects which are conceived by the senses are capable of change. Ideas, however, are unchanging and unchangeable. It is ideas that really exist. Ideas which are constant and real are objects of knowledge. Since knowledge is of something real and constant, knowledge is discovery rather than invention. Philosophers, by their ascent from the particular to the general, discover not facts about objects perceptible to the senses, but the real world of true and changeless being.<sup>46</sup> In Platonic realism, ontological

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<sup>44</sup> Malcolm, N.; "Anselm's Ontological Arguments" in The Existence of God (ed. J. Hick, Macmillan, 1964) p.59

<sup>45</sup> According to Dummett, many different types of realism, such as "realism about material objects, opposition to which has traditionally taken the form of phenomenalism ; realism about the theoretical entities of science, which is opposed by scientific positivism ; realism about mathematical statements --- opposition to which is known as 'constructivism' ; realism about mental states, events and processes, to which is opposed behaviourism ; realism about the past and about the future", have a common feature that they insist in the existence of particular entities - material objects, universals, etc. And many different types of anti-realism commonly take the form of reductionism. "Thus phenomenalism holds that material object statements are reducible to ones about sense-data, and scientific positivism that statements about electrons relate ultimately only to pointer-readings ; statements about character are really about behaviour, we may say ; and the behaviourist says the same about statements concerning desires, intentions, mental images, etc." M. Dummett, Truth and Other Enigmas (Duckworth, London, 1978) pp.145-165

<sup>46</sup> Haren, M.; Medieval Thought The western intellectual tradition from antiquity to the thirteenth century (Macmillan, 1985) pp.10-11, Marenbon, J.; Early Medieval Philosophy (480-1150) An introduction (RKP,

credit is given primarily to ideas rather than to perceptible particulars. Ideas are considered to exist in reality and the particulars which can be perceived by the senses are held to depend on the ideas for being what they are. Anselm is said to inherit Platonism from Augustine.<sup>47</sup> For Augustine as for Plato, there is hierarchical order in the universe<sup>48</sup> and the assessment of the world of sense experience is made by reference to ideas. Particulars which are perceived by senses are only semireal. If they are real, it is because they manifest the ideas in some way or other ; if they are unreal, it is because they lack the perfection of ideas and are subject to the laws of material change and decay. Thus, ideas are required to confer to particulars such reality as they do have. In this context of realism, Anselm is said to have a different notion of existence from that of his critics, Gaunilo, for example. Anselm has a view that essence has primary ontological status rather than particulars.<sup>49</sup>

E. Gilson strongly affirms that what the proponents of the ontological argument have in common is "the identification of real existence with intelligible being conceived by thought", and what the opponents of it have is "the refusal to consider any problem of existence aside from an empirically given existent"<sup>50</sup>. Regardless of the cogency of Gilson's argument, if it

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1983) p.4

<sup>47</sup> Haren explains, "Though the supernature of Anselm's thought was his own and was designed and executed with originality and skill, it rested on the Christian Platonist foundation which Augustine had so firmly laid". (Ibid pp.96-97)

<sup>48</sup> M. H. Carre also thinks Augustine is identified as an exponent of Platonic realism. Realists and Nominalists (Oxford Univ. Press, 1946)

<sup>49</sup> Miller, P.J.W.; "The Ontological Argument for God" in The Personalist, vol.42, 1961 p.346. Miller says, "In a Platonic and Augustinian philosophy, such as that of St. Anselm, on the other hand, the concept we have of goodness represents just the essence of goodness itself, independently of any mode in which goodness actually exists, i.e., independently of any object which is good. --- What the mind conceives, according to Anselm, is an essence shorn of all existential conditions, whereas what the mind conceives, according to Thomas, is simply the being of existing sensible things rendered intelligible by abstraction". (p.344) "It is evident that in this philosophy existence has no independent meaning. It signifies merely the perfect exercise of essence. The sole principle of the reality of the thing is its essence, which determines it to some determinate degree of being. Anselm's philosophy is one of the many inspired ultimately by Plato, according to whom being in the real order is the being of essence, or being as intelligible, which is the complete embodiment of the essences grasped in our concepts." (p.348)

<sup>50</sup> Gilson, E.; History of Christian Philosophy in the Middle Ages (Sheed and Ward, London, 1955) p.134

is conceded that Anselm inherits Platonic realism in his theory of reality<sup>51</sup>, we do not have any reason to confine the concept of existence employed by Anselm to that of Meinong's existence and Hartshorne's actuality.

If Anselm's existence is like Meinong's subsistence or *Sosein*, or Hartshorne's existence, we need not say that necessary existence is meaningless when necessity is interpreted as logical necessity, even if logical necessity is treated, as Findlay treats it, as merely reflecting arbitrary conventions for the use of language. If Anselm's existence is the mode of being of abstract ideas, like existence in Platonic realism, existence means that there is no self-contradiction in a concept for a being. This sense of existence is quite compatible with logical necessity, even when logical necessity is thought to be a mere reflection of arbitrary linguistic conventions. For there is no absurdity in the concept of "object which is represented by a conventionally non self-contradictory concept"<sup>52</sup>. To argue that necessary existence is a logically absurd concept is not as simple as Hick and Findlay think, even when necessity is interpreted as linguistic convention.

There are many compatible combinations of 'necessity' and 'existence' which could have been employed in Pros.III. Some concepts of necessary existence meet the condition not only of intelligibility but also of suitability as a subject of an a priori argument, i.e. some concepts of necessary existence satisfy Hick and Purtil's demand. If there are combinations of 'necessity' and 'existence' which are intelligible in themselves *and* are capable of being a subject of an a

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<sup>51</sup> R. I. Aaron points out that Anselm accuses Roscelin and his school of teaching that universals were mere vocal utterances, i.e., that they identified the universal with the spoken general word. And Carre also argues, "If individuals and not universals are the primary reality the doctrine of the unity of the Godhead is endangered. If it is denied that persons are one in virtue of their humanity, it follows that the Persons of the Trinity do not constitute a substantial unity in virtue of their Divinity. We shall find Anselm pressing this contention against the nominalists". (*op. cit.*, p.37)

<sup>52</sup> 'Logical necessity' means 'true solely in virtue of linguistic conventions', 'necessary existence' means 'object which is represented by a conventionally non self-contradictory concept'. We can ask whether the concept is consistent or not. But it is not in point to ask that this notion of necessary existence be synonymous with the notion of necessary existence in the sense of aseity or eternity etc. If we have chosen a meaning of necessity, we must not oscillate between different meanings of necessity when we talk about necessary existence.

priori argument, we need not follow Hick's criticism that 'necessary existence' is intelligible only when necessity is understood as factual necessity and that the Pros.III argument fails since factually necessary existence cannot be a subject of a priori argument. There are many other possible ways to understand 'necessary existence' which satisfy not only the logical consistency of the concept but also its suitability to be the subject of an a priori argument. Hick's criticism seems not to address a crucial flaw in Hartshorne's interpretation of Pros.III, since it does not pay attention to the fact that 'existence' is as multi-meaning as 'necessity' in human discourse, and since the argument that only necessity in the sense of conventionality can be the subject of an a priori argument is groundless. This may reflect that their analysis of necessity is not sufficient.

We can make combinations of 'necessary existence' from the analysis of 'necessity' in 2.3. and the analysis of 'existence' in 3.1. There are many concepts of necessary existence in these combinations which are intelligible and can be consistently held throughout the Pros.III argument and are suitable as a subject for an a priori argument. In terms of the distinction between extensional and intensional existence, for example, the former is compatible with the notion of necessity in the sense of eternity (necessity<sub>6</sub>), aseity (necessity<sub>7</sub>) and indispensability (necessity<sub>8</sub>); the latter is compatible with conventionality (necessity<sub>1</sub>), apriority (necessity<sub>4</sub>) and logical validity (necessity<sub>5</sub>). Among these, the necessary<sub>4</sub> (a priori) intensional existence and the necessary<sub>5</sub> (logically validly inferred) intensional existence are both intelligible and suitable as a subject of a priori argument. And in Meinong's division of existence and subsistence, necessary<sub>1</sub> (conventional) subsistence, necessary<sub>4</sub> (a priori) subsistence, and necessary<sub>5</sub> (logically validly inferred) subsistence are not only intelligible but also suitable as subjects for a priori argument. We can make a complicated diagram for the conceptual compatibility and incompatibility of necessary existence, and its suitability to be the subject of an a priori argument. Anselm does not give a definite account of his use of 'existence' in his writings. But if it is possible to interpret him as a Platonic realist<sup>\*</sup>, we should be better not to conclude that Anselm's existence in Pros.III is only extensional existence in view of the fact that existence is so complicatedly employed in human discourse as necessity.

\* Anselm's De Veritate reveals Platonism very well.



It does not matter whether Hartshorne and Malcolm have actually employed one of these concepts of necessary existence which are both intelligible in themselves and suitable as a subject of an a priori argument in their interpretations of Pros.III. What is important is that if we employ one of these concepts of necessary existence for the interpretation of the Pros.III argument, the argument is a valid argument. Purtill acknowledges that Hartshorne's reconstruction of the Pros.III argument<sup>53</sup> is not valid because Hartshorne's concept of necessary existence has shifted. According to Purtill and Hick, even if Hartshorne's reconstruction of the Pros.III argument <sup>seems to be valid prima facie</sup>  $\wedge$  it cannot be a valid argument since the concept of necessity in 'necessary existence' has shifted from the concept of factual necessity to the concept of logical necessity. They argue that if the Pros.III argument as reconstructed by Hartshorne is going to be a valid argument for the existence of God, there should be a concept of necessary existence which is both intelligible in itself and suitable to be the subject of an a priori argument. If there is a concept of necessary existence which satisfies Purtill's demand, we can employ this concept of necessary existence for the interpretation of the Pros.III argument, even if Hartshorne did not employ this concept, and on this basis we can claim that the Pros.III argument is valid. With a concept of necessary existence which satisfies Purtill's demand and the formal validity of Hartshorne's reconstruction, we can interpret the argument for the existence of God in Pros.III as a valid argument.

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<sup>53</sup> Purtill, R.L.; "Hartshorne's Modal Proof" , see note on p.47

## 4. Truth and Logical Truth

### 4.1. Introduction

It has been shown that the arguments in Anselm's Pros.II and III are valid if some principles are accepted. The adoption of an extensional semantics as the meta theory made us interpret the argument in Pros.II as a logically valid argument, and analyses of 'necessity' and 'existence' could vindicate a Hartshorne-Malcolm interpretation of the Pros.III argument against Hick and Purtill's criticism. If there are people who choose an extensional semantics for an interpretation of Pros.II, they will accept the validity of the argument. And people who think that my vindication of the Pros.III argument is acceptable will acknowledge the validity of the Pros.III argument. Now a question arises : do those people who acknowledge the logical validity of the arguments think that God's existence is proved ? If some of them still do not believe that God exists, it may be because they do not accept premises employed in these arguments as true. Many have thought about the meaningfulness of the formula for God and Anselm's premise that something is greater when existing both in intellectu and in re than when existing only in intellectu<sup>1</sup>. It is reasonable for those who do not accept the meaningfulness of the formula or Anselm's principle not to accept the conclusion that God exists. Those who do not acknowledge the logical principles employed in Purtill's rearrangement can also legitimately deny the validity of the argument in Pros.III. A question remains concerning the people who both accept the logical analyses employed in my interpretations of the arguments and the truth and meaningfulness of premises in the arguments. The question is, "Do they all recognize that God exists ?", or "Do they convert to theism if they were atheists before ?"

As Malcolm notices, there are still atheists who understand Anselm's arguments as valid. The

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<sup>1</sup> This is called Anselm's Principle. W. L. F. Gombocz; "St. Anselm's Disproof of the Devil's Existence in the Proslogion" in Ratio vol.15, 1973 : R. J. Richman; "The Ontological Proof of the Devil" in Philosophical Studies vol.9, 1958 : W. Rabinowiz; "An Alleged New Refutation of St. Anselm's Argument" Ratio vol.20, 1978 Hartshorne, however, uses 'Anselm's Principle' for another principle, that God cannot be conceived not to exist. "John Hick on Logical and Ontological Necessity" in Religious Studies vol.13, 1977

only possibility for the people who recognize the validity of Anselm's arguments still to remain atheists has been thought to be to challenge the truth of the premises employed in the arguments. So a number of articles have been written about the truth and meaningfulness of premises employed in Anselm's arguments, and many authors have carefully considered whether arguments in Pros.II and III are valid or not. Now, of the atheistic possibility, can we not change the direction of our attention, that is, to the question about the function of a logically valid argument itself? What has not been thought of in relation to Anselm's arguments is the significance of logical truth or the logical validity of an argument<sup>2</sup>. We need not stick to the habit of mind which attributes the atheistic possibility only to the non acceptance of premises. Let us assume that even the premises are accepted by atheists. Do they all convert to theism? If so, the atheistic possibility should only be the problem of premises. If not, however, there is some point in raising this other question. If there are people who, recognizing the premises and validity of an argument, are still reluctant to accept the conclusion, we have reason to question the function of a valid argument. What does a logical truth say? What does a logically valid argument guarantee with true premises? How is the implication between the premises and the conclusion in a logically valid argument secured? Could it not be the case that the reason why an atheist remains an atheist even if he accepts both the validity and premises of Anselm's arguments lies in the fact that logical validity can do little to establish the facts in the world? It seems to be widely believed that a logical truth shows an absolutely certain feature of the reality, that the implication between the premises and the conclusion of a logically valid argument cannot be denied since it is an absolute aspect of the world. If we stand on this tradition, people who acknowledge the validity and truth of the premises of the arguments in Pros.II and III should admit that God's existence is proved in the conclusion. If, however, a logical truth has nothing to do with the reality of the world, a logically valid argument may not secure the conclusion as a significant fact in the world. That is, there may be a way of being consistently reasonable while accepting the premises and the validity of the

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<sup>2</sup> A logically valid argument makes a logical truth, if premises and conclusion are combined together. "An argument is valid if the combination of its premises with its conclusion is a tautology." D. Pears; Wittgenstein (Fontana, 1975) p.81, "Logical validity' has the connotation of 'truth on logical grounds'." A. Coffa; "Carnap, Tarski and the Search for Truth" in *Nous* vol.21, 1987, p.549, Carnap; *Logical Syntax of Language* p.41

ontological arguments and yet remaining an atheist or an agnostic. Certainly there are some views in philosophical logic which would make this possible, and it is part of our concern to explore them.

In this chapter, I will think of the significance of a logical truth, of what a logically valid argument shows, of how the implication between the premises and the conclusion of a logically valid argument is secured. Our view of the significance of a logical truth has important bearing on our attitude toward arguments in Pros.II and Pros.III, and on our understanding of the function of religious discourse generally. In the next chapter, I will consider the implication of our attitude toward a logically valid argument for our understanding of the significance of the arguments in Pros.II and Pros.III, and of religious arguments generally.

Before this, a preliminary question "What is truth ?" will be asked first, since the question "What significance does a logical truth have ?" cannot be answered without an answer given to the question "What is truth ?" It is generally agreed that logical truth is a subclass of truth. Of the thesis that logical truth is a subclass of truth, Frege points out that "someone who does not grasp the unique meaning of this word ('truth', my parenthesis), may also not be clear about the task of logic" and that "it would perhaps not be wrong to say that the laws of logic are nothing but the development of the content of the word 'true'"<sup>3</sup>. Given that logical truth is a subclass of truth, some definitions of truth delimit in advance the significance of logical truth. The acceptance of some theory of truth will have implications for the reference to reality of logical truth. And therefore we cannot adopt a view of the nature of truth uncritically in this context where we are concerned with the significance of logical truth in respect of the description of reality. If we were to accept a correspondence theory of truth, for example, we would have to admit that logical truth also is correspondence to reality. For, given a correspondence theory of truth and that logical truth is a subclass of truth, we should have to concede that logical truth mirrors facts in the world. This would predetermine the conclusion of any attempt to consider the significance of logical truth, in respect of the description of the

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<sup>3</sup> Nachgelassene Schriften (ed. H. Hermes etc., Hamburg, 1969) p.3

world, in comparison with non logical truth. There is, however, a widely advocated theory of truth which both preserves the intuitive idea that logical truth is a subclass of truth, and does not of itself determine whether logical truth makes reference to reality, but leaves that last issue open. We may appropriately consider its merits next.

## 4.2. A Definition of Truth

According to C. J. F. Williams, the question "What does it mean to say something is true?" is very simple to answer. He contends, "to say that what Percy says is true is to say that things are as Percy says they are".<sup>4</sup> This probably has been the most common view of truth since Aristotle; truth is correspondence with facts. It becomes our common sense that a sentence<sup>5</sup> is true when it corresponds to reality, when it mirrors the world. A fundamental way of deciding the truth value of a sentence is comparing it with the world. This view, however, seems not to be acceptable<sup>6</sup> even to correspondence theorists, as far as the significance of logical truth is concerned. If truth is correspondence with facts, logical truth should also be correspondence with facts in the world; a logical truth should be probably a reflection of a most general feature of the world. For, given that logical truth is a subclass of truth, to be in correspondence with reality is a necessary condition for logical truth. An advocate of the correspondence theory may not be willing to accept this result. For example, Wittgenstein's view in Tractatus reveals a discrepancy in this respect.

Wittgenstein holds that a compound proposition<sup>7</sup> is a truth function of its constituent propositions - atomic propositions. By assigning truth values to its constituent propositions,

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<sup>4</sup> Williams, C.J.F.; What Is Truth? (Cambridge Univ. Press, 1976) p.2

<sup>5</sup> Of the bearer of a truth value, Austin, Quine, G. Pitcher assign it to a statement; Plantinga to a proposition; Kripke and Tarski to a sentence. I follow the last view, accepting the idea that truth is a semantic concept, that truth is a property of language - a sentence. See, Austin; "Truth" in Truth (ed. G. Pitcher, Prentice-Hall, New Jersey, 1964) pp.19-20, Quine; Reference and Modality in Reference and Modality (ed. Linsky, Oxford Univ. Press, 1971) p.17, G. Pitcher; Introduction to Truth (ed. G. Pitcher, Prentice-Hall, New Jersey, 1964) p.5,6,8, Plantinga; The Nature of Necessity p.1 (note), Kripke; "Outline of a Theory of Truth" in The Journal of Philosophy vol.72, 1975, p.691 (note 1) G. L. Hallett says, "It is statements that are true in the primary sense of true, whereas beliefs, propositions, and sentences are true only in a derivative, functionally dependent sense". in Language and Truth (Yale Univ. Press, 1988) p.190

<sup>6</sup> I am not talking about logical deficiency in versions of the correspondence theory, and I do not want to be involved in the competition between correspondence, coherent and redundancy theory of truth. What concerns me is the fact that some theory of truth should already have something to say about the significance of logical truth.

<sup>7</sup> I follow Ogden's translation.

the truth value of the compound proposition is determined. That is, propositions, according to Wittgenstein, are verbal complexes ; molecular propositions (such as  $Fa \vee Fb$ ) are composed truth-functionally out of atomic propositions (such as  $Fa$ ). The world consists of simples, or logical atoms, in various complexes, or arrangements, which are facts. In a perspicuous language, the arrangement of words in a true atomic proposition would mirror the arrangement of simples in the world ; correspondence consists in this structural isomorphism. In this way, "the proposition is a picture of reality" (4.01)<sup>8</sup> ; a true proposition should picture a fact in the world. Logical truth should not be an exception to the theory if logical truth is a subclass of truth. Logical truth, however, in *Tractatus*, says nothing about the world. It is completely empty. Wittgenstein says, "Tautology and contradiction are not pictures of the reality. They present no possible state of affairs. For the one allows every possible state of affairs, the other none. In the tautology the conditions of agreement with the world - the presenting relations - cancel one another, so that it stands in no presenting relation to reality" (4.462). So, from his picture theory of meaning, propositions of logic are meaningless (4.461) and say nothing about the world. There arises an apparent contradiction between Wittgenstein's theory of truth and logical truth. If logical truth is a subclass of truth, it must have the property of truth - picturing the world - as a necessary condition.

We can have two ways to avoid this apparent discrepancy in Wittgenstein's theories of truth and logical truth. The first is to argue that logical truth is not a subclass of truth, the second is to treat a logical proposition not as a meaningful proposition at all.<sup>9</sup> Wittgenstein seems to take the second alternative. He says, "The proposition shows what it says, the tautology and the contradiction that they say nothing. The tautology has no truth-conditions, for it is unconditionally true ; and the contradiction is on no condition true. Tautology and

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<sup>8</sup> What a proposition pictures is a state of affairs (Sachlage), rather than a fact (Tatsache). So a false proposition can have meaning and a truth value. A true proposition pictures a fact.

<sup>9</sup> The relation between these two ways may depend on one's view about whether the notion of meaningfulness is primitive to the notion of truth, or vice versa. If we take meaningfulness as primitive to truth, the second way is stronger than the first. If, however, we explain the meaning of a sentence only in terms of the truth condition of the sentence, as shown in Dummett's explanation of Frege's contextualism, the first way is stronger than the second.

contradiction are without sense"<sup>10</sup> (4.461). Propositions of logic are not propositions at all. A proposition should be in relation with the world,<sup>11</sup> but propositions of logic say nothing about the world. As Kenny points out, they are propositions only by courtesy.<sup>12</sup>

The acceptance of the correspondence theory as explained in Tractatus led to the conclusion that logical truth as a subclass of truth should picture the world. But this was not accepted, and so there arose a discrepancy. There were two alternatives to avoid the discrepancy : to argue either that logical truth is not a subclass of truth, or that a logical proposition is not a proposition at all. Wittgenstein adopted the second alternative. The discrepancy vanished at the sacrifice of the propositional status of a logical proposition. If there is a definition of truth in which we do not sacrifice the propositional status of a logical proposition, sustaining the principle that logical truth is a subclass of truth, and which does not itself pre-answer the question of the significance of logical truth, the theory may be said to be more suitable as a theory of truth, which is a necessary condition for logical truth, than the correspondence theory as employed in Tractatus. Without the possibility of this kind of definition, study of the substantial significance of logical truth cannot even start.

Tarski's theory of truth "has been probably the most influential and most widely accepted theory of truth. His theory falls into two parts : he provides, first, adequacy conditions, i.e. conditions which any acceptable definition of truth ought to fulfil ; and a definition of truth which he shows to be, by his own standards, adequate"<sup>13</sup>. According to him, for a satisfactory definition of truth, the formation of conditions for determining whether the

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<sup>10</sup> There is an apparent inconsistency between the sentences 'The tautology --- is unconditionally true' and 'Tautology --- are without sense'. But if we understand Wittgenstein to take the notion of truth to be primitive to meaningfulness, as explained in note 9 above, we may be able to avoid the inconsistency.

<sup>11</sup> It is said, "And the proposition is the propositional sign in its projective relation to the world (3.12)", "The simplest proposition, the elementary proposition, asserts the existence of an atomic fact (4.21)", "The proposition shows its sense. The proposition shows how things stand, if it is true. And it says, that they do so stand (4.022)".

<sup>12</sup> Kenny, A.; Wittgenstein (Penguin Books, 1976) p.68

<sup>13</sup> Haack, S.; Philosophy of Logics (Cambridge Univ. Press, 1979) p.99



acquired definition is materially adequate and formally correct is prerequisite. The first of these conditions sets limits on the possible content, the second on the possible form of any acceptable definition.

"We must first specify the conditions under which the definition of truth will be considered adequate from the material point of view. --- Secondly, we must determine on what the formal correctness of the definition depends. Thus we must specify the words or concepts which we wish to use in defining the notion of truth ; and we must also give the formal rules to which the definition should conform. Speaking more generally, we must describe the formal structure of the language in which the definition will be given."<sup>14</sup>

He proposes, as the material adequacy condition, that any acceptable definition of truth should have as consequence all instances of the (T) scheme ;

(T) X is true iff p.

where 'p' is replaced by any sentence of the language for which truth is being defined, and 'X' is replaced by a name of this sentence. An instance of (T) would be ;

'Snow is white' is true iff snow is white.

He says,

"We should like our definition to do justice to the intuitions which adhere to the classical Aristotelian conception of truth - intuitions which find their expressions in the well-known words of Aristotle's *Metaphysics* ; To say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, or of what is not that it is not, is true"<sup>15</sup>.

From this we can formulate the conditions under which we will consider the usage and the definition of the term "true" as adequate from the material point of view ; a definition of truth is called "adequate" if all the equivalences of (T) follow from it.

Tarski emphasizes that the (T) schema is not a definition of truth. It is a material adequacy condition. All instances of it must be entailed by any definition of truth which is to count as

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<sup>14</sup> Tarski, A.; "Semantic Conception of Truth" in Readings in Philosophical Analysis (ed. Feigl and Sellars, New York, 1940) pp.52-53

<sup>15</sup> Ibid pp.53-54

materially adequate. The import of the schema (T) is that its satisfaction will guarantee that the truth predicate 'true' will have the class of true sentences as its extension.

"The point of the (T) schema is that, if it is accepted, it fixes not the intension or meaning but the extension of the term 'true'. Suppose one had two definitions of truth,  $D_1$  and  $D_2$ , each of which was materially adequate. Then  $D_1$  would entail all instances of ;

X is true<sub>1</sub> iff p  
and  $D_2$  all instances of ;

X is true<sub>2</sub> iff p  
so that  $D_1$  and  $D_2$  are co-extensive. Or, to put essentially the same point in another way, the material adequacy condition would rule out certain definitions of truth, those which did not entail instances of the (T) schema."<sup>16</sup>

The formal requirement which Tarski wants to accomplish is about "the structure of the language in which the definition of truth should be given, the concepts (or vocabulary) which may be employed in the definition, and the formal rules to which the definition must conform". The language in which the definition of truth will be given must not generate any antinomy. Tarski thought antinomy, as in the liar paradox, arises from the assumptions :

- (1) That the language used contains within itself, in addition to its expressions, (a) the means of referring to those expressions themselves and (b) such semantic predicates as 'true' and 'false'.

Such a language Tarski calls 'semantically closed'

- (2) That the usual logical laws hold.<sup>17</sup>

These assumptions are essential to generate the antinomy. So we must reject one of these assumptions to avoid antinomy. But unwilling to reject assumption (2), i.e. unwilling to change our classical logical system, Tarski concludes that "a formally correct definition of truth should be expressed in a language which is not semantically closed".

If it is inevitable not to use semantically closed language for the definition of truth, we have to use two different languages in discussing the problem of the definition of truth. The first of

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<sup>16</sup> Haack, S.; *Philosophy of Logics* p.100

<sup>17</sup> Cited from Haack's book p.102

these language is the language which is "talked about" and which is the subject matter of the whole discussion ; the definition of truth which we are seeking applies to the sentences of this language. The second is the language in which we "talk about" the first language, and in terms of which we wish to construct the definition of truth for the first language. The first language is referred to as "the object-language" and the second "the meta-language."

The vocabulary of the meta-language is determined by previously stated conditions of material adequacy. It was conceded that any acceptable definition of truth has to imply all equivalences of the form (T) ;

(T) X is true iff p.

The definition itself and all the equivalences implied by it are to be formulated in the meta-language. And the symbol 'p' in (T) stands for an arbitrary sentence of the object-language. Hence it follows that every sentence which occurs in the object language must also occur in the meta-language, in other words, the meta-language must contain the object-language as a part . Furthermore, the symbol 'X' in (T) represents the name of the sentence which 'p' stands for. Therefore the meta-language must be able to provide a name for every sentence of the object-language. In addition, the meta-language must contain terms of a general logical character, such as the expressions "iff". And the semantic terms (referring to the object-language) are to be introduced into the meta-language only by definition.

Any acceptable definition of truth, then, according to Tarski, must satisfy both the material adequacy and the formal correctness conditions. He gives a definition, and shows that his definition of truth is, by these standards, acceptable.

Tarski points out that "each instance of (T) is a partial definition of truth, in that each instance specifies the truth-conditions of some one specific sentence ; so that a conjunction of all instances of the (T) schema, one for each sentence of object language, would constitute a complete definition". Tarski, however, argues that it is not possible to give such a conjunctive

definition, for the number of sentences of a language may be infinite, and in this case it may be impossible actually to give all the required instances of the (T) schema. So Tarski thinks that (T) schema is not, and moreover cannot be turned into, a definition of truth. He constructs his own definition by a roundabout route. He takes it as a desideratum that no semantic terms should be taken as primitive, so that any semantic notion in terms of which 'true' is defined should be itself defined. Since he is to define 'true' using the concept of satisfaction, he must first define 'satisfies'.

According to Tarski, the notion of 'satisfaction' is a suitable notion to define 'true' because "closed, compound sentences are formed out of open sentences<sup>18</sup>, rather than closed, atomic sentences". For example,  $(\exists x)(Fx \vee Gx)$  is formed out of 'Fx' and 'Gx' by the operations of disjunction and existential quantification; and the open sentences are neither true nor false, but satisfied or not by objects. "The definition of satisfaction is recursive - that is, definitions are given first for the simplest open sentences, and then the conditions are stated in which compound open sentences are satisfied." Under Tarski's formulation, the concept of satisfaction is introduced as a relation between the open sentences (predicates) of an object language and objects. Truth for all closed sentences of the language is a function of the satisfaction of open sentences from which they are formed.

The following is the explanation of satisfaction by Tarski. Satisfaction is a relation between open sentences and ordered n-tuples of objects. That is, 'x is a city' is satisfied by London, and 'x is north of y' is satisfied by [London, Exeter].<sup>19</sup> The order of the items is important. Tarski defines satisfaction as a relation between open sentences and infinite sequences, under the convention that  $F(x_1 \dots x_n)$  is to be satisfied by the sequence<sup>20</sup>  $[O_1 \dots O_n, O_{n+1} \dots]$  just in case it is satisfied by the first n members of the sequence; subsequent members are ignored.

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<sup>18</sup> My note; Open sentences are what are called "propositional functions" in Russellian terminology.

<sup>19</sup> These are examples in Haack's *Philosophy of Logics*.

<sup>20</sup> Tarski himself does not use the word 'sequence' of objects. He simply says 'arbitrary objects'. For the word 'sequence', Haack says, " --- they are satisfied --- by certain things, pairs of things, triples of things, etc." (*Philosophy of Logics* p.106)

The negation of an open sentence  $S_1$  is satisfied by those sequences which do not satisfy  $S_2$  ; and the conjunction of  $S_1$  and  $S_2$  by those sequences which satisfy  $S_1$  and  $S_2$ . A quantified sentence like '(Ex)(x is a city between y and z)' is thought to be satisfied by a sequence of objects, if we can make another sequence, which satisfies the open sentence resulting from dropping the quantifier, '(x is a city between y and z)' in the case of the example above, by changing the original sequence in at most the  $i$ th place (where the  $i$ th is the variable bound by the quantifier). For instance, the sequence [England, London, Edinburgh ---] or [Socrates, London, Edinburgh ---] satisfies '(Ex)(x is a city between y and z)', since we can make a sequence, for example, [York, London, Edinburgh ---] which satisfies 'x is a city between y and z', by changing the first place in the sequences of [England, London, Edinburgh ---] and [Socrates, London, Edinburgh ---].

Closed sentences are special cases of open sentences, those with no free variable. It was said that ' $F(x_1 \dots x_n)$ ' is satisfied by the sequence  $[O_1 \dots O_n, O_{n+1} \dots]$  when it is satisfied by the first  $n$  numbers of the sequence. Subsequent numbers are ignored. So in sentences where there are no free variables, even the first member of a sequence, and all subsequent members are irrelevant to whether or not the sequence satisfies a 0-place open sentence, i.e. a closed sentence. This means that a closed sentence, if true, is satisfied by every possible sequence of objects. In this way, Tarski defines a sentence as true just in case it is satisfied by all sequences, and as false just in case it is satisfied by none. For example, the 2-place open sentence 'x is north of y' is satisfied by e.g. all sequences [Edinburgh, London---], whatever their third and subsequent members are. The 1-place open sentence 'x is a city' is satisfied by e.g. all sequences, [Edinburgh---], whatever their second and subsequent members are. And every true 0-place open sentence '(Ex)(x is a city)' is satisfied by all sequences [-----] whatever their first and subsequent members are. It is explained above that a quantified sentence like '(Ex)(x is a city between y and z)' is satisfied by sequences of [England, London, Edinburgh - -] and [Socrates, London, Edinburgh ---], since we can make a sequence [York, London, Edinburgh ---] which satisfies '(x is a city between y and z)' by changing the first place of the

sequence [England, London, Edinburgh ---]. Now in the case of ' $(\exists x)(x \text{ is a city})$ ', we can make a sequence which satisfies ' $(x \text{ is a city})$ ', like [Edinburgh ---], from any sequence of objects by changing the first place of the sequence. A closed sentence, if true, is satisfied by every sequence of objects. Any closed sentences will be satisfied by all sequences or by none, and cannot be satisfied by some and not others. Tarski's theory of truth is that a sentence is true if it is satisfied by every sequence of objects, and false if it is satisfied by no sequence of objects.

Tarski's definition of truth in terms of satisfaction can apply to both factual and logical truth. If, for example, ' $(\exists x)(x=x)$ ' is a theorem of classical logic, the truth of the theorem can be established in terms of satisfaction ; all sequences of objects satisfy the sentence so that it is true. This definition of truth can be applied to non logical truth without any revision, as shown in ' $(\exists x)(x \text{ is a city})$ '. The intuitive idea that logical truth is a subclass of truth is met in this definition. It is said, "The sentences which are distinguished as axioms seem to us to be materially true". We have a theory of truth which can determine the necessary condition of logical truth i.e. which keeps the principle that logical truth is a subclass of truth, and at the same time does not trivialize the study of the significance of truth.

### 4.3. Logical Imperialism

Logic has been a primary method for theological and philosophical speculations. Logical truth has been thought of as showing the most general aspects of the world, and as having necessity which an empirical truth lacks. The truth in logical proposition has been used to infer the corresponding necessity in reality. Laws of logic are laws of things in the world.<sup>21</sup> The law of contradiction, for example, is taken to guarantee the extra logical fact that there is nothing which is different from itself. Logical truth has the supremacy to judge if a thing can happen or not in the world. Nothing can exist which logic excludes. The actuality of being cannot exceed the possibilities given in logical laws. This is the ground on which logic is employed as the method of theological speculation. We can agree with Aquinas that it is no limitation on God that He cannot perform logical absurdities and that He cannot be a logical absurdity. In this tradition, logical validity is one of our criteria of reality.<sup>22</sup> This tradition goes back to Aristotle. In Aristotle, logic has strong ontological connotations. Of the ontological implication of logical laws in Aristotle, it is said,

"It constitutes as it were the first chapter of a systematic presentation of the science of being. It presupposes no other theory, and on this account can be described as the most general theory of all"<sup>23</sup>.

On this view, a logically valid argument is instructive in the sense that it makes clear the connection between the conclusion and the premises, that it makes the connection between the conclusion and the premises to be a necessary feature of reality. Of the function of logical

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<sup>21</sup> "In this relation between the nature of science and the nature of things is seen the fact that the laws of science, of thought, are also the laws of things. This necessary assumption, trust and hope of the intellectual enterprise is fundamental to the possibility, meaning and validity of science. Science assumes that its expression of facts and laws on the one hand, agrees in the main with the fundamental laws of the world of reality on the other." (J. Gaspard; "On the Existence of a Necessary Being" in The Journal of Philosophy vol.30, 1933, p.10)

<sup>22</sup> Davies, A.E.; "The Problem of Truth and Existence as Treated by Anselm" in Proceedings of Aristotelian Society vol.20, 1920 pp.177-9

<sup>23</sup> Lejewski, C.; "Logic, Ontology and Metaphysics" in Philosophy in Britain Today (ed. S. G. Shanker, Croom Helm, London, 1986) p.188

validity in logical imperialism, it is said,

"Argument in this sense may yield new knowledge to the extent that, as Aristotle states it, "before he was led to recognition or before he actually drew a conclusion, we should perhaps say that in a manner he knew, in a manner not""<sup>24</sup>

If we accept logical imperialism, we have to concede that the only reasonable attitude would be to accept a conclusion which is inferred from true premises and valid argument. The only possibility for an atheist who understands Anselm's arguments as logically valid still to remain an atheist is, as Malcolm and others think, only in the matter of premises.

I will consider the cogency of logical imperialism in relation to the possibility of deviant logics later, but in the next section I will be engaged in modern alternatives to logical imperialism.

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<sup>24</sup> Sontag, F.; "The Meaning of 'Argument' in Anselm's Ontological 'Proof'" in The Journal of Philosophy vol.64, 1967, pp.460-461



#### 4.4. Logical Nihilism

There is a doctrine that logical truth only reflects rules of use of language, especially, the use of logical constants, and that through logical truth we know only the way logical words are used . It may be called the linguistic doctrine of logical truth. According to this view, the truth of certain sentences of a language follows by virtue of the rules or conventions governing the expressions of the language. According to the classical positivist position, these logical or analytical truths comprise all the true sentences of logic and mathematics. M. Schlick asserts that "the validity of logic has nothing to do with any properties of the universe but it is concerned with the equivalence of different expressions" ; logical truth is grounded on human conventions for language rather than on matters of fact. Logical truth is seen as founded on purely linguistic or conceptual considerations, i.e. a logical truth can be searched for only through investigation into language and the rules governing its use. Linguistic rules for logical constants are taken as the only basis of logical truth. Given a language with its rules of use, such and such sentences are true without reference to matters in the world.

Carnap may be instanced as a leading proponent of this view. He argues,

"There has been much controversial discussion recently on the question whether or not logic is conventional. Are the rules on which logical deduction is based to be chosen at will and, hence, to be judged only with respect to convenience but not to correctness ? Or is there a distinction between objectively right and objectively wrong systems so that in constructing a system of rules we are free only in relatively minor respects (as, e.g. the way of formulation) but bound in all essential respects ?

The result of our discussion is the following : logic or the rules of deduction (in our terminology, the syntactical rules of transformation) can be chosen arbitrarily and hence are conventional if they are taken as the basis of the construction of the language system and if the interpretation of the system is later superimposed. On the other hand, a system of logic is not a matter of choice, but either right or wrong, if an interpretation of the logical signs is given in advance. But even here, conventions are of fundamental importance ; for the basis on which logic is constructed, namely, the interpretation of logical signs (e.g. by a determination of truth conditions) can be freely chosen.

It is important to be aware of the conventional components in the construction of a

language system. This view leads to an unprejudiced investigation of the various forms of new logical systems which differ more or less from the customary form (e.g. the intuitionist logic constructed by Brouwer and Heyting, the systems of logic of modalities as constructed by Lewis and others, the systems of plurivalued logic as constructed by Lukasiewicz and Tarski, etc.), and it encourages the construction of further new forms. The task is not to decide which of the different systems is "the right logic" but to examine their formal properties and the possibilities for their interpretation and application in science. It might be that a system deviating from the ordinary form will turn out to be useful as a basis for the language of science".<sup>25</sup>

Wittgenstein shows a similar view in his Tractatus. In Frege's and Russell's systems of logic, a number of formulae are employed as axioms and they have a privileged status as self evident primitive logical truths. From these axioms, through rules of inference, theorems are derived. Logical truths are taken by Frege and Russell to be "rested on axioms which were generalizations certified to be self evident by inspection of the primitive concepts of logic"<sup>26</sup>. Wittgenstein criticizes this view. He thinks that axioms in Frege's and Russell's systems are introduced as self evident without justification and suggests his truth table method to the effect that "one can calculate whether a proposition belongs to logic, by calculating the logical properties of the symbol --- using only rules that deal with signs"<sup>27</sup>. Wittgenstein distrusted "the appeal to self-evidence, and offered instead a method of calculation which was mechanical in the literal sense that it could be carried out by a machine"<sup>28</sup>. His method is applied to all logical truths to show how they have truth values, irrespective of whether it is an axiom or a theorem. Thus all propositions of logic are seen to be of equal status, without any being taken as primitive.<sup>29</sup> Of the advantage of Wittgenstein's truth table method for the interpretation of

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<sup>25</sup> Carnap, R.; Foundations of Logic and Mathematics (Univ. of Chicago Press, 1946) pp.26-29

<sup>26</sup> Baker, G.P.; Frege : Logical Excavations (Oxford Univ. Press, 1984) p.373

<sup>27</sup> Tractatus 6.126

<sup>28</sup> Kenny, A.; Wittgenstein p.33

<sup>29</sup> According to Baker, "This conception was so alien to Russell that he failed to grasp it from Wittgenstein's account. He continued to think of propositions as Platonic objects, as what is believed or what is stated, and hence he struggled in vain to ascertain what the property of logical truth was which Wittgenstein called the characteristic of being tautologous. Russell could not appreciate that the peculiar status of logical truths turned solely on features of symbols ; although he adopted Wittgenstein's view as his official creed, he persisted in thinking that logical truth was a mysterious property of Platonic entities". Frege : Logical Excavations p.373

logical truth, Kenny says,

"Again, given a formula of the propositional calculus, we can always settle, by applying the truth-table method, whether or not it is a tautology. No similar method exists in Frege's system. By discovering a proof of the formula from Frege's axioms we can show it to be a theorem of his system ; but if we fail to discover a proof this does not show that it is not a theorem of the system ; it may simply be that we have not been ingenious enough to find a proof. Thus if we are given a formula of the propositional calculus and asked 'Is this a tautology or not ?' Wittgenstein's method offers us a foolproof way of settling the question either way, while Frege's method offers a way of answering 'yes' with certainty, but no way of giving a certain answer 'no'. To sum up in the customary technical expression, Wittgenstein offers, while Frege does not, a *decision procedure* for propositional logic<sup>30,31</sup>.

Wittgenstein contrived a way of showing that logical truth and logical validity have nothing to do with matters in the world, but are concerned with the choice of a particular truth table for a particular logical constant, which is the interpretation of the logical word.

As stated above, Wittgenstein held that a compound proposition is a truth function of its constituent propositions - atomic propositions. By assigning truth values to its constituents, a truth value of a compound proposition is determined. There are several possible such assignments. The truth table for a compound proposition presents all possible assignments of truth values to the component propositions. Consider the disjunction  $p \vee q$ , for example. There are four possible combinations of  $p$  and  $q$  in terms of truth values : both  $p$  and  $q$  are true ;  $p$  is true,  $q$  is false;  $p$  is false,  $q$  is true; both  $p$  and  $q$  are false. Further there are sixteen possible truth tables for the compound sentence, given that there are two truth values "true" and "false".<sup>32</sup> We can think of logical constants as being no more than abbreviations for some set

<sup>30</sup> My note ; Hintikka shows that Wittgenstein's method can be expanded to predicate logic. Logic.

Language-games and Information.(Clarendon, Oxford, 1973)

<sup>31</sup> Kenny, A.; Wittgenstein pp.33-34

<sup>32</sup> Possible truth tables are as below

1	2	3	4	5	6	7	8
p q	p q	p q	p q	p q	p q	p q	p q
TTT	TTT	TTT	TTT	TTT	TTT	TTT	TTT
TFT	TFT	TFT	TFT	TFF	TFF	TFF	TFF
FTT	FTT	FTF	FTF	FTT	FTT	FTF	FTF
FFT	FFF	FFT	FFF	FFT	FFF	FFT	FFF

of arrangements of truth values. For example, we can imagine the following situation; given p true and q true then the combination pq is true, given p true q false then the combination pq is true, given that p false and q true then the combination pq is true, and finally given p false and q false then the combination pq is false. We have simply stated table 2 . For convenience' sake, we can have a specific mark that stands for the table, i.e. "v". Logical constants, in this way, are abbreviations for specific truth tables. If we determine an interpretation of logical constants in this way, certain things follow ;  $p \vee \neg p$  cannot have the truth value of false in any circumstances.

Given definitions of logical constants in terms of truth tables, most compound propositions will turn out to be true under some assignments of truth values to their constituents, and false under others. But there is a possible special case - that of a proposition which turns out to be true under all assignments of truth values to its constituents. Such propositions Wittgenstein calls tautologies<sup>33</sup>. And he calls these propositions propositions of logic - such as  $p \vee \neg p$ , for example. The propositions of logic are tautologies (6.1). The truth of a logical proposition follows automatically by means of recourse to the meanings of logical constants. It does not matter what the truth values of the constituent propositions are : a mechanical application of the definitions of the logical constants, as given in their truth tables, always yields a truth value for logical propositions. They are true solely by virtue of the definitions of the logical constants, as given in their truth tables. A logical truth is a mechanical result of following these stipulations. What we need in order to explain the truth of a logical truth is just the truth table definitions of logical constants.

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9	10	11	12	13	14	15	16
pq	pq	pq	pq	pq	pq	pq	pq
TTF	TTF	TTF	TTF	TTF	TTF	TTF	TTF
TFT	TFT	TFT	TFT	TFF	TFF	TFF	TFF
FTT	FTT	FTF	FTF	FTT	FTT	FTF	FTF
FFT	FFF	FFT	FFF	FFT	FFF	FFT	FFF

<sup>33</sup> Of the word 'tautology' used in Tractatus, it is said, "A tautological sentence is not tautological in the literal sense of being a pleonasm. It is, rather, empty or 'negatory' in the sense of saying nothing". J. Hintikka ; Logic, Language-Games and Information (Clarendon, Oxford, 1973) p.151

Wittgenstein's view of logical propositions as tautologies explains the kind of knowledge we may have of them. According to him, the truths of logic are completely empty, since they set forth nothing but the definitions of logical constants. He says, "The propositions of logic therefore say nothing (6.11)". Logical truths are not substantial truths about special Platonic entities, or about any other kind of facts in the world ; they are not substantial truths at all. Logic has traditionally been a primary source for philosophical speculation, especially because logical truths have a necessity that empirical truths do not have. This necessity of logical truths could lead us to infer similar necessities in reality. We might maintain that logical sentences disclose significant facts in the world. If the law of non-contradiction is a logical truth, and perhaps a necessary truth, that law can be thought of as guaranteeing the extralinguistic fact that there is nothing which both is and is not something at the same time. Wittgenstein's truth table method for interpretation of logical truth, however, demotes necessity in logical truth to a matter of convention for logical constants.

Wittgenstein's truth table method for the interpretation of basic logical particles does not grant substantial import to logic and logical truth ; in holding this view of logical truth, Wittgenstein is to be placed with others like Carnap and Quine. Our knowledge of logical propositions is firmly founded by relegating them to emptiness. When we utter a non-empty or substantial sentence, we make a certain claim about reality. Such sentences express that the facts are such-and-such ; the facts might not be so, and hence the sentence might be false. But a tautology makes no such claim. It is true no matter what the facts are. "Tautology and contradiction are without sense (4.461)."

Quine keeps a distance from the positivism advocated by Carnap. In Carnap, meaning was related to the linguistic convention and the external problem of existence, and truth was related to the pursuit of science and the internal question of existence. For Carnap, it is the function of science to determine what is true and what is false ; it is the function of philosophy to

distinguish between what is meaningful and what is meaningless. Logic might be reduced to working for fixing meanings of logical constants, as a part of the 'first philosophy' ; logical truth was defined as something whose truth turned only on the meanings of specific logical particles. Linguistic and factual truths became two sorts of truth which differed in their character. Quine rejects this dichotomy of analytic-synthetic, meaning-truth, logical (linguistic) truth-factual truth, and philosophy-science as a dogma of logical empiricism.<sup>34</sup> On the rejection of this dichotomy and verification principle of positivism his doctrine of gradualism is grounded.

It might seem, however, that Quine's theory of logical truth can be located under the title of logical nihilism in that in his theory a logical truth has no particular relevance to the facts in the world . A sentence, in Quine, is logically true if only the structure of the sentence plays an essential role for the truth value of the sentence.

"Logical truths are statements of such forms as 'x=x', 'p or not p', 'If p then p', 'If p and q then p', 'If everything is thus and so then something is thus and so', and others more complex and less quickly recognizable. Their characteristic is that they not only are true but stay true even when we make substitutions upon their component words and phrases as we please, provided that the so-called "logical" words '=', 'or', 'not', 'if-then', 'everything', 'something', etc., stay undisturbed. We may write any statements in the 'p' and 'q' positions and any terms in the 'thus and so' positions, in the forms cited above, without fear of falsity. All that counts, when a statement is logically true, is its structure in terms of logical words. Thus it is that logical truths are commonly said to be true by virtue merely of the meanings of the logical words."<sup>35</sup>

In logical truths the role played by logical constants is "essential" while the role played by nonlogical expressions is that of "vacuous variants". A word may be said to occur essentially in a statement if replacement of the word by another can change its truth value. When this is not the case, the word may be said to occur vacuously. Logical truth is expressed by a sentence which is true and remains true under all interpretations of its components other than the logical particles. "A sentence is logically true if all sentences with that grammatical structure

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<sup>34</sup> Quine; "Two Dogmas of Empiricism" in From a Logical Point of View (Harper & Row, New York, 1963)

<sup>35</sup> Quine; Methods of Logic (RKP, 1974) p.4

are true". Quine, however, points out that his theory of logical truth is different from Carnap's conventionalism.

"My most general definition of logical truth ---rested on two things ; grammar, which is a purely linguistic affair, and truth, which is not. A sentence is logically true if all sentences with that grammatical structure are true.

In other words, one is tempted to say that a sentence is logically true if true by virtue purely of its grammatical structure. I avoid this phrasing, for it suggests that it is language that makes logical truths true - purely language, and nothing to do with the nature of the world. This doctrine, which I call the linguistic theory of logical truth, is one that Carnap subscribes to.

A logical truth, staying true as it does under all lexical substitutions, admittedly depends on none of those features of the world that are reflected in lexical distinctions ; but may it not depend on other features of the world, features that our language reflects in its grammatical constructions rather than its lexicon ?<sup>36</sup>

To the question, "Is logic a compendium of the broadest traits of reality, or is it just an effect of linguistic convention ?", Quine concludes that logical theory, despite its heavy dependence on talk of language, is already world-oriented rather than language-oriented, and the truth predicate makes it so. That is, he does not consider there to be an essential difference between logic and science, or between logical truth and factual truth.

For Quine, language is a "social institution serving the social end of communication". As a physicalist, Quine thinks that "the objects of our first and commonest utterances are socially shared physical objects rather than private experiences". Physical objects are indispensable as the public common denominators for communication of our sense experience - this is the physicalistic feature of his philosophy. But Quine thinks it is a dogma of empiricism to think that individual sentences or utterances about these objects are verified or falsified by experience. Rather, as is said in Duhemian empiricism, our experience gives support to, or disconfirms, the system of knowledge as a whole, not the individual sentences.

"But utterances about physical objects are not verifiable or refutable by direct comparison with experience. They purport to describe not experience but the world. They can be compared with the external world only through the medium of our

<sup>36</sup> Quine; Philosophy of Logic (Prentice-Hall, N.J., 1970) pp.95-96

experience of that world, but the connection between our experience and the world already involves a step of hypothesis or inference which precludes any direct and conclusive confrontation of the utterance with its subject matter. So statements are connected only deviously with experience. As far as knowledge is concerned, no more can be claimed for our whole body of affirmations than that it is a devious but convenient system for relating experiences to experiences. The system as a whole is under-determined by experience."<sup>37</sup>

Empirical evidence is always for or against systems of sentences as a whole, and not for single isolated sentences. According to Quine, to reduce the meaning of a sentence to its verifying method is a dogma of logical empiricism which is wrong on this score.

"The dogma of reductionism survives in the supposition that each statement, taken in isolation from its fellows, can admit of confirmation or infirmation at all. My countersuggestion --- is that our statements about the external world face the tribunal of sense experience not individually but only as a corporate body."<sup>38</sup>

As an example, consider a test of the hypothesis that the earth is flat. We have a hypothesis to be tested and some sentences describing certain initial conditions, and from these we derive some observable consequences. If the observable consequences fail to occur, this failure is taken as empirical evidence for refuting the hypothesis. Now,

Hypothesis ; The earth is flat.<sup>39</sup>

Initial conditions ; A ship sails away from New York harbour in a straight direction.

Therefore ; The ship should disappear all at once (falling over the edge of a flat earth)  
or at least disappear top first (as it goes over the edge).

We observe the ship disappear gradually and the top last of all ; hence we conclude the falsity of the flat earth hypothesis. But, there is really more than one hypothesis involved, in fact a body of them. For instance, the hypothesis that light travels in a straight line has to be added to the flatness hypothesis in order to reach the conclusion that the ship will disappear all at once or at least top first. And further, we must recognize that this hypothesis of light's straight travelling could itself be the conclusion of a theory or of a system of hypotheses about light.

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<sup>37</sup> Quine; Methods of Logic p.2

<sup>38</sup> Quine, "Two Dogmas of Empiricism" p.41

<sup>39</sup> This example is taken from A. Orestein's Willard Van Orman Quine (Twayne Publishers, Boston, 1977).



Thus a valid structure of testing would be :

Hypothesis<sub>1</sub>

Hypothesis<sub>2</sub>

Hypothesis<sub>n</sub>

Initial conditions

Therefore, observable consequences.

Now if the conclusion is denied by experience, we cannot tell which hypothesis ought to be rejected. We do not reject an isolated hypothesis but rather a body of hypotheses. In this way, "our statements about the external reality face the tribunal of sense experience not individually but as a corporate body". This is the Duhemian type of empiricism as opposed to the verification principle of positivism.

Logic and mathematics are the parts of our system of background assumptions which are most widely used and to which we are most strongly committed in many different fields of human intellectual enterprise ; they are most unlikely, therefore, to be revised in the light of experience. But they are in principle open to revision like any other hypotheses.

"Conjectures of history and economics will be revised more willingly than laws of physics, and these more willingly than laws of mathematics and logic. --- Mathematics and logic, central as they are to the conceptual scheme, tend to be accorded to such immunity, in view of our conservative preference for revisions which disturb the system least ; and herein, perhaps, lies the "necessity" which the laws of mathematics and logic are felt to enjoy."<sup>40</sup>

In the example above, the revision of the hypothesis of the earth's flatness disturbs our whole structure of science less than that of light's straight travel. Logical laws are the most central and crucial hypotheses of our conceptual scheme, and for this reason the most protected from revision because of the force of conservation. But, on the other hand, because of their crucial

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<sup>40</sup> Quine; Methods of Logic p.3

position, they are the laws "an apt revision of which offers the most sweeping simplification of our whole system of knowledge".

"Conversely, by the same token, no statement is immune to revision. Revision even of the logical laws of excluded middle has been proposed as a means of simplifying quantum mechanics ; and what difference is there in principle between such a shift and the shift whereby Kepler superseded Ptolemy, or Einstein Newton, or Darwin Aristotle ?"<sup>41</sup>

Logical truths and mathematical truths are on a par with the rest, but very centrally situated.

For Quine, a logical truth is a hypothesis which lies in a remote place to be revised from experience in human intellectual activity, whereas, for Carnap, logical truth is a matter of linguistic convention. Quine's theory of logical truth, however, stands in line with logical nihilism in that a logical truth has no particular relevance to the world in his theory. Quine says,

"In the end it is perhaps the same to say, as one often does, that the laws of mathematics and logic are true simply by virtue of our conceptual scheme. For, it is certainly by virtue of that scheme that those laws are central to it ; and it is by virtue of being thus central that the laws are preserved from revision at the expense of statements less strategically situated.

It is also often said that the laws of mathematics and logic are true by virtue of the meanings of the words '+', '=', 'if', 'and', etc., which they contain. This also I can accept, for I expect it differs only in wording from saying that the laws are true by virtue of our conceptual scheme."<sup>42</sup>

If logical truth is a matter of convention, the only important things we know by logical truth are the arbitrary rules of use of language. This view undermines any theory that tries to base logical inference on some independent foundation in reality. If logical truth needs any justification, it must lie within linguistic convention for the use of logical constants, because there are no independent points of support outside the convention. The only possible justification is that this or that is how people think and speak. With this view, we can ask what significance a logically valid argument does have, what secures the implication between the

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<sup>41</sup> Quine; "Two Dogmas of Empiricism" p.43

<sup>42</sup> Quine; Methods of Logic p.3

premises and the conclusion in a logically valid argument. For both logical imperialism and logical nihilism, an inference is logically valid if and only if it does not increase the information in the premises, i.e. the factual information contained in the conclusion is less than or equal to the information conveyed in the premises.<sup>43</sup> For information in the conclusion and premises, both logical imperialism and logical nihilism have the same position. In the significance shown by the argument as a whole, however, logical imperialism and logical nihilism have different results. For logical imperialism, a valid argument as a whole shows more than what is asserted by the premises and the conclusion ; it additionally acknowledges that the implication between the premises and the conclusion is a most general feature of reality. This comes from the doctrine that logical truth describes the fundamental structure of the world. In logical nihilism, however, a logical truth does not convey any substantial information. Logical nihilism maintains that the implication between the premises and the conclusion in a logically valid argument is due to linguistic conventions for logical constants employed in the argument. In this way, we can say that in logical imperialism a logically valid argument as a whole shows substantial significance which is not described by the premises and the conclusion, and in logical nihilism a valid argument as a whole has no more substantial significance than the premises and the conclusion; in logical nihilism, the implication between the premises and the conclusion is secured only through our arbitrary conventions for the language employed in the argument. In Wittgenstein's terms, a molecular sentence as a whole would say nothing more than what is said by its constituent atomic sentences.

Now, if a logically valid argument as a whole has no more substantial significance than that of its premises and conclusion, i.e. if the implication between conclusion and premises is not given any substantial significance, we cannot obtain the substantial implication between Anselm's premises and the conclusion that God exists.<sup>44</sup> The implication is secured only

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<sup>43</sup> See J. Hintikka's book Logic, Language-Games and Information (Clarendon, Oxford, 1973) p.150ff

<sup>44</sup> We can accept Anselm's premises and conclusion separately. But if Anselm's arguments are going to be a proof procedure for the existence of God, above all, the conclusion should be implied by the premises, and the implication should be secured as an absolute fact in the world. Further, logical nihilism and imperialism could be significant not only for the significance of the logical validity of an argument but also for the premises and

through our convention for language. If there are people who do not accept that God exists, even if they recognize the formal validity of the inference and premises, where they do not agree with Anselm is over whether the implication between Anselm's premises and the conclusion that God exists is only a conventional one, or an absolute feature of reality.

In the context of logical nihilism, the function of Anselm's arguments could be sought in other respects than that of convincing people that God exists. Maybe the arguments serve to clarify the faith of the believers, without producing any change in the attitudes of the unbelievers. N. Rescher's remarks point to the implication of logical nihilism for the ontological arguments in Anselm's work. "In religion, as in science, there is no viable alternative to empiricism, for God cannot be demonstrated by logic. Logical manipulations cannot successfully be employed for theological purposes as a surrogate or shortcut for religious experience."<sup>45</sup>

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conclusion themselves, if Anselm intended his premises and conclusion to be logical truths. But it seems that Anselm's conclusion is not intended to be a logical truth, and that Anselm's original purpose is to show that the conclusion is implied by his premises.

<sup>45</sup> Rescher, N.; "The Ontological Proof Revisited" in Australasian Journal of Philosophy vol.37, 1959 pp.138-148

#### 4.5. Problem of Deviant Logics

According to Carnap, Wittgenstein and Quine, logical truth is a matter of the interpretation we give to logical words. Questions arise about this principle. Like Plantinga, we may ask Quine if we can revise rules of arithmetic to simplify the doctrine of the Trinity, i.e. to the effect that  $1+1+1$  is not equal to 3, but equal to 1.<sup>46</sup> If we feel that something goes wrong in this manipulation, we may imagine that there is something intrinsic in logical and mathematical truth which is beyond arbitrary human convention. Similarly, we may ask Wittgenstein why we should interpret logical constants, i.e. allocate a truth table to logical constants, in the way given in *Tractatus*. Wittgenstein interprets disjunction, for example, as false only when both  $p$  and  $q$  are false. He allocates table 2 on p.147 to the interpretation for " $\vee$ ". From this allocation of a truth table to a logical constant, tautologies follow mechanically. Logical truth is said to be nothing but a matter of meanings of logical constants. The question arising is why we have to choose this table rather than others for the interpretation of " $\vee$ ". Is this choice just arbitrary, or is there anything for which we cannot but interpret disjunction in this way ?

J. Kaminsky argues that the choice of a truth table for a logical constant is not an arbitrary matter but that there is something which makes us interpret logical constants in that specific way.

"If, for example, we did try to use table 10 as an interpretation of "if-then" we would at some point be required to reject this since it would then make  $(p \supset q) \supset (p \supset \neg q)$  logically true, and this would not be tolerable in our language. It would mean that there are many possible truth table arrangements but not all of them are permissible. All arrangements of truth tables are possible but only specific ones can be used in a language. This limitation on truth table interpretations of the logical particles could have very serious ontological implications. It seems as if truth tables are apparently governed by a prior meaning of the logical particles. If a given table does not reflect the meaning, then the table is to be rejected as an interpretation."<sup>47</sup>

<sup>46</sup> Plantinga argues, "Giving up a truth of logic - modus ponens, let us say - in order to simplify physical theory may strike us as like giving up a truth of arithmetic in order to simplify the Doctrine of the Trinity". *The Nature of Necessity* p.3

Wittgenstein wished to explain logical truth by reference to truth tables. But in the very reading of the tables, he is required to introduce those very particles he is seeking to define. Table 5 for example would read :  $pq$  is true if  $p$  is true and  $q$  is true, or  $p$  is false and  $q$  is true, or  $p$  is false and  $q$  is false. In this reading, however, we have already employed the logical words we want to define.

"The logical particles "or" and "and" as well as "if-then" ( if we take the if to be an abbreviatory form for "if-then" ) are presumably understood before the truth table can be read. Otherwise there would be no reason to read it in this way rather than in an indefinite number of other ways, e.g.  $p$  is to the left of  $q$ , below  $p$  is  $T$ , below  $T$  is another  $T$ , etc. Thus to explain the logical particles by the truth tables, a priori knowledge of the particles is required. We may speak of interpreting "or" in terms of this or that truth table, but of what significance this can be if we already require the use of "or" in order to explain the truth table ? In a sense we are involved in the same difficulty Aristotle long ago noted when he asked how it was possible for someone to question the truth of the law of contradiction. In the very act of questioning the law, we must be using the law if our words are to continue to remain meaningful. Wittgenstein faces the same dilemma. In explaining the particles and logical truth he already presupposes their meaningfulness exclusive of truth table analysis. In Black's words, "By his theory of tautologies Wittgenstein showed only how to convert some a priori truths into the standard disjunctive normal form. --- When the imagery is discarded, what remains is the truism that a priori propositions are a priori. Wittgenstein's 'solution' merely brought him back to his starting point".<sup>48</sup>

If we accept this criticism, then we are led to claim the substantial significance of logical truth. Certain kinds of logical relations are required to be present in any description of a world and truth tables merely express them.

"[T]his was the position taken by Russell in his earlier work where he speaks of logical words as standing for "universals" whose apprehension is as "ultimate as sensations". And according to Price, "not" is not a syntactic expression that has arisen because men have developed language. Existential quantification and the "if-then" construction are not simple syntactical expressions that are peculiar to and useful only in a language. On the other hand, such patterns come into being because they reflect certain experiential

<sup>47</sup> Kaminsky, J; Language and Ontology (Illinois Univ. Press, 1969) pp.138-139

<sup>48</sup> Ibid p.143

conditions. In other words, if we think of a logical system as consisting of axioms and derived theorems, this kind of system ought to be showing us what is fundamental in experience or in reality. Hegel's ontology has indeed been justified."<sup>49</sup>

We can interpret language<sub>1</sub> by rules we set down in language<sub>2</sub> and then we can interpret language<sub>2</sub> by rules we set down in language<sub>3</sub>. But we soon reach a point where no further modification can occur. Some basic rules of inference must still be present ; some basic linguistic structures must remain ineliminable.

If this criticism is acceptable, we can think that Wittgenstein's undertaking to make logical truth arbitrary and conventional is not successful. Our knowledge of logical truth is not reduced to a mere convention for interpreting logical constants. That we know a logical proposition is true is not the same as that we have our own truth table for the interpretation of logical particles. Logic and logical truth have something to do with extralinguistic reality.

If we accept the conventional theory of logical truth, there arises another question in addition to these questions posed to Quine and Wittgenstein. Is it possible that we have two different systems which establish different logical truths, even though they use the same vocabulary and formation rules? In Haack's words, is it possible that the class of well formed formulas of Language<sub>1</sub> and the class of well formed formulas of Language<sub>2</sub> coincide, but the class of theorems of L<sub>1</sub> differs from the class of theorems of L<sub>2</sub> ? We can imagine a situation in which someone propounds a heterodox logic in which all the laws which have up to now been taken to interpret disjunction are made to interpret conjunction. For example, let us imagine him to insist that 'p and -p' is logically true. We may be able to understand the situation in two ways. First, he can be taken to be simply writing the word 'and' in place of 'or'. We may regard his deviation merely as notational and phonetic. Second, we can think that our logical system and his are deviations of each other, and that his system has as a theorem a formula which ours does not take as a theorem, which ours takes even as contradictory. If the conventional theory

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<sup>49</sup> *Ibid* pp.143-144

of logical truth is maintained significantly, i.e. if convention is not simply about names of logical notions, we may have to follow the second way. For we should be able to have significantly different conventions for logical words if conventional theory is assumed. Carnap's view that logical conventionalism leads to various logical systems is quite right. If it turns out, however, that deviation in logic is simply notational, this may be a disproof for conventionalism.

Let us compare two mutually deviant logics to see if deviation in logic is real or just notational. Lukasiewicz devised a many valued logic system in 1920<sup>50</sup>. The following matrices are his 3-valued truth table.

	-p	p.q	p∨q	p⊃q
q		T I F	T I F	T I F
p				
T	F	T I F	T T T	T I F
I	I	I I F	T I I	T T I
F	T	F F F	T I F	T T T

Lukasiewicz had in mind that the third value 'I', which he read 'indeterminate' or 'possible', was to be taken by future contingent statements, which he thought could not be either true or false. His matrices are explained as follows. In case of negation : if the constituent is T or F, the negation has F or T, respectively ; if it is I, the negation is I. In case of conjunction : the conjunction is T only when both conjuncts are T ; if there is at least one F conjunct, the conjunction is F ; and the conjunction is I in all other cases. In case of disjunction : if both disjuncts are F, the disjunction is F ; if there is at least one T disjunct, the disjunction is T ; and the disjunction is I in all other cases. In case of conditional : if the antecedent is T and the consequent is F, the conditional is F ; if it is impossible for there to be the above combination, that is, if the combination is T⊃T, or I⊃T, or F⊃T, or F⊃I, or F⊃F, or if the combination is I⊃I, the conditional is T ; and it is I in all other cases. In Lukasiewicz' system, p∨-p and -(p.-p) does not hold always true. Only p⊃p is established as a theorem in his system.

<sup>50</sup>Lukasiewicz; "On 3-valued Logic" in *Polish Logic* (ed.McCall, Oxford Univ. Press, 1967)



S. C. Kleene suggested another 3-valued truth table.<sup>51</sup>

	-p	p.q	p∨q	p⊃q
q		T I F	T I F	T I F
p				
T	F	T I F	T T T	T I F
I	I	I I F	T I I	T I I
F	T	F F F	T I F	T T T

The difference between Lukasiewicz and Kleene is in the interpretation of the conditional. When both antecedent and consequent are I, in the Lukasiewicz's system, the conditional has value T. But in Kleene's system, the conditional is I. So even the principle of identity ( $p \supset p$ ) does not hold in Kleene's system.

Now the question arising is, "is it really the case that Lukasiewicz's and Kleene's systems are deviant from each other?". The difference in the interpretation of the conditional, in which the theorem difference between the two systems lies, could be counted as the basis for thinking of them either as deviant from each other or as simply notationally different. The case seems to be the latter. The grounds for thinking the difference merely notational are as follows. When we have three truth values and make a compound from two constituents, there are  $3^{3^2}$  matrices of truth tables. We can think that Lukasiewicz's truth table for the interpretation of  $p \supset q$  is one matrix of all the possible, and Kleene's is another. That is, we can think that ' $p \supset q$ ' in Lukasiewicz's system and ' $p \supset q$ ' in Kleene's system designate each different matrix in the possible matrices, and consequently, even if Kleene does not designate with ' $\supset$ ' the matrix designated with ' $\supset$ ' by Lukasiewicz, there can be a logical notion which corresponds to ' $\supset$ ' in Lukasiewicz's sense in Kleene's system. If matrices are taken to be possible logical notions with a given number of truth values, the difference between Lukasiewicz and Kleene is only

<sup>51</sup> Kleene, S. C.; Introduction to Mathematics (North-Holland Pub., Amsterdam, 1952)

notational and trivial. If there is a heterodox logic in which a symbol, which has been taken for a matrix in an orthodox logic, is taken simply for another notion, the difference may be said to be notational and trivial. That is, there are  $3^{3^2}$  matrices in any three value system, both in Lukasiewicz's and in Kleene's system, anyway. And it makes no significant difference at all to give a matrix a heterodox name if these matrices are accepted as possible logical notions in the two systems.

In Kleene's system, there can be a matrix which is used to interpret ' $p \supset q$ ' in Lukasiewicz's system. Then why does he not designate that matrix with ' $p \supset q$ '? We can assume that each matrix corresponds to each possible logical notion. If we take two truth values, there are 16 matrices and there could be 16 logical notions. If we take three truth values, there could be  $3^{3^2}$  matrices and the same number of logical notions. We can give particular names to all the matrices, as we please.

So I would like to say that the problem of deviant logics reduces to the problem of how many truth values each system has. If two systems have two truth values which have the same meanings in both systems, there can be no deviation at all between them, except notationally and trivially. If two systems have three truth values which have the same meanings, there can be no deviation between them, either. In the former case, there are 16 possible matrices, and in the latter case,  $3^{3^2}$  matrices. So there are corresponding possible logical notions for both. What names to give them is not a significant matter. What is significant is that there are certain numbers of matrices or logical notions when we choose certain numbers of truth values. In this sense, a logical notion, as designating a particular matrix, is universal regardless of its name, once the number of truth values is given. Logical notions or the system of possible matrices given with a certain number of truth values seem to be the limitation of human understanding, regardless of the names. If we take three values, our intellectual work operates in the  $3^{3^2}$  possible patterns of thought. If we take two values, we work within 16 patterns.

If we agree that the two systems have the same truth values, the deviation will be only notational and phonetic. If someone says that 'p and -p' is a theorem in his system but continues to think that there are only two truth values, that is, if someone propounds a logic in which all the laws which have been taken to interpret 'or' are made to interpret 'and' and still agrees that there are only two truth values, he must be taken to be writing 'and' in place of 'or'. In this case the problem is trivial. But if he insists upon truth values other than ours, his deviation is meaningful. For it is possible that he does not take 'p∨-p' as his theorem even when he uses '∨' in the same way as ourselves so far as 'T' and 'F' are concerned, as shown in Lukasiewicz's and Kleene's system. Only when one has different truth values from ours, can his system be meaningfully said to be deviant from ours. If not, his deviation is only notational and phonetic. If he adheres to the principle of bivalence, but still argues that 'p or -p' is not a theorem in his system, we can think that his use of the word 'or' is different from ours and that he uses 'or' in place of some other logical notions. His system is only different from ours notationally and phonetically. As Quine says, if a foreigner assents to a compound sentence but not to a constituent, this can be a reason not to construe the construction as a conjunction. And if he assents to a constituent but not to the compound, this can be a reason not to construe the compound as disjunctive.

The remaining question is whether it is meaningful to have more than two truth values. The problem of deviant logic reduces to the problem of whether it is meaningful to establish a system which has some other truth values than 'true' and 'false', the problem of the significance of many valued logic(s), and the significance in comparing systems which have different numbers of truth values. This is not my present task. If deviation in logic is only notational in a given number of truth values, the conventional theory of logical truth would lose some convincing power, anyway.

If deviation in logic is simply notational, we can conclude that convention in conventionalism is also notational, since to have different conventions for logical words is nothing but to have

deviant logical systems. The possibility of different conventions for a logical constant is only in the notation. A conventionalist will not agree that his doctrine is only about convention in giving a specific name to a logical notion. To defend his doctrine, he must show that convention for a logical word is not simply a matter of notation. For this, it must be shown that deviation in logic has substantial significance beyond mere notational significance, that is, that there can be substantially different conventions for logical words. If he cannot do this and cannot but agree that deviation in logic is only notational as shown above, conventionalism may not be easily accepted as a successful theory of logical truths.

Now we can think of a basic standpoint of fideistic interpretations of Anselm's arguments which say that Anselm's arguments in Pros.II and III are not proofs for the existence of God even if they are valid arguments, and rationalistic interpretations that Anselm's arguments, if valid, are successful proofs for the existence of God. Further we can conjecture a possible fundamental standpoint of general fideism and rationalism in terms of logical nihilism and logical imperialism. This will be done in the next chapter.

## 5. Fideism and Rationalism

There have been two different attitudes concerning the function of reason in religious activity through the history of Christian thought. Under the name of fideism, some have thought that revelation<sup>1</sup> and the corresponding commitment to the revelation on the human side are the bases of a Christian life. It is maintained, as was said by Hume, that "the truths of our religion find their best and most solid foundation in faith and divine revelation". Revealed truth is accepted "on the mere authority of its revealer ; not on any empirical evidence for it, nor on any logical self-evidence contained in it"<sup>2</sup>. Others, on the other hand, have put emphasis on the autonomy of reason in the religious life, as well as a commitment which is said to be able to transcend any justification from human reason. According to rationalism, if we call this attitude "rationalism", the intensity of belief corresponds to the strength of available reasoning. We may associate the names of Tertullian, Kierkegaard, Barth, van Buren, and Wittgenstein with fideism, and the names of Aquinas, Hegel, Brunner and Hartshorne with rationalism. It seems to be risky and presumptuous to quote these names without having specific knowledge of them. Specialists in these authors may argue that this classification is not fair. I have no intention to quarrel with the specialists. This risk extends to the division of fideism and rationalism itself. Some may argue that clear-cut distinction between fideism and rationalism is not possible.<sup>3</sup> It could be, however, conceded that these authors may be classified at least roughly in this way.

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<sup>1</sup> Of revelation it is said, "By revelation we may mean the communication, by God or some other super natural agency, of true propositions which cannot be discovered, or at least not easily discovered, by natural means. Faith is the belief that these propositions have been divinely communicated and are, therefore, true. Revelation may also be understood as the self-manifestation of God. What is revealed is not propositions but God himself. He unveils Himself, communicates Himself to man. Faith is a radical form of devotion, a belief in God - a complete trust in, an utter commitment to, the being who has so revealed Himself. Aquinas construes faith and revelation in the first sense. Paul Tillich interprets them in the second sense". Philosophy of Religion (ed. W. L. Rowe and W. J. Wainwright, Harcourt Brace and Jovanovich, USA, 1973) p.340

<sup>2</sup> Farrer, A. "Revelation" in Faith and Logic (ed. B. Mitchell, George Allen and Unwin, 1958) p.84

<sup>3</sup> B. Mitchell's position, for example, is that "reasoning is always to be construed as the following of rules, whose character may to some extent vary from one system to another". The Justification of Religious Belief (Macmillan, 1978) p. 99

Recently, fideism has had support in the name of "Wittgensteinian fideism"<sup>4</sup>. According to this, no reason could be given for or against any religious commitment. The mere entertainment of a religious proposition in a neutral way is impossible, since it is impossible for someone to understand another person's commitment when he does not share it. Religious belief is considered to be different from other kinds of belief, belief in natural science for example.<sup>5</sup> This position follows from playing down the propositional element in religious belief and from the emphasis on commitment.<sup>6</sup> The propositional element, if any, becomes

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<sup>4</sup> Of "Wittgensteinian fideism", F. Kerr explains, "The phrase seems to have been introduced into the philosophy of religion by Kai Nielsen. As an atheist he wants to go on arguing that religion is a massive error. He therefore objects to the way that certain Christian philosophers allegedly maintain that religion is a way of life that is intelligible only to participants. On such a view, when an atheist argues against the existence of God he could not know enough about the matter to make sense, let alone engage in refutation of the hypothesis. The concepts that are familiar in religion are supposedly available only to those who share the 'form of life' in which they are employed. Religious talk supposedly constitutes a distinctive and autonomous 'language-game' which outsiders could not understand, let alone expose as incoherent or erroneous". Theology after Wittgenstein (Basil Blackwell, Oxford, 1986) p.28

<sup>5</sup> N. Malcolm argues, "Religion is a form of life ; it is language embedded in action - what Wittgenstein calls a 'language-game'. Science is another. Neither stands in need of justification, the one no more than the other". Thought and Knowledge (Cornell University Press, 1977) p.212

B. Mitchell says, "It began to be apparent that, instead of looking for a clear-cut criterion for distinguishing between the meaningful and the meaningless, it might be more profitable to recognize different sorts of meaning. Thus, rather than embrace the paradox that moral judgements are meaningless, philosophers began to suggest that they were indeed meaningful, but that the sort of meaning they possessed differed from that of straightforward factual statements. It might be called 'emotive meaning' ; so that although people who differed on a moral matter could not be said to disagree in belief, they could be said to disagree in attitude. An alternative suggestion was that moral principles were best understood neither as statements of fact nor as expressions of emotion, but as rules ; and as such resembled generalized commands or imperatives. Thus the positivist rejection of ethics served to concentrate attention on the ways in which moral judgements differed from statements of fact, and this development (greatly stimulated by the influence of Wittgenstein), contributed to a fresh approach to the question of meaning". Faith and Logic (George Allen and Unwin, London) pp.4-5

<sup>6</sup> "Take two people one of whom talks of his behaviour and what happens to him in terms of retribution, the other one does not. These people think entirely differently. Yet, so far, you can't say they believe different things.

Suppose someone is ill and he says : "This is a punishment", and I say : "If I'm ill, I don't think of punishment at all." If you say "Do you believe the opposite?" - you can call it believing the opposite, but it is entirely different from what we would normally call believing the opposite.

I think differently, in a different way. I say different things to myself. I have different pictures". (L.

part of the commitment instead of providing the grounds and reasons for it. T. S. Kuhn<sup>\*</sup> advocates this position with his relativistic view. He suggests that there is no such thing as objectivity even in science. The practice of science depends on commitment to what he calls "paradigms" which provide scientists with the conceptual equipment by means of which they see the world.<sup>7</sup> This is very reminiscent of the Wittgensteinian notion that understanding a way of life cannot be separated from living it. In a similar way, Kuhn argues that it is impossible to understand a theory completely without actually subscribing to it. The basic commitment is outside the realm of reason. Reason follows commitment, reason cannot judge commitment.

I do not dare to become involved in the controversy between fideism and rationalism<sup>8</sup>, or in Wittgensteinian fideism, in any detail. What I would like to observe is a fact about the possible bases of fideism and rationalism. It may be agreed that Wittgensteinian fideism supplies some of the ground on which fideism stands ; someone who does not participate in a religious life cannot understand the meanings of religious remarks. It seems to me, however, that there is something else to be observed for fideism. What has not still been noticed by proponents of

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Wittgenstein, Lectures and Conversations on Aesthetics, Psychology and Religious Belief (Oxford, 1966) p.55

"If the question arises as to the existence of a god or God, it plays an entirely different role to that of the existence of any person or object I ever heard of." (Ibid p.59)

Keightley points out, "the 'truth' of religious beliefs is sui generis ; i.e., beliefs cannot be susceptible to the verifying and justifying procedures which apply outside the religious framework. As we have seen, for Wittgenstein, religious beliefs are not true in the sense that they are propositions based on good evidence. Expressions of belief are not used in the same way as hypotheses in science or history". (Wittgenstein, Grammar and God (Epworth Press, London, 1976) p.53)

<sup>7</sup> R. M. Hare calls this "blik". "Theology and Falsification" in New Essays in Philosophical Theology pp.99-103

<sup>8</sup> Scripture has been cited on both sides. As usually cited, 1 Cor 2:11-13 goes, " --- only the Spirit of God knows what God is. This is the Spirit that we have received from God, and not the spirit of the world, so that we may know all that God of his own grace has given us ; and, because we are interpreting spiritual truths to those who have the Spirit, we speak of these gifts of God in words found for us not by our human wisdom but by the Spirit", and Romans 1:19-20 is read, "For all that may be known of God by men lies plain before their eyes ; indeed God himself has disclosed it to them. His invisible attributes, that is to say his everlasting power and deity, have been visible, ever since the world began, to the eye of reason, in the things he has made". (New English Bible)

<sup>\*</sup> Kuhn, T. S.; The Structure of Scientific Revolutions (Chicago Univ. Press, 1962)

fideism and rationalism is the fact that logical nihilism and logical imperialism, respectively, are aspects of their positions. Let us take, for example, interpretations of Anselm's arguments for the existence of God in Proslogion.

Anselm has been interpreted in two different ways so far as the function of reason in his works is concerned. According to Barth<sup>9</sup> and A. Stolz,<sup>\*</sup> Anselm's whole theology should be interpreted as "fides quaerens intellectum". Of the ontological proofs in Pros.II and III, they argue, it is to be remembered that "Anselm had not the slightest intention of proving the existence of God" and that the whole work of Proslogion is an essay of a pious theologian. The title of Proslogion is said to show the fact that it is an address to God who is already believed to exist. Actually Chap.I of Proslogion, the chapter immediately preceding one in which an argument for the existence of God is deployed, concludes with a prayer that God will grant the author to understand what he already believes.<sup>10</sup> Anselm's works are not rational theology, and arguments in Pros.II and III are not intended as rational proofs for the existence of God<sup>11</sup>. At the end of the first chapter of Proslogion, we hear the famous credo ut intelligam principle, "I do not seek to understand in order that I may believe, but I believe in order that I may understand. For I believe this also, that I shall not understand unless I have believed". The authority of faith rather than the autonomy of reason is taken as the primary principle in his works. In this view, the most important thing in understanding Anselm is the primacy of faith. Reason is not allowed any independent value. It is worthy only as an instrument for understanding what is already believed rather than for proving the truth of

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<sup>9</sup> Barth; Anselm : Fides Quaerens Intellectum (SCM, 1958)

<sup>10</sup> Anselm addresses God, "Teach me to seek You, and reveal Yourself to me as I seek ; for unless You instruct me I cannot seek You, and unless You reveal Yourself I cannot find You. Let me seek You in desiring You ; let me desire You in seeking You. Let me find You in loving You ; let me love You in finding You. O Lord, I acknowledge and give thanks that You created in me Your image so that I may remember, contemplate, and love You. But this image has been so effaced by the abrasion of transgressions, so hidden from sight by the dark billows of sin, that unless You renew and refashion it, it cannot do what it was created to do". (Hopkins' tr.)

<sup>11</sup> According to Gilson, "In so far as philosophy for us means an investigation which starts from rational premises in order to end in rational conclusions it can be said that St. Anselm did not write a single work of philosophy".

<sup>\*</sup> "Anselm's Theology in the Proslogion" in The Many-Faced Argument (ed. J. Hick)



articles of faith. Anselm's whole work is not aimed to "lead men to faith, nor to confirm them in the faith, nor even to deliver their faith from doubt".<sup>12</sup> Faith is a prerequisite for any kind of knowledge. It is said, "Faith precedes understanding, since of the two sources of human knowledge, reason and faith, faith can exist without reason, but reason cannot exist without faith. In rational inquiry there must be a foundation of faith in the principles of the inquiry, and in the principles of the understanding itself". The function of arguments in Pros.II and III in this line of thought is, if they are valid, to enable a believer in God to understand more deeply what he believes.

Others, E. L. Mascall and M. J. Charlesworth, for example, advocate the view that reason has been given autonomy in the whole of Anselm's works. Charlesworth argues that Anselm inherits Augustine's position on faith and reason that reason has its own value independent of faith. Augustine's position, according to Charlesworth, is that "'crede ut intelligas' is restricted to the sphere of revealed truth and does not apply to the 'preambles' of faith (the existence and attributes of God), nor, a fortiori, to other truths available to human reason".<sup>13</sup> Charlesworth argues, "St. Augustine, then, clearly admits the possibility of a rational justification of belief in God and, since St. Anselm professes to follow Augustine so closely, we may conclude that his intention in the Proslogion is precisely the same as that of his master".

Anselm's Cur Deus Homo is counted as illustrating his theological method best. Cur Deus Homo, which is written to explain why God should become man to save man, is not different

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<sup>12</sup> Barth; Anselm : Fides Quaerens Intellectum (SCM, 1958) p.17

<sup>13</sup> "[W]e can at least say that, while he (Augustine) is anxious to safeguard the autonomy of faith by means of the 'crede ut intelligas' formula, he is equally anxious to affirm the possibility of rational speculation about God prior to and independently of faith in God. In his own theological practice St. Augustine does in fact devote a great deal of attention to what were later to be called 'preambles' of faith, the possibility of knowing God as the ground of rational certitude, the nature of the soul, freedom of the will. There is, indeed, a strong 'rationalistic' strand in St. Augustine's thought. --- However, ---, Augustine did not want to be a 'rationalist' denying the proper autonomy of faith, any more than he wanted to be a naive fideist denying the autonomy of reason, and the strain represented by 'crede ut intelligas' and that by 'intellige ut credas' exist together in his thought in an unresolved or ambivalent state." M. J. Charlesworth; St. Anselm's Proslogion (Clarendon, Oxford, 1965) p.28

from Proslogion so far as Anselm's attitude on the function of reason is concerned.<sup>14</sup> The method in Cur Deus Homo is "remoto Christo". Of the overall structure and method of the book, Anselm says,

"The first of these contains the answers of believers to the objections of unbelievers who repudiate the Christian faith because they regard it as incompatible with reason. And this book goes on to prove by rational necessity - Christ being removed from sight, as if there had never been anything known about Him - that no man can possibly be saved without Him. However, in the second book - likewise proceeding as if nothing were known of Christ - I show with equally clear reasoning and truth that human nature was created in order that the whole man (i.e. with a body and a soul) would someday enjoy a happy immortality. And I show the necessity of man's attaining this end for which he was created, and [that it can be attained] only by means of a God-man. And I show that all the things which we believe about Christ ought, necessarily, to occur". (Preface, Hopkins' tr.)

In the conclusion of the book, Boso who is the interlocutor of Anselm in the book, expresses admiration that Anselm has satisfied "not only the Jews but also the pagans by reason alone". This implies that the function of reason in Anselm's works is even to persuade and satisfy unbelievers beyond clarifying what is already believed for believers. Anselm acknowledges the possibility of natural theology, a rational approach to God, which is independent of faith.

For the rationalistic feature of Anselm's whole work and arguments for the existence of God in Pros.II and III, it is also pointed out that Anselm replies to his opponent Gaunilo with purely rational arguments, that in the preface to the Monologion he announces his intention to base his exposition only upon reason<sup>15</sup> and that he includes in his scope the doctrine of the Trinity which even Aquinas thinks reason is powerless to discover<sup>16</sup>. The function of the arguments in Pros.II and III, in this line of thought, is to convince an atheist of the existence of God, if the arguments are valid.

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<sup>14</sup> Charlesworth; op. cit. p.30

<sup>15</sup> In the preface to Monologion, Anselm explains about the method he will adopt. "[T]hat nothing at all in the meditation would be argued on Scriptural authority, but that in unembellished style and by uncomplicated arguments and with simplified discussion rational necessity would tersely prove, and truth's clarity would openly manifest, whatever the conclusion of the distinct inquiries declared."

<sup>16</sup> Mascal, E. L.; "Faith and Reason : Anselm and Aquinas" in Journal of Theological Studies N.S. vol.14, 1963 p.70

The problem of whether to interpret Anselm and his Proslogion arguments as a product of fideism or rationalism is complicated. Anselm does not give a clear-cut answer to the problem. Whatever the answer may be, we can at least agree that fideistic interpretation of Anselm's Proslogion arguments is an example of fideism, and rationalistic interpretation of Anselm's arguments for the existence of God in Proslogion is an example of rationalism, in that the controversy in interpreting Anselm as a fideist or a rationalist is a controversy about the function of reason. The interpretation which Barth and Stolz give lies within the tradition which tries to keep Christian faith separate from any human proof procedure. All articles of faith are revealed to human being by divine providence, and the only possible responses on the human side are commitment to the revelation or rejection of it. Rationalistic interpretation of Anselm, on the contrary, stems from the tradition which advocates a positive function of human reason in discovering truth claimed by religion. It is maintained that human reasoning is a vital factor in determining the content of Christian faith. In this respect, the controversy between fideistic and rationalistic interpretation of Anselm can be counted as a part of the long conversation between fideism and rationalism in Christian history.

Taking fideistic interpretation of Anselm's arguments as an example of fideism, we can bring out an aspect of fideism. As has been said in 4.1., people who advocate the "Wittgensteinian fideism" explained above may deny Anselm's arguments in Pros.II and III to be proofs for God's existence, even if the arguments are logically valid. They challenge the meaningfulness of the premises to unbelievers. As Malcolm notices, the arguments are not proof procedures for God's existence, even if they are logically valid, since the premises are not intelligible to unbelievers. The premises are meaningful only to believers. In the same context, O. K. Bouwsma thinks that the arguments are not proofs for the existence of God, since the premises employed are simply the language of praise like "Hallelujah". They do not have meanings which can be premises of proof procedures. We cannot treat sentences of praise as premises of arguments from which God's existence is proved. A fideistic interpretation of Anselm's

arguments is justified by adopting the view that the language of belief is not intelligible to unbelievers or that it has radically different meaning from what it may have in other contexts, and by arguing that the premises employed are not meaningful to unbelievers, with the result that the arguments cannot be rationalistic proofs for God's existence.

But there is a different fideistic position. According to Barth, Anselm's arguments are not only logically valid, but also the premises are intelligible to unbelievers. Barth's fideistic interpretation of Anselm's Proslogion arguments does not find any flaw in the validity of the arguments, and it accepts the meaningfulness and truth of the premises even to the fool in *Proslogion*<sup>17</sup>. If this is the case, i.e. if fideism accepts the validity of the arguments and the truth of premises employed in the arguments, how is this fideism possible? How is it possible that the function of the arguments is not that of proving the existence of God? According to Wittgensteinian fideism, premises in the arguments should not be intelligible to those who do not believe in God's existence already, and so the real function of the arguments is the elucidation, the understanding of believer's belief, rather than proving articles of belief to unbelievers. Barthian fideism, however, fully recognizes the meaningfulness and truth of the premises employed in the arguments as well as the validity of the arguments.

It seems that the only possibility of this Barthian fideism should lie in the attitude towards the function of logically valid arguments in religious discourse. The only way, where there is agreement on the validity of an argument and on the truth of its premises, to have different views about the significance of the argument is to have different attitudes towards the significance of a logically valid argument, even if the authors themselves have not noticed it. If Barth's fideistic position in interpreting Anselm's arguments can be taken as an example of

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<sup>17</sup> "Therefore all he has to do is to lead his opponent along his own path and thus be able to give him the answers to the questions that even he himself is asking. If such is Anselm's interpretation of the quest of the 'unbeliever' then we can understand how he comes to engage in a discussion with him without --- stipulating that the unbeliever in order to become competent to discuss must first be converted into a believer. Anselm assumes his own ground, the ground of strictly theological (we would nowadays say dogmatic) impartiality, to be likewise a ground on which the 'unbeliever' could quite well discuss and would want to discuss." (Barth; *Anselm: Fides Quaerens Intellectum*, pp.66-67)

It is controversial if Barth fully assumes that the fool understands Anselm's premises. But for the sake of argument I presume so.

fideism, fideism should support logical nihilism for consistency. Rationalism, on the other hand, should support logical imperialism in the same context. Wittgensteinian fideism justifies fideism by arguing that premises are understood only by believers. But, if it is conceded that even unbelievers can understand and recognize the truth of the premises, which seems to be more plausible than the Wittgensteinian contention that religious premises cannot be understood by unbelievers, the only possibility to remain a fideist, while accepting the validity of the arguments, is to support logical nihilism.

M. Wiles in his "The Reasonableness of Christianity"<sup>18</sup> says, "The name of Wittgenstein has given a new philosophical status to the fideistic approach to Christianity in recent decades. 'Wittgensteinian fideism' sounds a lot more respectable than fideism *tout simple*". Even if Wiles' remarks have a pejorative connotation, they still reveal a certain amount of truth. Wittgensteinian fideism gave a justification to fideism by arguing that religious language can be understood only by those who live the religious form of life. This is the view which is allegedly backed by his "later philosophy". It seems, however, that his logical nihilism in Tractatus can also be a justification for fideism, as is shown in the Barthian interpretation for Anselm's arguments according to which Anselm's arguments in Pros.II and III are not proofs for the existence of God even if they are logically valid and their premises are true. Justification of fideism can be established even if we do not acknowledge the cogency of Wittgenstein's later philosophy.

Logical nihilism is an aspect of fideism. If the cogency of logical nihilism can give a reason to fideism, and if logical nihilism is maintained in Wittgenstein's earlier philosophy, we need not confine Wittgensteinian fideism to his later philosophy. His earlier work which supports logical nihilism also advocates a fideism. What makes Wittgensteinian fideism look deeper is the logical nihilistic view which is exposed in Tractatus as well as the language game philosophy in Philosophical Investigations. Deep foundations of fideism, logical nihilism and

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<sup>18</sup> In The Rationality of Religious Belief Essays in honour of Basil Mitchell (ed. W. J. Abraham and S. W. Holtzer, Clarendon, Oxford, 1987) p.42

relativism of meaning, are disclosed in Wittgenstein's works. If logical nihilism in Tractatus is adopted, it can easily lead to the conclusion in Philosophical Investigations that each discourse has its own use and validity.

Even if Wittgenstein's "later philosophy" loses its cogency, there is still another foundation for fideism, i.e. the logical nihilism in his Tractatus. Even if it is argued to be implausible that meanings of language are relative, we still have a support for fideism in the logical nihilism. To put it more strongly, the more plausible support for fideism is logical nihilism rather than "Wittgenstein's later philosophy". For we can quite frankly admit that we seem to understand the language of people who live different forms of life from ourselves.

Given that logical truth is what governs the world, and that it even is not God's limit not to trespass a logical law, and that religious language can be understood by unbelievers, then we do not need anything other than rationalistic arguments for proving the truth of religious articles. If logical nihilism is taken, however, only commitment on the human side can be a ground for accepting or denying religious doctrine.

Realization that the roots of fideism and rationalism are logical nihilism and logical imperialism could help to bring closer the long parallel between fideism and rationalism. The dialogue between fideism and rationalism, and between fideistic interpretation and rationalistic interpretation of Anselm's ontological arguments in Pros.II and III could be taken up in the dialogue between logical nihilism and logical imperialism. This shows where a difference is and makes the conversation convergible. For a decision between logical nihilism and logical imperialism is a clearer issue than one between fideism and rationalism, even if it makes much greater demands on our intelligence.

## 6. Conclusion

I have tried to show, in Section 4.5. Problem of Deviant Logics, that the philosophical position taken by logical nihilism is weakened since deviation in logic is only notational. The possibility of logical systems deviant to each other is a necessary condition for logical nihilism shown in the conventionalists' theories. If substantial deviation in logic is impossible, we cannot but conclude that the necessity in a logical truth is more than something which originates from human conventions for logical words.<sup>1</sup> As Plantinga said, we cannot change the truth-value of '1+1+1=3' for whatever reason, to simplify the doctrine of the Trinity, or whatever else, perhaps because the notions we have for the signs '+' and '=' may not be changed substantially. I do not know yet, however, whether logical words are referring to Platonic logical entities. What I can guess is simply that logical imperialism is more acceptable than logical nihilism, that necessity shown in a logical truth may be thought to reflect a feature in the world rather than human conventions for logical words employed, in relation to the impossibility of deviant logics.

We have seen that Anselm's arguments for the existence of God in Proslogion Chap.II and III are logically valid arguments on some logical principles. We needed extensional semantics to establish the validity of the Chap.II argument. Premises of modal logic in Purtil's reformulation and analyses of 'necessity' and 'existence' for the conceptual coherence of 'necessary existence' were needed to establish the validity of the Chap.III argument. For those who accept these logical principles with Anselm's premises, it would be reasonable to recognize that God exists as the conclusion shows. If they were atheists before, they may have to change, for reasonableness' sake, their attitudes according to the conclusion of a logically valid argument. Anselm's arguments for the existence of God in Proslogion Chap.II and III

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<sup>1</sup> I respect the view that 'logical' in 'logical necessity' is a word for an epistemological category in this respect. I suspect, however, that even if 'logical necessity' and 'a priori necessity' are co-extensional, they may not have the same meaning. In this context, I discerned a priori necessity and logical necessity as necessity<sub>4</sub> and necessity<sub>5</sub>, respectively, in Section 2.3., p.114.

should be proofs for the existence of God for unbelievers. A possible way not to recognize Anselm's arguments as proof procedures, though assuming the validity of the argument and the truth of the premises, as shown in Barth's interpretation, is challenging the significance of a logically valid argument. The Barthian fideistic interpretation can be justified through the cogency of logical nihilism.

If logical nihilism is reduced in cogency through the failure of deviant logics, fideism generally<sup>2</sup>, or at least the Barthian interpretation of Anselm's arguments, comes to lose its convincing power. There may be no way to justify the position which does not accept Anselm's arguments as proofs for the existence of God assuming that the arguments are logically valid, the premises of the arguments are true and a logical truth shows a necessary feature of reality. It is reasonable for those who were atheists before to become theists, and to recognize Anselm's arguments as successful proofs for the existence of God.

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<sup>2</sup> Another possible justification of fideism, which originates from the so-called Wittgenstein's later philosophy, is to the effect that unbelievers do not understand Anselm's premises. But it does not seem to be likely. Rather, Barthian fideism is more likely in that it acknowledges that everybody can understand Anselm's premises. We may say that fideism in general is groundless, if a more likely version of fideism loses its justification.



## Bibliography

### Abbreviations

- AJP Australasian Journal of Philosophy  
CJP Canadian Journal of Philosophy  
CJT Canadian Journal of Theology  
IJPR International Journal for Philosophy of Religion  
IPQ International Philosophical Quarterly  
JP The Journal of Philosophy  
JTS The Journal of Theological Studies  
M The Modern Schoolman  
NS New Scholasticism  
P Philosophy  
PAS Proceedings of Aristotelian Society  
PJ Philosophisches Jahrbuch  
PPR Philosophy and Phenomenological Research  
PQ Philosophical Quarterly  
PR Philosophical Reviews  
PS Philosophical Studies  
RM Review of Metaphysics  
RS Religious Studies  
SJP Scottish Journal of Philosophy  
SJT Scottish Journal of Theology  
ST Studia Theologica  
ZK Zeitschrift für Kirchengeschichte  
ZTK Zeitschrift für Theologie und Kirche

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