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INSTRUMENTALISM IN PLATO'S PHILOSOPHY

A Functional Theory of Ideas and of God

Submitted in partial fulfilment of the requirements for the Degree of Doctor of Philosophy in the Department of Philosophy of the University of Cincinnati.

- : -

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INSTRUMENTALISM IN PLATO'S PHILOSOPHY

A Functional Interpretation of Ideas and God

Instrumental Platonists, such as J. A. Stewart, Paul Natorp, and A. E. Taylor have already made known through their published works, the passages from Plato's dialogues which indicate, if indeed they do not fully prove, that Plato had in mind an instrumental idea of truth and value. This, they agree, is consistently displayed from beginning to end of the dialogues. With the path thus clearly charted, the aim in this discussion will be to follow after them as observantly as possible and to point out the significance and the working of an instrumental interpretation.

A vast array of pros and cons might be marshalled for challenge or defense in connection with the findings of the instrumentalists. In spite of the weight of tradition and the forcefulness of certain anti-instrumental scholars, the instrumental view has sufficient adherents to be imposing, and it may be well to apply the pragmatic test of significance, even before the textual battle has reached its climax.

Some loyal traditionalists will protest, -

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why discuss Platonic Instrumentalism per se, if scholars are still uncertain about its actual existence? To which may be countered the question, - why not test this theory of Platonic Instrumentalism for its intrinsic worth? If its worth is slight, then its opponents may relax their endeavors to refute it and placidly wait for it to die of its own inanition. If its worth is significant, then its proponents may well increase their zeal either to credit it to Plato or to show with due reason how unfortunate it was that the greatest of philosophers failed in taking full advantage of the hints which leavened his writings. It would thus be for the instrumentalists to show the real gold in the whole mine of wisdom which constitutes the immortal dialogues. As Heraclitus sagely said: "Seekers after gold dig much dirt and find little gold." Maybe the instrumental meaning is a nugget which time will polish to its true significance. It is a little closer scrutiny of this instrumental "find" which is the purpose of this essay.

First, a brief review of the most outstanding claims to merit by other, older views.

Second, a statement of the instrumental view.

Third, an evaluation of that view with a mathematical interpretation of its nature and use.

Fourth, its effect in the Platonic philosophy.

Fifth, its bearing in subsequent Platonism and Christian Theology.

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I

ESTABLISHED VIEWS

It is conceded to be quite as possible to indulge in textual use or abuse of the Platonic dialogues as of the Bible. Isolated passages are massed in formidable array on all sides. The textual ammunition of the traditionalists, when hurled at the Aristotelians, prove to be boomerangs, and vice-versa with the Aristotelian weapons. Yet the course of all these verbal projectiles was carefully diagrammed by Plato himself in the Parmenides, with an outcome which will be discussed later.

The Traditional View

However the course of scholastic battle has surged, the traditionalist fortress has never been battered down. It defends the strict separatist conviction.

Platonic ideas, to the traditionalist, are variously called "Absolute Essences", "Separate Entities", "True Being", "Ultimate Realities", "Structural Features of the Universe", "Independent Existences", "Eternal, Immutable Verities", or whatever else will indicate that Ideas are the content of no human mind, in fact that they are not in _any_ sense "mental states". Whether each idea is a "causa sui" or a concept of God is the one outstanding source of civil dispute within the community of the traditionalists. Identify Ideas with God if one must,

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(and the Middle Ages felt it must) nevertheless whether as Idea or as God, separateness, transcendental independence and self-sufficiency is their sine qua non.

Inevitably from this rises Plato's dualism. There can be no separateness without something to be separated from. Consequently there must be two ultimate realities, which Plato termed Being and Not-Being. The reality of the latter is carefully elaborated in the Sophist, in answer to Parmenides' old warning "Keep your mind from this way of inquiry for never will you show that not-being is."(1) Whereupon the Eleatic Stranger in the dialogue draws out Theaetetus in a proof "that things which are not exist", and also in showing "what form of being not-being is", for they show "that the nature of the other exists, and is distributed over all things in their mutual relations, and when each part of the other is contrasted with being, that is precisely what we have ventured to call non-being." Thus Not-Being itself appears as an Idea.

This traditional independence of Ideas involves constant difficulties that of reconciling the elements of simple dualism to that of endless pluralism. It is obviously more convenient to resolve all things into two ideas, such as Being and Non-Being which would seem patently to exhaust all possibilities, but embarassing questions arise as to the nature of such a thing as Becoming. Is there an Idea for that? In the Parmenides this issue is forced

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through successive concepts to perceptive objects such as "hair, mud, dirt and anything else that is foul and base." Is there an Idea for each one separately and Socrates in embarrassment replies that from such an issue "I run away, because I am afraid that I may fall into a bottomless pit of nonsense and perish, and I return to the ideas of which I was just now speaking, and busy myself with them." (2) And the ideas of which he was just now speaking are those of the moral verities,-- the just, the beautiful and the good.

Plato, with an amazing naiveté in one so profound, pointed out his own quandary later on in the Parmenides, or rather had Parmenides point out in connection with the asserted absoluteness of each idea that "a man must be a man of real ability before he can understand that everything has a class and an absolute essence; and still more remarkable will he be who makes out all these things for himself, and can teach another to analyze them satisfactorily." (3)

"Yet," Parmenides pursues the intricacies of the problem, "if a man will not admit that every individual thing has its own determinate idea which is always one and the same, he will have nothing on which his mind can rest; and so he will utterly destroy the power of reasoning."(4)

Through this stated and implied maze of views Socrates frankly avows " I certainly do not see my way at present." (5)

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As to whether Socrates, as Plato's spokesman, ever did finally see his way clearly, and satisfyingly we have the verdict of a well-known and insistent traditionalist, Paul Elmer More, who acknowledges there was no final execution by Plato of his own intentions, and who also makes the comment "it is of the very essence of Platonism to leave these high matters in their own evasive liberty." (6)

Evasive liberty might imply evasive satisfaction, too. Evasiveness may increase the tantalizing lure of the Platonic ideal, but it also leaves loopholes in the traditional fortress for invaders like the instrumentalists to penetrate the strongholds of Platonism.

It is very necessary, however, to take equal cognizance of the more rigid parts of the traditional structure. These are chiefly constituted from the passages which say in plain English that the Ideas are "separate", "absolute", "independent", "immutable", "eternal", "timeless patterns", and a number of other kindred predicates. I use the word "English" advisedly, though Plato himself said his say in plain Greek. I do not pretend to cast aspersions on the translator's literalness, but there is occasion in any discussion of the Platonic tradition, to present at least a warning against the emotive dangers in reading Plato in English. By emotive dangers I mean the use of words, regardless of definition, for their associational emotional effect, as, for example, today one can

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say "Bolshevik" or "Mid-Victorian" or "Pre-war morals", and convey a world of implied, though not necessarily specific meanings. A translator must write in the emotive as well as the grammatical language of his people. To be permanently understandable, at least in any sympathetic sense, a work may have to be translated again and yet again from the English of one century to the English of the next. To illustrate such a claim I cite the passage in the Phaedo, which is translated by Jowett "now we see through a glass darkly." (7) A person familiar with Christian terminology inevitably associates this with the implications of Christian doctrine, or the current interpretations of St.Paul's Corinthian message. (8) Yet the Greek phrase in the accepted Platonic documents does not specifically necessitate that translation, and furthermore it is indicated in the text, by quotation marks, as a non-Platonic phrase. Very possibly, no better translation, no more fitting mode of suggestion for the original, will ever be found in English. There is, nevertheless, no evading the enhancement of the effect by such emotive words even when they involve no distortion of the original meaning.

Plato's dialogues are said to have been first translated into English by a Scotch churchman, Dr. Harry Spens in 1763. Besides being a professor of divinity, he

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became Moderator of the General Assembly of the Church of Scotland. The scholarly language of the eighteenth century was permeated with the ecclesiastical tradition of absolutism and churchliness. The religio-classical phraseology held sway, until the originally classical Voltaire revealed to the French the magic of free play with words. Up to the modern industrial period, at least, practically all scholarly translations or commentaries on classical Greek literature were predominantly absolutistic and Christian, and it was from such manuscripts that translators had to draw their comparative possibilities for determining the most prevalent meanings for doubtful words or idioms. The passage quoted above, regardless of its context in the Phaedo and without having anything directly to do with the Platonic-Christian liaison, does contribute <u>emotively</u> to substantiating the claims of Christian Platonists that the Spirit of Plato was essentially Christian.

Jowett, probably the most widely influential of the translators, prefaces his own work with the assertion: "The aim of the Introductions in these volumes has been to represent Plato as the father of idealism, who is not to be measured by the standard of utilitarianism or any other modern philosophical system." (9) An ideal and its vocabulary are usually inseparable. Jowett presumably translates in the language of his ideal, leaving it to others to argue long and earnestly whether εἶδος , for

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example, bears the implication of transcendence, imminence, or instrumentalism, as Adam, Zeller, Natorp, Stewart, et al, have long been doing.

So far, there is no complete translation of Plato's dialogues except in what may be called traditional phraseology; although even these vary noticeably as may be observed for example, in classifying, or rather, naming, the four faculties of the soul, which appear as follows:

According to Spens: " Intelligence answering to the highest, demonstration to the second, and assign opinion to the third, and the last imagination."

According to Davies and Vaughan: "Pure reason corresponding to the highest, understanding to the second, belief to the third, and conjecture to the last."

According to Jowett". . . reason answering to the highest, understanding to the second, faith for persuasion to the third, and knowledge of shadows to the last." (10)

It is a far cry from the "imagination" of Spens to the "knowledge of shadows" of Jowett, in the translation of εἰκασία, and just that variation, would make a significant difference in, for instance, More's discussion of the role of the imagination (11), as "the producer of the Ideas", - of which more will be said later.

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Without elaborating further, this may indicate that the weight of familiar phraseology is in the balance on the side of traditional absolutism in Plato. Though scholars have consciously dissected, analyzed and synthesized the meanings and implications of passage after passage, as, increasing comprehension of original Greek points of view has shaded and colored all the translations from the Greek, still the familiar English sources savor of absolutist convictions. When a full instrumental translation is made, then indeed parallel columning of all passages on the Ideas may be more instructive than at present. An instrumentalist capable of undertaking such a task, would soon see for himself whether then the greater number of indisputable literal "texts" would be Absolutistic, and that would satisfy many people who will not participate in a contextual battle, which is the Instrumentalists' present form of defense and attack.

For those, however, who insist on strict textual criteria, the traditional Platonists obviously have the advantage. To indicate the most firmly established bulwarks of the traditionalists' defense, the following passages may be quoted:

> Rep. V 476a: "And this is the distinction which I draw between the sight-loving, art-loving, practical class, and those of whom I am speaking, and who are alone worthy

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of the name of philosophers."

"How do you distinguish them?" He said.

"The lovers of sounds and sights," I replied, "are, as I conceive, fond of fine tones and colors and forms, and all the artificial products that are made out of them, but their mind is incapable of seeing or loving absolute beauty."

"That is true", he replied.

"Few are they who are able to attain the sight of absolute beauty ."

"Very true."

"And he who, having a sense of beautiful things, has no sense of absolute beauty, or who, if another lead him to a knowledge of that beauty is unable to follow--of such an one I ask, is he awake or in a dream only ? Reflect: is not the dreamer, either awake or asleep, one who puts the resemblance in the place of the real object?

"I should certainly say that such an one was dreaming."

"But take the case of the other, who recognizes the existence of absolute beauty and is able to distinguish the idea from the objects which participate in the idea, neither putting the objects in the place of the idea nor the idea in the place of the objects-- is he a dreamer or is he awake?"

"He is the reverse of a dreamer," he replied.

"And may we not say that the mind of the one has knowledge, and that the mind of the other has opinion only?"

"Certainly."

Rep. VI 499f : "For he, Adeimantus, whose mind is fixed upon true being has no time to look down upon the affairs of men, or to be filled with jealousy and enmity in the struggle against them; his eye is ever directed towards fixed and immutable principles, which he sees neither injuring nor injured by one another, but all in order moving according to reason; these he imitates and to these he would, as far as he can, conform himself. Can a man help imitating that with which he holds reverential discourse?".

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Rep. VI VII, 502-18 This is the Locus Classicus for the Idea of the Good, and will be discussed in part III of this thesis.

Timaeus 28a, 29a, The ontological argument: "What is that which always is and has no becoming; and what is that which is always becoming and has never any being: That which is apprehended by reflection and reason always is, and is the same; that, on the other hand, which is conceived by opinion with the help of sensation and without reason, is in a process of becoming and perishing, but never really is. Now everything that becomes or is created must of necessity be created by some cause, for nothing can be created without a cause. That of which the artificer looks always to the same and unchangeable, and of which he works out the form and nature after an unchangeable pattern, must of necessity be made fair and perfect; but that of which the artificer looks to the created only, and fashions after a created pattern, is not fair or perfect."

" . . . Which of the patterns had the artificer in view when he made the world, -- the pattern of the unchangeable, or of that which is created? If the world be indeed fair, and the artificer good, it is manifest he must have looked to that which is eternal; but if what cannot be said without blasphemy is true, then to the created pattern. Everyone will see that he must have looked to the eternal; for a world is the fairest of creations and he is the best of causes. And, having been created in this way, the world has been framed in the likeness of that which is apprehended by reason and mind and is unchangeable, and must therefore of necessity, if this is admitted be a copy of something."

Philebus 54, Socrates: "My answer is, that all things instrumental, remedial, material, are applied with a view to generation, and that each generation is relative to, or for the sake of, some being or essence, and the whole of generation relative to the whole of essence." (From this point he goes on to prove the self-sufficiency of the Good.)

Phaedo, 65: "Well but there is another thing, Simmias: Is there or is there not an absolute justice?

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"Assuredly there is.

"And an absolute beauty and absolute good?

"But did you ever behold any of them with your eyes?

"Certainly not.

"Or did you ever reach them with any other bodily sense? (and I speak not of these alone, but of absolute greatness, and health, and strength and of the essence or true nature of everything.) Has the reality of them ever been perceived by you through the bodily organs? Or rather, is not the nearest approach to the knowledge of their several natures made by him who so orders his intellectual vision as to have the most exact conception of the essence of that which he considers?

"Certainly.

"And he attains to the knowledge of them in their highest purity who goes to each of them with the mind alone, not allowing when in the act of thought the intrusion or introduction of sight or any other sense in the company of reason, but with the very light of the mind in her clearness penetrates into the very light of truth in each; he has got rid as far as he can, of eyes and ears and of the whole body, which he conceives of only ~~as a disturbing~~ as a disturbing element, hindering the soul from the acquisition of knowledge when in company with her--is not this the sort of man who, if ever man did, is likely to attain the knowledge of existence?"

Phaedo: 75 "From the senses then is derived the knowledge that all sensible things aim at an absolute equality of which they all fall short?"

"Yes.

"Then before we began to see or hear or perceive in any way, we must have had a knowledge of absolute equality, or we could not have referred to that standard the equals which are derived from the senses?"

Phaedo 83: "Philosophy . . . received her (the Soul) . . . and bid her trust in herself and her own pure apprehension of pure existence, and to mistrust whatever comes to her through other channels and is subject to variation."

Phaedo 108ff: (Description of a jewelled heaven after death--a realm of pure entities.)

Phaedrus 247: "For the immortal souls, when they are at the end of their course, go out and stand upon the back of heaven, and the revolution

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of the spheres carries them round, and they behold the world beyond. Now of the heaven which which is above the heavens, no earthly poet has sung or ever will sing in a worthy manner. But I must tell, for I am bound to speak truly when speaking of the truth. The colorless and formless and intangible essence is visible to the mind, which is the only lord of the soul. Circling around this in the region above the heavens is the place of true knowledge. And as the divine intelligence, and that of every other soul which is rightly nourished, is fed upon mind and pure knowledge, such an intelligent soul is glad at once more beholding being; and feeding on the sight of truth is replenished, until the revolution of the worlds brings her round again to the same place. During the revolution she beholds justice, temperance, and knowledge absolute, not in the form of generation or of relation, which men call existence, but knowledge absolute in existence absolute; And beholding other existences in like manner, and feeding upon them she passes down into the interior of the heavens and returns home . . . "

Cratylus 440: "Nor can we reasonably say, Cratylus, that there is knowledge at all, if everything is in a state of transition and there is nothing abiding; . . . but if that which knows and that which is known exists ever, and the beautiful and the good and every other thing also exist, then I do not think that they can be like a flux or progress, as we were just now supposing."

Symposium 211: "And the true order of going or being led by another to the things of love, is to use the beauties of earth as steps along which he mounts upwards for the sake of that other beauty, going from one to two and from two to all fair forms, and from fair forms to fair actions, and from fair actions to fair notions, until from fair notions he arrives at the notion of absolute beauty, and at last knows what the essence of beauty is. This my dear Socrates," said the stranger of Mantineia, " is that life above all others which man should live, in the contemplation of beauty absolute."

The above dozen citations indicate how emphatically Plato could and did both logically and passionately

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proclaim an Absolute. But as he himself has so patently brought out in the Cratylus,-merely tagging a problem with a name is not the same as solving it. One cannot ignore his charge at the end of his argument with the Heraclitean Cratylus: (12)

> "Whether there is this eternal nature in things, or whether the truth is what Heraclitus and his followers and many others say, is a question hard to determine; and no man of sense will like to put himself or the education of his mind in the power of names; neither will he so far trust names or the givers of names as to be confident in any knowledge which condemns himself and other existences to an unhealthy state of unreality; he will not believe that everything is in a flux like a leaky vessel, or that the world is a sick man who has a running at the nose. This doctrine, Cratylus, may indeed, perhaps, be true, but it is also very likely to be untrue; and therefore I would have you reflect well and manfully, and not allow yourself to be too easily persuaded now in the days of your youth, which is the time of learning but search, and when you have found the truth, come and tell me.
>
> "Then, another day, my friend, when you come back, you shall give me a lesson; but at present, go into the country as you are intending, and Hermogenes shall set you on your way.
>
> Cratylus: "Very good, Socrates; and I hope that you will not cease to think about these things yourself."

As these two ended their discussion in a draw, at least in Cratylus' mind, and the promised renewal of the discourse was not recorded by Plato, we may proceed now at this forking of the ways between Absolutism and the Heraclitean flux, to investigate other interpretations of the Ideas.

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In concluding this brief presentation of the traditional view, its significance may be summed up as follows:

1. A certain "evasive liberty" as to the nature of the dualism or pluralism of the Platonic Absolutes invites further speculation.

2. The Absolutistic view has the emotive as well as the temporal value of tradition in its existing translations in the English speaking world, where the most radically modern views are rooted, and so is well entrenched.

3. The traditional view is unique in the history of thought in its objectivity of Ideas, and therefore dominates either with its assertions or its problems any system into which it is admitted at all. Reality, which is essentially invisible, imperceptible, eternal, immutable, self-existent, independent though knowable, (though only in infra-life transitions) and yet the controlling aspiration of all existences, but withal has an equally real non-self different from but not opposed to it, has an all comprehensiveness and yet exclusiveness which flaunts all predication. If accepted at all, it simply is--and there's an end to it! Acceptance involves a purely personal experience which, like the secret of the mystics, is locked in the hearts of those who have it. Its dialectic force died with Plato while the purely inspirational influence went on in four volume sets as truly as the technique of making exquisite glass flowers died with the Blaschka family while

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the aesthetic influence persists in glass cases in the Ware collection of the Botanical Museum at Harvard University.

THE PARTICIPATION OR ARISTOTELIAN VIEW:

Aristotle's refusal to accept any absolutely Separate entities and the intensity of his comments on anything Plato said regarding such Realities is famous. Some of Plato's own comments have thus been magnified out of all due proportion to his original expression of them.

As it was Aristotle however, who first stressed the issue between Absolutism and Participation, he may be advantageously followed in stating the difference and then one may return to Plato for further enlightenment. In introducing the Magna Moralia as a discussion of the Good, Aristotle drew the line sharply:

> "About good in what sense of the term have we to speak? For the word is not univocal. For 'good' is used either for what is best in the case of each being, that is, what is choiceworthy because of its own nature, or of that by partaking in which all other things are good, that is, the Idea of Good.
>
> "Are we then to speak of the Idea of Good? Or not of that, but of good as the element common to all goods? For this would seem to be different from the Idea. For the Idea is a thing apart and by itself, whereas the common element exists in all: it therefore is not identical with what is apart. For that which is apart and whose nature it is to be by itself cannot possibly exist in all. Are we then to speak about this indwelling good? Surely not! And why? Because the common element is that which is got by definition or by induction."(13)

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Or again:

> "While the ideal theory presents difficulties in many ways, the most paradoxical thing of all is the statement that there are certain things besides those in the material universe, and that these are the same as sensible things except that they are eternal while the latter are perishable. For they say that there is a man-in-himself and a horse-in-itself and health-in-itself, with no further qualification, - a procedure like that of the people who said there are gods, but in human form. For they were positing nothing but eternal men, nor are the Platonists making the Forms anything other than eternal sensible things." (14)

Then he takes up the unnecessary duplication implied in an intermediate between Form and individual and concludes:

> "Now there are some who say that these so-called intermediates between the Forms and the perceptible things exist, not apart from the perceptible things, however, but in these; the impossible results of this view would take too long to enumerate, but it is enough to consider such points as the following: - It is not reasonable that this should be so only in the case of these <u>intermediates</u>, but clearly the <u>Forms</u> also might be in the perceptible things; for the same account applies to both. Further, it follows from this theory that there are two solids in the same place, and that the intermediates are not immovable, since they are in the moving perceptible things. And in general to what purpose would one suppose them to <u>exist</u> indeed, but to exist <u>in</u> perceptible things?" (15)

Thus the participation theory, - not the traditional Form (Idea) <u>and</u> Matter, but Form <u>in</u> Matter.

Acknowledgement of a Platonic hint of this is made with an interesting criticism in Met. A. VI 987[b]:

> "Having in his youth first become familiar with Cratylus and with the Heraclitean doctrines (that all sensible things are ever in a state of flux and there is no knowledge about them), these views he held even in later years. Socrates, however, was busying himself about ethical matters and neglecting the world of nature as a whole

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> but seeking the universal in these ethical matters and fixed thought for the first time on definitions; Plato accepted his teaching, but held that the problem applied not to any sensible thing but to entities of another kind - for this reason, that the common definition could not be a definition of any sensible thing as they were always changing. Things of this other sort then he called Ideas, and sensible things, he said, were apart from these, and were all called after these; for the multitude of things which have the same name as the Form exist by participation in it. Only the name 'participation' was new; for the Pythagoreans say that things exist by 'imitation' of numbers and Plato says they exist by 'participation', changing the name. But what the participation or the imitation of the Forms could be they left an open question." (16)

The consequence of this observation is that Aristotle, as Stewart puts it, "comes out naively, in the end, with a Doctrine which differs only in phraseology from Plato's rightly understood."(17) Zeller's conclusion is that "Aristotle's whole system cannot be truly understood until we treat it as a development and evolution of that of Plato, and as the completion of that very Philosophy of Ideas which Socrates founded and Plato carried on." (18) Much of the difficulty between the two philosophers centers around the use of the word οὐσία or "substance". They both seek the Real. They both believe knowledge transcends sense. Is the Real in a transcendent realm known intuitively, or immanent in the sense world known inductively? The two men are really more diametrically opposed on the problem of the method and limitations of knowing than they are on the nature of Being.

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Aristotle thought Plato meant by an Idea a <u>thing</u>, whereas he himself counted the Idea an <u>explanation of things</u>. The issue as to the Nature of Being thus simmers down to this, "Did Plato mean Ideas per se (as the traditionalists hold) independent of things, - or did he mean Ideas immanent in things, the individuating, formative element in them, - or as Aristotle would say - Ideas and things related as actuality and potentiality or as "such" is related to "this"? Did Plato mean imitation or participation? In the quotation cited on pages 10 and 11 (Rep. V, 476) translators recognize the use of both "resemblance" and "participation" to account for the relationship.

What Plato himself meant, as said before, is the problem of textual scholars. This thesis aims only to present illustrations of all views and to consider their necessary implications, not their historical authoritativeness. Given three possible views of the Platonic Idea, are their implications irreconcilable, or as Will Durant is wont to say, do philosophers at heart agree? Are they all actually seeking a logical basis for the same implications?

J. R. Stewart says "Plato is always bringing the predicate into relation with the subject, and regards the Idea as 'known' only in so far as found applicable to the explanation of Experience." (19)

There are many passages which reveal Plato's anticipation of Aristotle's participation theory of Form <u>in</u>

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Matter. In the first place Jowett notes "the transcendental existence of the Ideas is not asserted, and is therefore implicitly denied in the Republic and Philebus; and they are mentioned in the Theaetetus, the Sophist, the Politicus, and the Laws, much as Universals would be spoken of in modern books. Indeed there are very faint traces of the transcendental doctrine of ideas, that is, of their existence apart from the mind, in any of Plato's writings, with the exception of the Meno, the Phaedrus and the Phaedo. The stereotyped form which Aristotle has given to them is not found in Plato." (20) So much for the sanction from a scholar who avows in the introduction to his own translation, as already quoted (21) that he aims to represent Plato as the father of idealism, who is not be measured by the standard of utilitarianism or any other modern philosophical system.

In the dialogue bearing his name, Phaedo sums up Socrates' long reply to Cebes by saying "After all this had been admitted, and they had agreed that ideas exist, and that other things participate in them and derive their names from them, Socrates, if I remember rightly said --" and then he proceeds with the discussion of opposition. (22) It may be maintained that what Phaedo refers to as having been admitted was the explanation of comparative magnitudes and of twoness, - and that it is recognized that Plato used mathematical concepts to mediate between Pure Ideas and Individual

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things, and therefore the participation is restricted to the Dialectic as distinct from the moral realm. (23) Paul Elmer More notes how constantly Plato introduces a mathematical illustration only to let it blankly drop out of the whole discussion as soon as the argument focusses on moral concepts, the real Platonic meaning being revealed only by means of the latter. (24) Aristotle does not seem to have missed this point for he, too, indicated it in his discussion of intermediates which was quoted in part on page 18 of this thesis, but he insists that what may be said of intermediates must equally be said of Forms.

But Plato was the first to say that, also, - in the _Parmenides_ where he squarely faces the triple problem of (a) Ideas independent and real; (b) Ideas and Things mutually real and (c) Things, independent and real. Early in the dialogue, he outlines more concisely than Aristotle ever did the inductive method of establishing the participation theory (25). In a single page of type, he outlines what Aristotle makes the subject of protracted discussion in Met.A 6, Z 4-14 and M. 4,5,9, and 10.

Plato has Parmenides bring out the famous third man argument against self-existent Absolutes, and point out the unknowability of true Absolutes, and yet insists the power of reasoning will be lost without them (26). Then the dialogue is launched against the antinomies of the triple problem mentioned above.

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Three types of antithesis exist, as a means of formulating such an issue as that of the One and the Many, the Ideal and the Sensible World. The Platonic antithesis consists of deriving contradictory results from what is to all appearance one and the same premise. (27) The Kantian antithesis consists of parallel proof and disproof of the same proposition. The Hegelian antithesis involves synthesis from internal necessity.

Plato makes at least eight hypotheses and subjects them to all kinds of antithetical treatment to emerge at the end with Parmenides's remark:

> "Then may we not sum up the argument in a word and say, - that if one is not, then nothing is?
>
> "That is true.
>
> "Then let us say this; and further as seems to be the truth, let us say that, whether one is or is not, one and the others in relation to themselves and one another, all of them, in every way, are and are not, and appear and appear not." (28)

A truly Platonic antimomy, or have we again what More calls "evasive liberty in high matters?"

Anyway all possibilities are outlined in this dialogue with a total effect which can best be accounted for mathematically farther on in this thesis.

All in all, Aristotle's οὐσία or "substance", the first principle of explanation in things presents the same dualism as Plato's Ideas (29), i.e. between concrete and abstract existence, - a dualism which never permitted either philosopher to rest contented with his labors. Aristotle's was a dualism of individual essence, and Plato's was of universal essence, but both were trying to arrive at a causal

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basis for all implications of Reality, and this is the theme of Aristotle's dissertation in Met. A. IX, which I quote here (in part) with comments interpolated parenthetically. (30)

> "As for those who posit the Ideas as causes, firstly, in seeking to grasp the causes of the things around us, they introduce others equal in number to these, as if a man who wanted to count things thought he could not do it while they were few, but tried to count them when he had added to their number. For the Forms are practically equal to or not fewer than the things, in trying to explain which these thinkers proceeded from them to the Forms. For to each set of substances there answers a form which has the same name and exists apart from the substances, and so also in the case of all other groups in which there is one character common to many things." (So far, Aristotle is apparently wrestling with the question whether the Ideas cause class concepts or actually individuate the members of a class, - whether they are universal or individual essence. All of this was anticipated by Plato in the Parmenides.)
>
> "Above all one might discuss the question what on earth the Forms contribute to sensible things, either to those that are eternal or to those that come into being and cease to be. For they cause neither movement nor any change in them. But again they help in no wise towards the <u>knowledge</u> of the other things, if they are not <u>in</u> the particulars which share in them; though if they were, they might be thought to be the causes, as white causes whiteness in that with which it is mixed." (Here Aristotle shows that the chief principle of explanation, namely "causation" is not revealed by separatism but by participation or incorporation.)
>
> "In general," he further emphasizes this inadequacy of the traditional Platonic view, "though philosophy seeks the cause of perceptible things, we Platonists have given this up, for we say nothing of the cause from which change takes its start.....(Here he interjects a criticism of the use of too much mathematics as explanation.) .. And regarding movement, if the great and small

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> are to be movement, evidently the Forms will be moved; but if they are not, whence did movement come? If we cannot answer this, the whole study of nature has been annihilated." (This again has been clearly anticipated by Plato in Sophist 249 where he insists that a true philosopher must affirm that Being and the all must consist of motion as well as rest.)

For Aristotle in his quadruple system of causation - material, efficient, formal and final - the final, i.e. the raison d'être of any particular qua that particular is Form immanent in matter. He does not credit Plato with having his Ideas similarly causal in character, for he takes Platonic "separateness" and "absoluteness" to mean spatial and exclusive isolation, whereas, if the Platonic participationists are right, the only separateness substantiated by contextual reading of the dialogues is the separateness of the abstract and the concrete. This is exactly the same separateness which prevails between Aristotle's "final" and "material" causes.

To sum up, the participation or immanence theory of Ideas is

1. As much Platonic as Aristotelian.

2. A reinterpretation more than a refutation of textual references to "separate", and "transeendent", and "absolute" Ideas.

3. The basis of emphasis on the causal or functional relations of the abstract and the concrete. In the language of logic, this is the problem of connotation and denotation, intention and extension, and involves the

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same sort of separateness that prevails in these logical distinctions.

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II

INSTRUMENTALISM

Instrumentalism is characterized as situational activity. Instrumentalism in Plato would be the situational aspect of his views. It is the experience involved in the Ideas or in which they are involved, which must be investigated and clarified, both psychologically and inferentially. Many a passage in the dialogues which would formerly have been listed as evidence of Aristotelian participation now has to be reserved for instrumental presentation.

Almost any interpretation of Plato necessitates taking cognizance of two motives or moods. More says these moods are (a) scientific, i.e. the rationalized forms of things in time and space; and (b) the Ethical, i.e. immediate intuitions of the soul (31). Science, he says, seeks <u>knowledge</u> of the Ideas and philosophy seeks <u>possession</u> of them. The rationalizations or the intellectual aspects are always totally subordinate to the intuitional and moral aspects. In fact so minor are they that, though frequently introduced as stepping stones to moral concepts, they are most lightly dropped into oblivion when they have rendered that service. More thus concludes: "The point of supreme importance for the Platonizer today is, not that he should be able to define the operation of Ideas, but that he should avoid the two contrary errors of the rationalist and romanticist" (32). Those two errors are first the danger of

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ending up with "mere nominalistic categories of the reason emptied of all vital significance" and of tending toward solipsism.

"Defining the operation of Ideas" is, hoever, what the Instrumentalist would like to do. Stewart maintains that the dual aspects of Platonism are Methodology and Aesthetic Expression. The latter, in his estimation, is always the passionate allegorizing of methodological implications. (33)

In dwelling on the experiential operation of the Ideas the Instrumentalist feels that he is in full sympathy with Plato. Aristotle pretentiously defied Plato in his insistence on participation, but the Instrumentalist carries participation and immanence much farther in a conscious sincerity of interest in the tenor of all of Plato's dialogues. First then to state the Instrumentalist view and second, to have Plato speak for himself on the subject.

The Doctrine of Ideas may first be emphasized for its great significance as Method of Science. In other words, the εἴδη are "points of view from which the man of science regards his data." (34) They are Laws of Nature. They are what John Dewey would call Instruments of Analysis. Morally they are still scientific points of view. More claims that Socrates' weakness lay in basing the moral on the rational soul only. He would perhaps claim then that the Instrumentalist is more Socratic than Platonic, but that must be judged from the quotations to be presented here. The εἴδη appear to explain the Moral Virtues situationally,

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i.e. in social contexts as is so patently the case with justice in the *Republic*.

The εἴδη Stewart remarks, are "dynamically existent" and also "separate" in the sense noted in the preceding section. They are separate as explanations and phenomena, connotation and denotation, abstract and concrete are separate. Are they then eternal and immutable? Or is Platonism threatened again with Heracliteanism? Only a qualified answer is possible to these justifiable questions. It must be qualified because human comprehensiveness has changed. Masterful as Plato's mind was, he had not the informational means at his disposal to clarify super-sensible degrees of difference. Relativity in those days was a mere limitation of all things to the measure of man's own organs and comprehension, as Protagoras argued and was vicariously refuted in the Theaetetus (35).

Yet Plato's genius was adequate to hinting at broader meanings as in the passage already referred to in the Sophist 249, and quoted more fully below:

> "Str. Any power of doing or suffering in relation to the least thing was held by us to be the definition of existence. ...... If to know is active, then, of course, to be known is passive; and on this view, being, as being known, is acted upon by knowledge, and is therefore in motion, for that which is in a state of rest cannot be acted upon as we affirm........
>
> And, O heavens, can we ever be made to believe that motion and life and soul and mind are not present with absolute being? *Can* we imagine being to be devoid of life and mind, and to remain in awful unmeaningness, an everlasting fixture? Under being, then, we must include motion, and that which is moved. .... Then,

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> Theaetetus, our inference is, that if there is no motion, neither is there any mind anywhere, or about anything, or belonging to any one."

Thence to the conclusion:

> "Then the philosopher, who has the truest reverence for being cannot possibly accept the notion of those who say that the whole is at rest, either in one or many forms; and he will be equally deaf to those who assert universal motion, but according to the children's prayer about all things movable and immovable, he would like to have both of them: Being and the all would be affirmed by him to consist of both."

Agreeing that this was a "fair motion of being" Plato then plunged his debaters into one of his typical confusions about opposites, and arrived at the antithesis of the above: "Being, then according to its own nature, is neither in motion nor at rest." Plato had not acquired the Hegelian art of necessary synthesis from this sort of creative negation. He, nevertheless, had demonstrated his own reluctance to be satisfied with Being as either absolute motion or absolute rest.

Time and space, rest and motion today are not the concepts they were then. Relativity is no longer mere Sophistic subjectivism. Consequently the best instrumental statement on the eternal and immutable aspects of the εἴδη as Laws of Nature is Dewey's account of the difference between so-called structural features and the transitory processes of the universe.

"The important thing," he contends, " is measure, relation, ratio, knowledge of the comparative tempos

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of change. In mathematics some variables are constant in some problems; so it is in nature and life. The rate of change of some things is so slow, or is so rhythmic, that these changes have all the advantages of stability in dealing with more transitory and irregular happenings - if we know enough. Indeed if any one thing that concerns us is subject to change, it is fortunate that all other things change. A thing 'absolutely" stable and unchangeable would be out of the range of the principle of action and reaction, of resistance and leverage as well as of friction. It would have no applicability, no potentiality of use as measure and control of other events. To designate the slower and regular rhythmic events structure, and more rapid and irregular ones process, is sound, practical common sense. It expresses the function of one in respect to the other .... Whatever influences the changes of other things is itself changed ...... The fact is that all structure is structure of something; anything defined as structure is a character of events, not something intrinsic and per se. A set of traits is called structure because of its limiting function in relation to other traits of events. A house has a structure; in comparison with the disintegration and collapse that would occur without its presence, this structure is fixed. Yet it is not something external to which the changes in-

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volved in building and using the house have to submit. It is rather an arrangement of changing events such that properties which change slowly, limit and direct a series of quick changes and give them an order which they do not otherwise possess. Structure is constancy of means of things used for consequences, not of things taken by themselves or absolutely." (36)

What more is there to say, except to quote Plato and then proceed to an evaluation of the significance and effectiveness of such an interpretation?

Anyone familiar with the dialogues may have long since been wondering why the famous passages about the bed and the shuttle have been so long ignored. Simply because they belong here and I now quote them as illustrations of εἴδη or structure, which is "constancy of means of things used for consequences."

> Rep. X, 597. "Here are three beds; one is natural, which, as I think we may say, is made by God. .... There is another which is the work of the carpenter...... And the work of the painter is the third.
>
> "God, whether from choice or from necessity, made one bed and one only; two or more such ideal beds, neither ever have been or ever will be made by God.... Because even if he had made but two, still a third would appear behind them in which the idea of both of them would be contained, and that would be the ideal bed and not the two others.... God knew this and he desired to be the real maker of a real bed, not a particular maker of a particular bed, and therefore in nature he created one bed only."
>
> Cratylus, 389. "To what does the carpenter look in making the shuttle? Does he not look to some

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> sort of natural or ideal shuttle? .... And suppose the shuttle be broken in making, will he make another, looking to the broken one? or will he look to the form which he had in his mind when he made the other?... Might not that be justly called the true or ideal shuttle?.... And whatever shuttles are wanted, for the manufacture of garments, thin or thick, of woolen, flaxen, or other material, the ideal ought to contain them all."

Both of these passages put rich meaning into Aristotle's dialectical discussion of Final Cause, for both the ideal shuttle and the ideal bed seem a constant rule, a human need made manifest, or the abstract form immanent in multitudes of concrete shuttles and beds, whose virtue is recognized in use: - the element of purposive constancy in a varying situation. The same argument again appears in Rep.X,601, in a discussion which concludes: "The excellence or beauty or truth of each structure, animate or inanimate, and of each action of man, has reference to the use of them, either natural or artificial."

Then the Sun passage, so artistically instrumental in its presentation:

> Rep.VI, 507 ff. "Sight being, as I conceive, in the eyes, and the possessor making use of his vision, and color being also present in them, unless there is a third nature at hand designed for this special purpose, you know that the sight will see nothing and the colors will be invisible?
>
> "And of what nature are you speaking?
>
> "Of that which you term light, I replied.... Noble, then is the bond which links together sight and visibility.... And this (the Sun) is he whom I call the child of the good, whom the good begat in his own likeness, to be in the visible world, in relation to sight and the things of sight, what the good is in the intellectual world in relation to mind and the things of the mind."

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As the Sun gives to the eye the power to see and to the object seen, its visibility, so the Good imparts truth to both the Knower and the Known. Here is the Good as Ideal, to be approached only figuratively, hence the Sun simile. It is itself non - connotative; in our emotive experience, it is the instrument of "what-ought-to-be"; it illumines situations; it makes experience conscious; it is "the constancy of means of things used for consequences."

The Good again appears as the cosmic principle of what-ought-to-be in the Phaedo 97E - 99C. Here "the εἴδη are Laws, and the Good is the system of these laws." (37)

To these five illustrative passages it would be futile to add more before going on to the next part of the discussion. (38). The Instrumental view finds its culmination and fullest expression through a theory of functions, which will itself throw fuller light on the nature of the "Absolute", the methods and truth of participation and the service of Instrumentalism.

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III

THEORY OF FUNCTIONS

In 1924 a University of Cincinnati candidate for a Master's degree began his thesis with the claim that, as mathematics is "pure rationalization" it is the counterpart of traditional classicism - static and deductive. He went on to discount it as a method of constructive procedure. He contrasted it to creative instrumentalism. I now want to explain instrumentalism by mathematics and thereby, I hope, catch the spirit of Plato in a more comprehensive way.

Plato was never completely reconciled to classical mathematics if one may so term the purely deductive art so long associated with the influence of the Greek Euclid. It is a question whether Plato knew Euclid, but he did know that type of procedure, especially the shibboleth of consistency. The point is to account for the origin of that with which a system must be consistent. There are three possibilities; a priori knowledge, arbitrary definitions or hypothetical assumptions, and induction. Plato did his best with all three. He faithfully recorded Socrates' efforts at inductive establishment of moral criteria in the early dialogues of search (Euthyphro, Crito, Charmides and Laches). The effort to make the a priori system certain is quite apparent in the Meno, Gorgias, Phaedrus, Theaetetus and Sophist.

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The method of hypothetical assumption is probably nowhere more apparent than in the argument for immortality in the Phaedo, where Socrates says:

> "This was the method which I adopted: I first assumed some principle which I judged to be the strongest, and then I affirmed as true whatever seemed to agree with this, whether relating to the cause or to anything else; and that which disagreed I regarded as untrue." (39)

Then he goes on to <u>assume</u> that there is an absolute beauty and goodness and greatness, and adds "to this I cling, in the persuasion that this principle will never be overthrown". Again in Republic X one finds Absolutes postulated as controls of conduct. In such cases the Ideas appear as "Denkmittel" - their truth depending on their effective functioning. This shows the Ideas immanent in the stream of experience, - literally growing as outstanding predicates of judgement, and, once more, "the constant means of things used for consequences."

Now my thesis is that the modern mathematical theory of functions is more adequate to Platonic aims than Euclidean deduction. So it will be necessary to explain the modern theory in considerable detail, but first I must call attention to the adventurous spirit of modern mathematics which has replaced the classical stolidity which made it seem to so recent a graduate student incompatible with instrumentalism.

In discussion of the possibilities of any assertions of certainty, Dewey, the outstanding Instrum-

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entalist, reminds us, "Man began by working such qualities as hate and love and fear and beauty into the meanings by which to interpret and control the perplexities of life. When these demonstrated their inefficacy, he had recourse to such qualities as heavy and light, making them into natural essences or explanatory and regulatory meanings. That Greek-Medieval science did not get very far on these lines is a commonplace. Scientific progress and practical control as systematic and deliberate matters date from the century of Galileo when qualities which lend themselves to mathematical treatment were siezed upon." (40)

From or through geometry and number seemingly comes that sense of form and order, without which we might have no sense of proportion, no ability, as Will Durant puts it, "to know when big things are big and little things are little before it is too late." (41) And that is a distinctly Greek ideal for as Hegel points out, "The religious conception of the Greeks (with Nemesis the divinity of measure) implies a general theory that all human things, riches, honor and power, as well as joy and pain, have their definite measure, the transgression of which brings ruin and destruction." (42)

Every now and then someone yearns like Spinoza to get a mathematically sound theory of the whole universe,

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but Spinoza never approached Plato's thoroughness in the examination of premises.

The past half century has seen some astounding things done to mathematics. Probably the most revolutionary innovation is that of the non-Euclidean geometries, such as Lobachewski's which proves that the sum of the angles of a triangle is equal to less than 180 degrees and Riemann's proving that theyare equal to more than 180 degrees, all based on different conceptions of space. And now, Einstein, in presenting his new unitary field theory for gravity and electro-magentism, early in February 1929, has stated the opinion that the formulation of the correct unitary field laws will be with a conception of the space-time continuum involving " a specialization of the Riemannian geometry and a generalization of Euclidean geometry." This, of course, implies imminent new departures in both mathematics and physics.

The great problem in mathematics, as Plato well realized it also is in all of life, is to discover or conceive where to start from, and the mathematicians (notably Bertrand Russell and Henri Poincaré) have now dug under the no longer "self evident" axioms of classical mathematics to the following primitive number propositions, dealing with the primitive ideas of null, number and successor:

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1. Null is a number.
2. The successor of any number is a number.
3. Null is not the successor of any number.
4. No number is the successor of more than one number.
5. Any property or attribute that is possessed by null and by the successor of any number that posseses the property or attribute in question is possessed by all numbers. (Or in Poincaré's formulation: If a theorem is true for the number 1, and if it has been proved of n+1, provided it is true of n, it will be true of all the positive whole numbers.)

With the reminder that "Absolute certainty is the privilege of uneducated minds -- and fanatics" though practical certainty is always a sane working basis, Cassius J. Keyser of Columbia points out:

"Mostly we are more concerned to have our doctrines immediately effective than ultimately true,.... but like Euclid, like Ptolemy, like home-made morals, or small business systems, some day they break down; - the hunt is still on." (43) Then Keyser marks the main new aspect with which this thesis is concerned; - namely that mathematics is no longer primarily the science of number, space, quantity and measurement, but of "form". He has himself used the phrase " A Study in Fate and Freedom" as the subtitle for his lectures on "Mathematical Philosophy". Freedom prevails in the choice or creation of basic assumptions or initial premises. Once these are adopted, however, Fate, in the form of Logical Necessity, determines the direction and limitations of every step from that point on.

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The sympathy of method between every man and a real mathematician is described by Royce in his lectures on "The World and the Individual."

"Does the modern mathematician write down axioms and merely defy you to deny them? Does he assert a priori that this cannot or shall not be questioned? No, the modern mathematician has no dogmas.... He builds up before your eyes a collection of observable symbols or of figures in space, arranged in a certain deliberately planned way. .... and then he experiments upon them and asks you to watch the result of the experiment. This result he first reads off with as much the sense that he is recording present facts of observation, as one would have who should observe on the street that yonder horse is in front of yonder cart.

"The difference so far is merely that the mathematician makes his empirical objects and does not wait to see if ordinary natural processes will furnish them to him. His world, therefore, seems his fairyland. He plays with it. Yet, none the less, as he plays, he observes the empirical results of his play. And while he does this, he is as much a student of given facts as is a chemist or a business man. The results of this observation are often unexpected....

"Once created, the mathematical world, in its own eternal and dignified way, is as stubborn as the rebellious spirits that a magician might have called out of the deep."(44)

It is the same experience that comes to any cre-

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ative workers like poets, novelists or the wiser legislators. Characters in novels have a most embarrassing way of disconcerting their creators. Once created, a character persists in being itself often to the confusion of the author himself and even to upsetting an entire plot. If the character does not persist in a life of its own, it dies on the publisher's hands the first trip out. Thackeray was asked whether Becky Sharp was really bad or only seemed so and the author of Vanity Fair replied that he didn't know, he'd always wondered himself. Naturally then, Becky is one of the realest characters in fiction. She was made to keep people guessing and she did so even to her creator. The way laws when applied spring surprises on the men who make them as is notable in the case of Volstead is akin to what Royce calls "the news of the day, the unexpected events and the fortune" of a creative mathematician.

Among mathematicians, there is a theory of Doctrinal Functions, which seems destined to enrich and influence the general life of thought as much as the Law of Gravity affected humanity's physical interests and welfare. Both Gravity and Functions are innovations in our thinking, subject to replacement by subsequent discoveries either of new facts or of new possibilities. The Law of Gravity is a relational system for bodies mutually determining each other's activities. A Doctrinal Function is a relational system for concepts mutually determining each other's meaning. (45)

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A Doctrinal Function is an autonomous collection of propositional Functions, so this discussion must begin with the latter, which owe their name to Bertrand Russell. The commonest meaning for "function", by itself, is mutual determination, i.e. variables depending on each other, - for example, variation in area depending on variation of the lengths of the sides, or, variation in stock market activity depending on variations in political policy.

A Propositional Function, however, is "any statement containing one or more real variables". A variable is any symbol which represents a variety of meanings or values, which are not indicated in the original statement but which, nevertheless, are found, upon trial to fit into it. Now, be it noted, Propositional Functions are not propositions. Only the introduction of specific values for the variables can produce propositions. For example, to employ one of Keyser's illustrations, $x+y=9$ is a Propositional Function. Only upon substituting values for x and y do specific propositions exist; $3+6=9$, $2+7=9$, $5+4=9$, and so on. The question of truth or falsity first intrudes at this point. Suppose other numbers were substituted for x and y; $7+8=9$, $10+50=9$! So-called truth and falsity exist only in the propositions, not in the Propositional Function. $x+y=9$ is neither true nor

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false. It simply is and no such judgement can be passed on it. Furthermore, a Propositional Function, in one sense is itself a variable. It varies in content; its various "values" are all the specific true propositions which result when valid substitutions are made for the variables in the original statement. Hence there might be such a thing as a valueless Propositional Function, even though it could not be adjudged true or false.

All geometrical postulates and theorems are Propositional Functions. The Euclidean postulate or so-called axiom, "the whole is greater than any of its parts" is a Propositional Function. "Whole" and "Part" are the variables. Values for "Whole" might be "$1", "the United States", "Christianity", or "the Infinite whole number series"; and the corresponding values of "Part" could be "a dime", "Louisiana", Methodism","or the infinite prime-number series." Thus:

"The United States is greater than Louisiana.

"The infinite whole-number series is greater than the infinite Prime number series."

If all the above suggested substitutions were carried out, the first three sets of values would give true propositions; - but the last (substituting infinite number series) gives a false proposition; for in the realm of the infinite, the whole is not greater than its parts. There are as many prime numbers possible as whole

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numbers for there can always be one more than n for either. Even though false, this last is nevertheless a proposition perfectly correct as far as form is concerned, but it is falsified by inadmissable variables.

The algebraical binomial-theorem is a most interesting illustration of a Propositional Function. The "binomial" and the "exponent" are the variables. Until, however, values are introduced for them, there is no true or false proposition; - merely a form.

The more perfect the Propositional Function, the more varied are its admissable values, - that is to say, the more substitutions there can be which will give true propositions. $x + y = 9$ has obviously limited values for its variables. If true propositions are to result, there is for any one value of x only one correspondingly possible value for y. If either x or y is valued above $4\frac{1}{2}$, the other must be valued correspondingly lower. To substitute other values is to produce a monstrous or ridiculous effect, not compatible with the accepted conception of 9. Euclid's whole-part axiom, in turn, is limited to the finite realm if substitutions are to produce true propositions. The binomial-theorem is more perfect in that it gives meaning to far more substitutions. It is indeed conceded to be quite impossible to exhaust the numbrical substitutions

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which could be made and which would result in true propositions, - i.e. would result in nothing incompatible with the number realm of which it is a part.

This theory of Propositional Functions is in no way restricted to the traditional mathematical field. There are, as Keyser mentions, the Propositional Functions of the Declaration of Independence, - its "form" of Freedom and Equality of Men, with the substitution of values for "freedom" and "equality"; freedom of speech and of the press, equality of rights and of opportunity. Hence the specific propositions of our government. Moral codes are Propositional Functions; moral acts are propositions born out of the parent function upon the admission of human variables.

In any field whatsoever there are wide variations in the adequacy of the Propositional Functions, for it must be remembered that the Propositional Functions, as explained before, are themselves variables, the extent of their variation depending on the variety of true propositions which can emerge from them. This can be illustrated by two Propositional Functions in art. The Propositional Function for one artist might be a comic strip character, say Jiggs, used as an ornament. The propositions would be the individual ornaments produced as expressions of the "form" Jiggs. As variables, or media of expressions one could admit paper-maché, wood plaster, bronze, gold platinum or marble. They all fit, i.e. the idea can be

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carried out with any one of them. With papier-maché, wood and plaster, the Jiggs propositions might not <u>appeal</u> to everybody, but at least they are not glaringly monstrous or atrocious. With bronze or marble, however, especially if of heroic size, and with gold or platinum in any size, it may be anticipated that the Jiggs -propositions would arouse a very general sense of incompatibility with our existing concepts of the beauty or importance of the Jiggs-function. Jiggs-art is of the caliber of the Propositional Function $x + y = 9$. By way of contrast, there is a sufficiency and amplitude of perfection in the Greek Discus-Thrower form, such that no matter what variable is the medium of expression, from charcoal marks to carved ivory, the truth of its beauty and harmony with existing concepts of athleticism are there. Discus-Thrower art is more of the caliber of the binomial theorem as a Propositional Function.

Then comes the question - what is common to such extremes, inasmuch as certain simple values for the variables, like plaster, produce true propositions from both? Are these strangely contrasting art-forms themselves variables in a higher function? Is there hope of anything so perfect that every one of the variables' possible values may be introduced with not one false result? Can there be a perfect art-idea realizable in all media? As Einstein asks, and at least partly answers affirmatively in 1929, is there a unitary field for all gravitation and electro-magnetism? Again, can there be a

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perfect geometry including all concepts of space, three-dimensional or otherwise? Can there be any moral ideal which is an adequate criterion for all human acts?

Ascending this scale of complexity to richer realms of implication, Keyser, having passed through propositions to Propositional Functions, next groups logically associated Propositional Functions into Doctrines. Grouping all of Euclid's logically interdependent postulates and theorems (i.e. all of Euclid's Propositional Functions) together, Keyser denominates them the Euclidean Doctrine of Geometry. There are also non-Euclidean Doctrines of Geometry. Likewise there can be a comic-strip Doctrine of Art and a classical Doctrine of Art. Whatever is the all-inclusive idea back of either the Geometry Doctrines or the Art Doctrines or any other class of Doctrines is a Doctrinal Function. Doctrines, i.e. groups of Propositional Functions, are the values for the variables in Doctrinal Functions.

To trace this definitely - ordinary numbers are the values of all variables, such as x and y, in the Propositional Functions known as the binomial theorem, De Moivre's theorem, and their ilk. These logically associated Propositional Functions constitute a doctrine of algebra. This doctrine of algebra with all other possible algebraical systems, in turn, perform as values in the Doctrinal Function of algebra. Or, in the field of physics, the Newtonian

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gravitational system is one Doctrine or group of Propositional Functions; and the electro-magnetic system is another Doctrine or group of Propositional Functions, and in turn they both may be now destined to be variables in the new Einsteinian Unitary Doctrinal Function of physics. To follow this sequence once more - papier-maché, plaster, platinum and other substances are the values of variables, i. e. are the media of such plastic art as the Propositional Functions, Jiggs and Discus-Thrower. The Propositional Functions, Jiggs, Discus-Thrower, Winged Victory, Liberty Lighting the World, Venus de Milo, - logically related by appealing, in some degree at least, to human taste, - constitute a doctrine of art. This doctrine of art, i.e. plastic art, along with other doctrines of art, as painting, music and dancing, in turn perform as values for the variables in the more inclusive concept or Doctrinal Function denominated Art or Beauty.

Upon getting this high up in the hierarchy of relational forms, it appears one is no longer dealing with content, but with pure relations of forms as forms, and is on the way to asserting a form of all forms, which is an end-in-itself. All else has true values only insofar as it partakes of the nature of the supreme "form". This is substantially the same trend which Einstein noted in a syndicated newspaper article, in which he says: "The characteristics, which especially distinguish.... the

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unitary field theory from other physical theories are the degree of formal speculation, the slender empirical basis, the boldness of theoretical construction and, finally, the fundamental reliance on the uniformity of the secrets of natural law and their accessibility to the speculative intellect." (46)

This is moreover the characteristic of all really higher mathematics or higher philosophy. The mathematician, Poincaré, remarks in this connection, "the true inventor is not the workman who has patiently built some few combinations, but he who has shown their relationships, their parentage. The former saw only the mere fact, the other alone felt the soul of the fact. Oftentimes for the indication of this parentage, it has served the inventor's purpose to invent a new name and this name becomes creative" (47).

Keyser, explaining his own terminology of Doctrines and Doctrinal Functions, says:

"A doctrine is the offspring of a marriage - the marriage of subject matter and pure form. If the doctrine be true, we may call it an autonomous truth - the most beautiful and most precious thing in the world - for it has the doctrinal function's beauty of form; it has the beauty of truth; and is besides tinged with the warmth and living colors of some species of subject matter in which our practical life is immersed and finds its interest and its sustenance; if, on the other hand, the doctrine be untrue, then it is not a falsehood, merely, but it is an autonomous

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falsehood; this is indeed not a precious thing, it is the very opposite and yet, strange to say, - for so pervasive is beauty in our world - an autonomous falsehood, despite its having the ugliness of untruth, has all the beauty of perfection, the form of the doctrinal function whence it was derived." (48)

At about this point, the observant student of Plato wonders if Keyser has not led him through the barbed wire entanglements of mathematics only to bring him to the same destination as does the broad highway of traditional Platonism. Keyser admits that he has done just this. The theory of Doctrinal Functions, he frankly assures us, "accords perfectly with the saying - reiterated many times and in many forms since the golden days of Plato that mathematics contemplates Being under the aspect of Eternity; for it is perfectly clear that doctrinal functions, though their discovery by man is a temporal event, are themselves timeless - 'older than the Sun or the Sky' and destined to survive all things that are under the law of change and the doom of death." (49)

But is a Doctrinal Function identical with a Platonic Absolute? If so, one may react against such an attitude of Keyser's exactly as Aristotle reacted against Plato. It may also be added that careful study of Keyser's works, as also of Plato's works, brings out by implication if not by direct assertion the very criticisms which can be

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levelled against them. On the preliminary assumption, however, that this Columbia professor mainly presents nothing but the Platonic Absolute in mathematical guise, there is room for protest that a function without values for its variables can no more be unchangeably real than a Platonic Absolute with no particular subsumed under it, or the kind of Being which the Stranger in the Sophist (50) warned against as "remaining in awful unmeaningness an ever-lasting fixture." Aristotle, the first serious student of this Platonic problem except Plato himself, sought "ends-in-themselves, " i.e. ideas of values for their own sakes. He presents Happiness in the Nichomachean Ethics as such a value. His God, the Unmoved Mover, is also an End per se. Yet no end, which Aristotle specified, seemed to him real without particulars to manifest it. Reality did not consist of "surviving all things that are under the law of change", that awful unmeaningness of an everlasting fixture, but it did consist of capacity to admit an inexhaustible range of values for its variables.

There was nothing Aristotle's Unmoved Mover could not move as a loved object moves the lover. Yet if left all alone, surviving all possible substitutions for its variables, it might be Unmoved but it would no longer be a Mover. Aristotle's Happiness is a Doctrinal Function, but not quite of the order of the traditional Platonic Absolute. Happiness, the Stagirite says, is the most perfect exercise of

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human faculties. Human faculties! Could there be a more inexhaustible range for variables? Could Happiness persist if these variables were exhausted? Not according to Aristotle, for the only frustration he saw for the functioning of Happiness was a shortage or lack of variables, i.e. incomplete substitution, or being value<u>less</u>. "Nothing incomplete can be Happiness", he insisted with as much assurance as a mathematician's conviction that it matters not whether the Binomial Theorem applies to

$$(x+y)^2 \quad \text{or to} \quad \left\{\left[3x^3+2y^{\frac{7}{2}}+\frac{pqrs}{3^2y^2}\right]+\left[3\left(x-13y^6\right)^{\frac{3}{2}}+\frac{p^3q^2+q^2r^3+r^2s^3}{x^3+y^3}\right]\right\}^{129}.$$

The point is to <u>complete</u> the operation, be it simple or complex. With human capacities as the variables in Happiness, Aristotle lists ugliness, low-birth, loneliness, childlessness as things which prevent Happiness and every one of these is an incomplete human faculty, - it is a partial substitution in the function of Happiness. These values do not seem to be negatives. They are rather insufficient. Human ugliness is usually a shortage of beauty rather than a full negation of it for it is rare, if not impossible, to find an ugly human without one redeeming feature. Loneliness differs from solitude which does negate companionship. Loneliness is insufficient companionship. It is as though in the long binomial above one made substitutions for all the variables except p and q. No real proposition would result. With partial substitution in any individual case, misery supersedes

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Happiness. Were there to be partial or no substitutions in the case of <u>all</u> humanity, Happiness, instead of "surviving all things that are under the law of change" would disappear all together. Verily, if the <u>unchanging</u> reality of the Unmoved Mover <u>does</u> change when there's nothing for the Mover to move, what absolutism is there in an Invariable Variable with nothing to vary?

Beautiful as pure Happiness might seem in the form of a mere concept or a so-called Platonic Absolute, Aristotle had the instrumental feeling, the functional sense. No Doctrinal nor Propositional Function means anything, if indeed it is anything, unless there are one or more applicable substitutions for its variables. Contrariwise, of what avail is a variable which cannot be introduced into a functioning system? Instrumentalists, like J. A. Stewart of Oxford, now count Plato maligned if it is claimed he was not fully as well aware of this as his bright pupil, Aristotle. It isn't hard to find it in Plato, and that will be the task in Part IV of this discussion.

It behooves us first, however, to hearken again to the warning against the autonomous falsehood, which "despite its having the ugliness of untruth, has all the beauty of perfection, the form of the doctrinal function whence it was derived."

"We are living in a world," Keyser points out at present, "where it is possible to have an infinitude of

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false propositions which, though differing among themselves psychologically in an endless variety of ways, are yet but one in point of form, absolutely identical in logical frame or structure."

Abundant illustrations of this are afforded in the law courts of the United States. Very conspicuous was that incongruous combination of psychological oddity and logical rigidity in the Remus murder trial in Cincinnati in 1927. Here occurred the strange coincidence of a prisoner, charged with insanity, himself a lawyer, representing himself in his own defense and personally cross-examining the alienists who were trying to prove him insane. And it all fitted "validly" in the legal "form" or, in other words, was a perfect doctrine of court procedure! With the ironic definiteness of popular speech, it worked "beautifully". Naturally this abuse of perfection, while it cannot be refuted, does precipitate a desire for new and better Doctrinal Functions in law.

It becomes necessary then to note, as Keyser himself does, that a really autonomous doctrine is more an ideal than a reality, because of the "inherent intractableness of the great subject matters with which most doctrines deal." The test of time constantly dents or shatters our supreme hope of having at last found something everlastingly and indisputably true!

The sort of thing which happens with moral doctrines,

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for example, is effectively described by Herbert Spencer, apropos of altruistic hedonism:

"The sympathetic nature gets pleasure by giving pleasure; and the proposition is that if the general happiness is the object of pursuit, each will be made happy by witnessing other's happiness. But what, in such case, constitutes the happiness of others? These others are also, by the hypothesis, pursuers and receivers of altruistic pleasure. The genesis of altruistic pleasure in each is to depend upon the display of pleasure by others; and so on perpetually. Where, then is the pleasure to begin? Obviously there must be some egoistic pleasure somewhere before there can be the altruistic pleasure caused by sympathy with it. Obviously therefore, each must be egoistic in due amount, even only with the view of giving others the possibility of being altruistic. So far from the sum of happiness being made greater if all make general happiness the exclusive end, the sum disappears entirely." (51)

Hegel uses this type of doctrine arising from a beautiful though doubtful function to prove that in any reciprocal system, as with a function and its variables mutually establishing each other, there is not usually complete autonomy or self-sufficency. Spencer did hit on a pair of mutually determining parts, - the sympathetic nature and those with which it sympathizes, - but unless there is an

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outside factor, person or decisive power to assign to one of the variables the value of receiving as well as giving symphathy, the function fritters itself away in non-sense. Hence Hegel's own reaching after a more perfect Doctrinal Function in his triad form of thesis-antithesis-synthesis, where an inner necessity generates a continuous sequence.

After a start is made with any functions and variables - the next test is whether all else involved with it is compatible. If not, the trouble may lie in the selection of variables or in mistaking a mere proposition or doctrine for a Propositional Function or a Doctrinal Function. Euclid's geometry, for example, was for centuries supposed to be what can now be called a Doctrinal Function of all space relations. With the introduction of space of four or more dimensions, it became patent that Euclid's system was only a Doctrine - the Doctrine of three dimensional space - and not the Doctrinal Function of all space. The capacity for progressively recognizing these limitations as increasing experience reveals them is what makes progress in comprehension and consistent activity possible. But what is the feeling we have which indicates such trouble or gives a sense of complacency when all is well? Keyser answers:

"Whatever logical compatibility may be, it evidently is such that compatibility and incompatibility are related somewhat as pleasure and pain, as cosmos and chaos, as

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music and noise, as health and disease, as harmony and discord, as beauty and ugliness.

"Is compatibility then an emotion, a feeling, a mere sentiment? If it be, it is a sentiment of forms". (52)

I would like to speak of this as a rhythmic sense - this sense of compatibility. Perhaps the progressive rhythm of Hegel's triadic system comes as near to expressing it as is possible at present. Whatever it be, however, as long as function and variable maintain the harmony of compatibility with each other, a Newton or an Einstein can calculate stupendous problems without a halt. Any variation from that rhythm halts them as suddenly as a cramp halts a swimmer. Functional sensitivity may come to have as directive a bearing in all of life as the Socratic daemon had in holding the great Greek to his course.

Although only mathematicians can feel comfortable in all the mazes of modern theory, the average man has no reason on that account, to be in a haze of incomprehension himself. "The child, today, " Dewey gives assurance, "soon regards as constituent parts of objects, qualities that once it required the intelligence of a Copernicus or a Newton to comprehend." Any grade school child can get a sufficient practical idea of the law of gravity, and of the sun as the center of the Universe. Modern, free mathematical concepts can become equally comprehensible when they are in more current use. As succeeding generations see purpose

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and meaning in Mathematical studies, the educated population, it may be anticipated, will more commonly press on to a taste of higher mathematics with its invariants, hyperspaces, variables and functions, such things as will give elasticity to intelligent imaginations along with precision of method. It may be hoped that this science will regain the lure which gave it perennial fascination to the Greek scholar.

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IV

PLATONISM AS FUNCTION

This hierarchy of Functions is the methodology of instrumentalism. It is experiential, inductive and deductive. The values for the variables are derived from experience. At first they are the many in chaos. Then relationing sets in - by compulsion, by chance, by inner necessity? Ardent exponents of all three will expound their relative claims eagerly enough. Yet to humanity as knower, whatever may be known becomes patent in the process, or as true instrumentalists would say, in the situation. Certain groupings become manifest in any experience. He who codifies them in any sort of a formula with variables has made an inductive leap to the first functional form, as for example, when Galileo formulated the laws of falling bodies. Thence, he proceeds through the whole hierarchy until a true Doctrinal Function appears as an all inclusive abstraction. He who can ascend this scale is the one Poincaré referred to as an inventor who feels the soul of a fact. (p.49)

In such a revelation - the Absolute appears as a Doctrinal Function, separate and immanent, as the abstract is to its concrete, as connotation is to denotation. Now it has been shown (p. 53 of this thesis) how the Propositional Function would change or vanish (which, after all, is a change) if it had no values for its variables, as the Un-

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moved Mover would no longer be the same with nothing to move. Furthermore Keyser has said (quoted on p. 43) that the Propositional Function is itself a variable in a higher group or Doctrine. All of its true propositions are values. How- it is to the point to ask now - can Keyser escape in the case of Doctrinal Functions, the very conclusion which he maintains for Propositional Functions? Why isn't a Doctrinal Function, however unchanging an Absolute it may seem nevertheless a variable with all its doctrines, - why isn't it incapable of surviving "all things that are under the law of change and the doom of death." It certainly would not survive if it had no true Doctrines as values. Autonomy would seem to require this conclusion unless one escapes by a bold leap of hypostatization and emancipates the Doctrinal Function alone from logical necessity. The one and the many both either are or are not! The Doctrinal Function or Absolute Idea may indeed be pronounced a structural feature of the universe but only "because of its limiting function in relation to other traits of events" to quote Dewey again.

In Plato's philosophy, we may identify the Functional elements as follows:

I The Values for the simplest variables are the various items of experience in the physical, moral, social, political or any other aspect of life.

II The Propositional Functions are formulated

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groups of these experiences. For example, Justice, in any formulation with variables is one of the moral Propositional Functions. Consider the first book of the Republic, which c0ntains three characteristic propositional functions of Justice.

1. To tell the truth and pay your debts is justice. (53)

"Truth" and "debts" are the variables. A few values are suggested in the dialogue, as for example "money" or the "arms of a man who turns mad." By substituting the first we get the proposition "To tell how much one owes and to pay that amount is justice." By substituting the second we get the proposition "To tell a man he has gone mad and to return his sword to him is justice." The first is considered a true proposition, and the second is promptly agreed to be false. The insinuation in saying the proposition has too many exceptions is that the Propositional Function as formulated has not enough admissable values for its variables to be worth while.

2. To do good to friends and harm to enemies is justice. (54)

Here are four variables, "good", "friends", "harm", and "enemies". "Alliances" and "war" are offered as values for "good" and "harm"; and another pair of suggested values for the same two is "money partnerships" and "stealing". "Real" and "Seeming" are the proposed values

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for both "friends" and"enemies". Or "good people" may be the value for "friends" and "evil people" for "enemies"., - or even combinations of these values are proposed, "seeming and real, good friends" and "seeming and real, evil enemies". The values in the end all seem to be as much variables as the original variables themselves. Unable to agree on any simple values for the variables, the Propostional Function is abandoned.

3. The interest of the stronger is justice (55)

"Interest" and "the Stronger" are the variables. The first pair of values offered is "eating beef" and "wrestling" i.e. "Eating beef by a wrestler is justice." Two other values result in "Making laws for rulers is justice,"or again "Fattening the sheep of the shepherd is justice." Then the debaters discuss at length the specific values suggested - that is, whether it is the ruler-in-himself or the ruler-in-office, or the shepherd-per-se or the shepherd-as-employee. Finally this Propositional Function is abandoned when consideration of the kindred Propositional Function "Injustice is stronger than justice" results in a bad paradox.

The characteristic of the Socratic method is arriving at Propositional Functions by inductive leaps from experience, then testing them by successive substitutions and deductive inferences, with quite often ultimate abandoning of the Function and making plans for another

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attempt later. Similarly, Propositional Functions of education, military training, philosophical guidance etc. are worked out in Books III-VIII.

III. <u>The Doctrines</u> are the related groups of these Propositional Functions. The Doctrine of Justice includes all the above cited Propositional Functions as well as those in Book II and also others found in Protagoras where it resembles holiness; in Meno as virtue; and in the Laws in its legal aspect, and anywhere else that values are suggested for it. The worth of the Doctrine of Justice will be tested by evaluating the Propositional Functions of which it is comprised to see if it has enough admissable values to make it manifest.

In a like manner all Propositional Functions as to piety will constitute a Doctrine of Piety.

Or, in a more inclusive classification, all Propositional Functions of justice, piety, temperance, courage wisdom, etc. may constitute the Platonic <u>Doctrine</u> of Morality.

By associating other groups, the Platonic Doctrine of Statecraft becomes characteristically manifest and likewise Plato's aesthetics assume form when all the Propositional Functions of pleasure, color, music and kindred variables have their necessary kinship revealed by their consistent fulfillment of a Doctrine of Beauty.

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IV The Doctrinal Function has the Doctrines as its variables and the Propositional Functions which can be truly substituted for their values. If there are no Propositional Functions which can be"truly" substituted for the Doctrines, the Doctrinal Function is value-less (like an Unmoved Mover with nothing to Move) and one must always guard against a Doctrinal Function composed of heteronomous or anautonomous Doctrines. To Plato, of course, the Doctrinal Function is the Good.

State the Good any way you will.

1. The Good is the Rational Order of the Universe, Seek values for "rational order" among the Doctrines of Beauty, Justice, statesmanship and the rest. Do any of the Propositional Functions thus substituted form a false Doctrine? If so the Doctrinal Function is not autonomous. The search must still be on for one that is.

2. The Good is the health and harmony of the soul. More substitution of Propositional Functions for the Doctrines of "harmony" and "soul". Here again one must be prepared to realize that if the admissable values are exhausted and inadmissable values which falsify the Doctrine begin to appear, one may have to plead guilty to having mistaken merely a new Doctrine (i.e. a new grouping of Propositional Functions) instead of what he had hoped, in

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vain, would be a Doctrinal Function.

That Plato was quite clear himself on the successive steps of this inductive ladder if one may speak of it as such seems evident in Book VII of the Republic when "the world is perplexed and wants to arrive at a decision and asks What is absolute unity?" Referring to arithmetic as conductors to truth, he concludes:

> "Then this is a kind of knowledge which legislation may fitly prescribe; and we must endeavor to persuade the principle men of our state to go and learn arithmetic, not as amateurs, but they must carry on the study until they see the nature of numbers in the mind only; nor again in the spitit of merchants or traders, with a view to buying or selling, but for the sake of their military use, and of the sould herself; and because this will be the easiest way for her to pass from generation to truth and being." (56)

Is not this progress from empirical generation to rational truth strikingly similar to the progress from the empirically induced and deductively verified theories of gravity and electro-magnetism to the speculative unitary field of Einstein's latest ratiocinations, which has already been used to illustrate the Doctrinal Function in the field of physics? It is very possible that as the kinship of all the sciences becomes more apparent the unitary field theory may prove to be only one of many other highly inclusive Doctrines instead of a true Doctrinal Function.

Besides arithmetical argument, the same progression can be noted in a famous passage in the Symposium.

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"He who would proceed rightly ... should begin in youth to turn to beautiful forms, and first if his instructor guide him rightly, he should learn to love one such form only - out of that he should create fair thoughts; and soon he will himself perceive that the beauty of one form is truly related to the beauty of another; and then if beauty in general is his pursuit, how foolish would he be not to recognize that the beauty in every form is one and the same! And when he perceived this he will abate his violent love of the one, which he will despise and deem a small thing, and will become a lover of all beautiful forms; this will lead him on to consider that the beauty of the mind is more honorable than the beauty of the outward form". So it goes until at last "the vision is revealed to him in a single science, which is the science of beauty everywhere." (57)

"For he who has learned to see the beautiful in due order and succession, when he comes toward the end will suddenly perceive a nature of wondrous beauty and this, Socrates, is that final cause of all our former toils, which in the first place is everlasting - not growing and decaying, or waxing and waning; in the next place not fair in one point of view and foul in another, or at one time or in one relation or at one place fair, at another time or in another relation or at another place foul, as if fair to some and foul to others, or in the likeness of a face or hands or any other part of the bodily frame, or in any form of speech or knowledge, nor existing in any other being; as for example, an animal, whether in earth or heaven, but beauty only, absolute, separate, simple and everlasting, which without diminution and without increase, or any change, is imparted to the ever-growing and perishing beauties of all other things. He who under the influence of true love rising upward from these begins to see that beauty is not far from the end. And the true order of going or being led by another to the things of love, is to use the beauties of the earth as steps along which mounts upwards for the sake of that other beauty, going from one to two and from two to all fair forms, and from fair forms to fair actions, and from fair actions to fair notions, until from fair notions he arrives at the notion of absolute beauty, and at last knows what the essence of beauty is." (58)

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Is it necessary to mark the points of contact in this passage formerly considered a traditionalist bulwark? (59) To indicate them briefly, however, first there is the inductive leap from fair forms to fair thoughts revealing as a Propositional Function how all the fair forms might fit in as values for the variables in a thought of beauty, thus making evident how the forms are truly related. Then the steps of abstraction to the completely abstracted Doctrinal Function of Beauty as an essence. Next, the description of the functioning of this "wondrous beauty". It is complete and adequate to an even higher degree than the binomial theorem and in a similar manner, it need not wax and wane, for, as formulated, it applies to all quantities, great or small. It admits unlimited values for its variables. In other words substitutions do not make it now true, now false (i.e. fair in one point of view and foul in another); and whether it be faces, hands, forms of speech or animals that which can be substituted at all is thereupon revealed in the beauty of the Absolute form.

Most interesting perhaps is the comment on it as "beauty only, absolute, separate, simple and everlasting, which without diminution and without increase, or any change, is imparted to the ever-growing and perishing beauties of all other things." Could this be anything but a functional relation: - the pure, enduring abstract persisting forever with and through the ever-growing and perishing concrete values? Separate as connotation is from denotation,

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everlasting and unchanging as is the relation between abstract and its concrete, reciprocal real-ization is a functional relation, so long as they *both* shall *be*.

In this as in all other handlings of the "One and Many" puzzle, there must go the companion warning so charmingly expressed in the Philebus:

> "Any young man, when he first tastes these subtleties, is delighted, and fancies that he has found a treasure of wisdom; in the first enthusiasm of his joy he sets (not every stone, but) every thought rolling, now converting the many into the one, and kneading them together, now unfolding and dividing them; he puzzles himself first and above all, and then he proceeds to puzzle his neighbors, whether they are older or younger, or of his own age - that makes no difference; neither father nor mother does he spare; no human being who has ears is safe from him, hardly even his dog, and a barbarian would have no chance with him, if an interpreter could only be found." (60)

This is a suitable expression for the reproaches which might fairly be expected from such a scholar as Paul Elmer More, who frankly maintains that instrumentalists are prone to doing violence to real Platonic readings. Yet I wonder if this functional view has not something in it which is not wholly foreign to Dr. More's own interpretations, at least in part. This possibility can only be indicated by quoting Dr. More's view directly, as for example, his evaluation of the role of imagination.

"The central truth of dualism is a recognition of the absolute distinction between the two elements of our conscious being and an admission of the impossibility of finding any rationally positive explanation of the mutual interaction of these two elements. We know that our

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concupiscent soul is, or ought to be, under the jurisdiction of the spirit, yet our analytic reason can express this jurisdiction only in terms of suspension and an inner-check. (He is presenting here a psychological analysis of the Ideas as a basis for morality.E.B.) But the human mind cannot rest comfortably in this state of mere negation; it is impelled by its very nature to seek some positive expression for these superrational facts of consciousness, and it is just here that another faculty, the imagination, steps in to perform what was impossible to the reason. In its lower activity the imagination is the power by which the sensations derived through the organs of sight and the rest are projected outside of the mind as objects of perception. The imagination can also go beyond this function and, after recombining at pleasure the data of perception, can project these new combinations into the void as things having to the mind a certain degree of independent existence. Thus, the landscape conceived by the artist or the character conceived by the poet is thrown out into the world of objective existences. And so, by a still higher activity, the imagination essays to deal with the immediate data of consciousness, as it deals with those of sensation. Justice, which to the reason was only a negation of our positive impulses, is, like the creation of the artist, projected outside of the soul so as to become a positive entity with a life and habitation of its own and the soul under the control

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of moral force seems itself to be reaching out to touch and take into its possession that which is, in a way its own creation.

"These imaginative projections of the facts of moral consciousness are the true Platonic ideas. Hence their peculiarity: though the most intimate realities of experience, things of which our knowledge is so firm and sure that of other things we seem in comparison to have only opinion, yet the moment we apply our discursive reason to them, the moment we undertake to describe them in intellectual terms, they melt away into nothingness, like the dew in the clear dry breath of the morning."(61)

Upon thorough analysis, is it not rather difficult to define any great difference between this creative power of the imagination and a good, vigorous, inductive leap from concrete to abstract, preserved thereafter as that which Keyser calls a "sentiment of forms" and Poincaré calls "the soul of a fact"? True, More himself, later argues back into this imaginative product on a priorism of moral immutability, insisting that the truth is present to consciousness before it has been evoked for the inner eye as a form, but unfortunately he gives no special passages in support of this. (62) He does mention Plato's phrase "the vision of understanding" but it seems to imply nothing contrary to Keyser's "sentiment of forms", and he also cites the Sun passage in the Republic, which, as already indicated, is after all a Doctrinal Function giving order to the variables

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and meaning to their values. When he said that applying our discursive reason to Ideas makes them melt away, is not their vanishing or metamorphosis fundamentally the same thing which happens to the binomial theorem when values are inserted for the variables? Put plain numbers in place of the x,y,zs etc. and to all except people with the "vision of understanding" or a "sentiment of forms" - even among mathematicians themselves, what appears is a conglomeration of figures. In other words, by substitution, it becomes what Peter Abelard in the Twelfth Century paradoxically termed "an individualized universal". To illustrate, $(x + y)^2$ expands to $x^2 + 2xy + y^2$ and as such is a propositional function. Substituting 2 + 3, or 4 + 5 one can have 4 + 2•2•3 + 9 or 16 + 2•4•5 + 25, and according to what is substituted, the ultimate meaning of the whole can be 25, 81 or infinity, while, at the same time, the original function, has disappeared for when one has arrived at an <u>answer</u>, the original letters, indices, signs, in fact the whole form has melted away into nothingness. The Propositional Function first became a mere proposition and by carrying out the adding operation, as indicated, it ultimately became simply a new value. This happens every time an abstraction is made concrete, - but there's nothing about that destructive of the abstraction. As Plato was wise enough to observe, "Beauty (Form) only, absolute, separate, simple

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and everlasting, without diminution and without increase, or any change, is imparted to the ever-growing and perishing beauties (forms) of all other things." The individual is <u>right</u> or <u>true</u> by virtue of the beauty of form of the universal.

In the Phaedo discussion of "twoness" Plato seems to have anticipated the need of some such functional reasoning, for he quizzically remarks:

> "Nor am I any longer satisfied that I understand the reason why one or anything else is either generated or destroyed or is at all, but I have in my mind some confused notion of a new method, and can never admit this." (63)

His confused notion of a new method may have been clearer in his own philosophy than he himself realized.

A feeling of this relation is hinted in a statement like this from the Timaeus;

> "Mind, the ruling power, persuaded necessity to bring the greater part of created things to perfection, and thus in the beginning, when the influence of reason got the better of necessity, the universe was created." (64)

The influence of reason, it seems, formulated Propositional Functions while the values for the variables were "created things". Then there was an ordered existence.

The sharpest battle of meanings is waged, however, in the Parmenides, which necessitates more detailed discussion. The preliminary statement of the difficulty has already been quoted on p. 23 . In the protracted One and Many discussion in this dialogue, the key-note seems to be just the point made in the above mentioned quota-

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tion, that no knowledge is possible without Absolute Ideas experientially verified. (65) The Ideal world, in other words, must be revealed to be the Real world <u>qua</u> object of knowledge (a suggestion, by the way, of which Hegel took full advantage later.) Then, of course, scholars run up against the same difficulty, Dr. More noted above, namely that having attained to the slightest conception of the Ideas, an application of discursive reason seems to make them utterly vanish. A Doctrinal or Propositional Function <u>always</u> turns into a mere doctrine or proposition the instant that values are substituted for its variables. To explain again, the binomial theorem may be a perfectly intelligible Propositional Function but to remain a function it must contain <u>unknowns</u>, x and y at least. Let those unknowns become known and then the function is gone and the proposition is here. The interesting feature of this view, however, is that x and y though unknowables are always rediscoverable and verifiable in empirical practise. Rediscoverable? Yes, and yet never can the full implication of x an y, that is either one's totality of values be put into words by discursive reason. Its values can be specified to n + 1, but there is still "n" defying discursive reasoning. Nevertheless x and y can always be satisfied by experience. The abstract can be made concrete and can, moreover be recov-

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ered again from the concrete.

When Jowett says the residuum of the Parmenides is "the idea of 'being' or 'good' which cannot be conceived, defined, uttered and cannot be got rid of", (66) he seems to me to be saying that this Idea cannot be fully realized per se, cannot be expressed without variables, cannot be presented in the concrete and still be a pure form, and yet it inevitably revives as a form from the existence of the concrete, or agin in the approximate language of the Parmenides, "The one becomes and is destroyed by taking and giving up Being." I think this can be found in every hypothesis.

Hypothesis I (137c-142b) What is one can never be anything else but one. This argument ends by resolving the One into a mere name for nothing, i.e. the absurdity of a Doctrinal Function with invariable variables, inconceivable per se, not recoverable not to be recreated without values, - and abstract without concretes from which to be abstracted.

Hypothesis II (142b-156) Unity is real, - what is one must nevertheless be real. This calls out a discussion highly suggestive of what Josiah Royce later formulated in his Supplementary Essay to Vol. I of "The World and the Individual" as a Self-Representative System. Finally Plato substantially presents the relation of functions and values for variables as follows: (parentheses mine)

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"And being one and many and in process of generation and destruction, when it becomes one the being of the many perishes (i.e. when it is a Doctrinal Function the values for the variables are not evident) and when many, the being of the one is destroyed," (i.e. when values are substituted, the doctrine or proposition appears, and the parent function in its functional aspect disappears.)

Hypothesis III (156-157b) Non-existence of Unity relative to plurality. Plato here tries to grasp Reality at the instant of transition (Bergson's problem) and he reveals a perpetual priority and posteriority in the abstract and concrete or the alternative of non-existence. There is excuse for wondering if he has not fallen into Zeno's error in this quibble. He seems to deal with transition as an intrinsic quality of the Reals in much the same way that Zeno assumed sound to be an intrinsic quality of the millet seed. He seemed to be groping after a concept of the reciprocal and relatively or mutually stable type of functional relationing. (67)

Hypothesis IV (157b-159b) Unity predicated of Reality. One quotation only is needed here: "The result to the others flowing from the one is that the union of themselves and the one appears to give a new phenomenon of limitation in relation to one another, whereas in their own nature they have no limit." Form and values reciprocally limit each other in relation to one another, whereas in their own nature they have no limit.

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Hypothesis V (159b-160b) Complete separation of Unity and Plurality. The conclusion is "If one exists, one is all things, and also nothing, but in relation to itself and to other things." If a truly autonomous Doctrinal Function exists, it will validly admit unlimited values for its variables, and yet per se, without values, it is nothing.

Hypothesis VI (160b-163b) One does not exist - and whatever is other is different from the one. The existence of non-being is essential to this argument. Negation is again as in the Sophist (68) resolved into difference and not unreality. The culmination is in the passage which reads, "And must not that which is changed become other than it previously was, and pass into another state and perish; but that which is not changed can neither come into being nor perish?" Again, as far as I can see, the change of the Doctrinal or Propositional Function into a specific doctrine or proposition, with the disappearance of the parent function qua function. Then the but-clause in the quotation declares that when there are no substitutions for variables, i.e. an Invariable Variable, the functional form neither can be nor not be.

Hypothesis VII (163b-164b) There is no such thing as the one. In other words - Plato's own words - "The non-existent one has and is nothing at all." The variables have no admissable values, and therefore are not. The Doctrinal

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Function "One" may not be non-being, in the ordinary negative, unPlatonic sense, but it is non-sense, non-realizable for lack of values as Aristotle so vigorously insisted when he had no use for universals without particulars.

Hypothesis VIII (164b-165b) "If one is not one, what becomes of the others?" Naturally this leads to complete non-relationing, i.e. complete isolation of each particular, meaningless values with no way to function, no reciprocal determination, i.e. no similarity or dissimilarity, no contact or separation, no motion or rest, nor coming into being nor perishing.

Hypothesis IX (165e - end) If one has no existence other things are not. This is an assertion inevitable after Hypothesis VIII, and has simply a more emphatic bearing on the point.

Thus to the climax:

"Then let us say this; and further, as seems to be the truth, let us say that, whether one is or is not, one and the others in relation to themselves and one another, all of them, in every way, are and are not, and appear and appear not," which has already been quoted (p.23) as evidence of the functional view. I have tried to make clear now also how every one of the hypotheses, whether accepted or rejected, has its crucial test, and is accepted or rejected on the basis of its functional possibilities for the One and the Many.

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In more modern terms, A.E. Taylor, whose suggestions I have adopted freely, but whose arguments I have varied at times as anyone can see who cares to compare this with his discussion, summarized the whole trend rightly, I think, when he claims: The Parmenides shows that (1) crude idealism, which places reality in a mere undiversified unity, and (2) crude sensationalism which places reality in mere chaotic diversity, both end in speculative nihilism. Hence the conclusion: - the sensible world would be nothing, but for its "participation" in the Ideas, and reciprocally the Idea would be nothing, but for its permeating presence in the actual world of experience. (69) In other words, I would add, their reality exists in, depends upon and is coeternal with their functional relation.

Realizing that no exposition can go unchallenged, it would be well to take into consideration promptly such protests as have been voiced by More, whom we have already recognized as a scholarly, gracious and withal firm exponent of the older view. It has already been shown how his use of the role of imagination makes the present view even if not agreeable to him, at least not wholly discordant. (70) A study of the Parmenides, however, leads him to a condemnation of any quasi-Hegelian tendencies, i.e. attempts at a "rationalizing reconcilation" of the difficulties inherent in the doctrine of Ideas (71).

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The first objection More presents is that this treatment implies a "complete break" in the course of Plato's own views of the Ideas, whereas More insists "that there are passages in the latest works which speak strongly for essential continuity of his philosophy in this respect." Well, More and Stewart agree perfectly that there is a continuity, - but a continuity of what? There they disagree. By citations throughout this thesis I have tried to indicate the continuity of the functional tendency. One passage which More cites in evidence of the older view is Timaeus 28a, already quoted on p. 12, as a favorite bulwark of traditionalism. Especially noteworthy is the sentence, " That which is apprehended by reflection and reason always is, and is the same; that, on the other hand, which is conceived by opinion with the help of sensation and without reason, is in a process of becoming and perishing but never really is. " On careful analysis this is so similar in implication to the concluding selection from the Parmenides that it would only be repetition to go through the functional argument again. If it stood in the former case, it surely will stand in this instance. As to the patterns in this passage, r the unchangeable patterns, they appear as the structural element, the constancy of means of created things used for consequences, as Plato has implied constantly through the dialogues. There is no break, but one must supplement the textual, verbal evidence of consistency in adjectives like

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"eternal" and "unchangeable" and "separate" by contextual evidence of consistency in relationing.

More also cites Laws 165c: "Did we not say that the workman or guardian, if he be perfect in every respect, ought not only to be able to see the many aims, but he should press onward to the one which he should know and knowing, order all things with a view to that." Yes, there must be one Idea and the Athenian Stranger who made this speech may well have had in mind something, which can be called today a Doctrinal Function inductively arrived at, for he goes immediately on to say: "And can anyone have a more exact way of considering or contemplating anything, than the being able to look at one idea gathered from many different things?"

Cleinias, the Cretan, vouchsafes a mere "perhaps" and the Athenian Stranger is back at him at once:

> "Not 'perhaps' but 'yes, truly' my good sir, is the right answer. There never has been a truer method than this discovered by any man."(72)

Later on, More intensely condemns every pretence at attaining to the Ideas by any process of metaphysical logic. He says they come to us "by means of some direct experience independent of such logic."(73) I have already discussed his role of the imagination and shall at least briefly consider Platonic ἀνάμνησις a little farther on. It is assumed, however, at this point, that if the Ideas were so ghostly <u>separate</u>, ~~that~~ not even the Good, like the sun, could lend

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visibility to such Ideas and simultaneously illuminate the power of sight for the Knower, that then the Ideas could not be attained to at all. The functional theory seems both more stable and by the same token more elastic than others which are either all rigid or completely flowing. It seems by the quotation from Sophist 249 already twice used, that Plato himself was not content to have Being either all rest or all motion.

More, however, is irreconcilable and persists in his opposition. "I take it," he says, "that any metaphysic which attempts to give an account of the ultimate nature of things, the rerum natura, by the process of pure reason will impale itself on one or the other horn of this dilemma: either it will cling honestly to the absolute One or the absolute Many, and so move about in the void with no content of meaning; or it will surreptitiously merge the absolute One in the concrete one or the absolute Many in the concrete many and so fall into a dishonest mixture, or 'reconciliation of contraries'."(74) Summarizing the Sophist, More observes "that the conclusion is in no sense of the word a "reconciliation'' of rest and motion, the One and the Many, nor is it in any sense a determination of the relationship of Ideas to phenomena, but a categorical statement that Ideas are and that in some unknown way they show the effects of their power in the realm of multiplicity and change."(75)

Granted: Ideas are. Propositional Functions are.

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The Binomial Theorem <u>is</u>. So, also, however, the multiplicity of things <u>is</u>. As Plato said in the Parmenides, "in every way, one and the other in relation to themselves and one another, all of them are and are not, and appear and appear not.

"That is most true."

As to the unknown way that they (the Ideas) show the effects of their power, there's a great deal that is yet unknown to any mind, but is it not possible to grant with Plato that one can have in mind a confused notion of a new method? (76) In the Functional theory it is still unknown <u>how</u> one arrives at the abstract, at Propositional Functions and Doctrinal Functions, for nobody has successfully made known yet <u>how</u> an inductive leap works. That Ideas are reached inductively and then verified deductively and eternalized by their adequacy in admitting values for their variables seems, however, in harmony with Plato, even if More would rather say "role of the imagination" than "inductive leap". A little further speculation as to the imagination and the leap will be indulged in towards the close of this discussion.

An assumption of the total impossibility of ever making any headway with this problem of Ideas and things (which, by the way, Plato did not seem to surrender at all, simply because his notion of a new method was "confused")

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is avowed by More:

"Though this (namely, that Ideas are and in an unknown way have power) is the significant outcome of Plato's later thought, it is clear that, for a while at least, he was haunted by the hope of attaining to some discursive proof of those Ideas the existence of which could only not be disproved by the false methods of eristic, and to some rational explanation of the inherence of these Ideas in phenomena. There are tentative efforts to create this positive metaphysic in the Sophist and the Philebus, but it should appear that the full working out of the plan was left for the projected dialogue on the Philosopher. The absence of that work from the Platonic canon means, I conjecture, simply this, that Plato became aware of his inability to achieve what, indeed, no philosopher has ever achieved: since it lies beyond the scope of human reason". (77)

There is ample ground for extreme scepticism as to what any individual mind or ever the whole of human reason can achieve, - but the cumulative effect of all intelligences, i.e. those above and even those below the threshold of human cognizance, may result in an increasing awareness of a positive metaphysic or what not in the scope of cumulative comprehension. Anyway as long as Platonic scholar are haunted as the master was by the hope of attaining to some discursive proof of the Ideas, and to some rational explanation of the inherence of these ideas in phenomena,

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speculation on it will persist.

As to what haunted Plato in the later dialogues, it seems much more definite and illuminating to R. C. Lodge of the University of Manitoba than to More, who apparently surrendered the hope of an answer after reading them. Lodge said in his Presidential address at the meeting of the Western Division of the American Philosophical Association: (78)

Insight (i.e. apparently the same thing as the sentiment of forms) is "the vision of an ideal system of elements, each with a definite and distinct positive function, so arranged that, while each realizes, as completely as possible, its own function, these functions are so adapted to each other, that all, taken together, are cooperating to realize a single, all comprehending, systematic totality. The interpenetration of whole and parts is thought of as so complete that each element while preserving its distinctness from each other element, is permeated by the spirit of the whole, and represents the concentration of all the forces of the ideal totality in some particular direction; while the whole is entirely realized in the ideal functioning of all its particular manifestations, its parts or elements, and indeed the spirit of the whole is completely realized in the ideal functioning of any one of its elements. It follows, that,

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so far as any element fulfills its function in the ideal system and plays its part in the spirit of realizing the good of the whole, it is thereby realizing its own highest good." Lodge cites for substantiation of this functional relation as it appears to him, Laws 903Bff; cf. Rep.420Df; Polit. 293 c-d.

Next he presents what I call the Platonic Doctrinal Function with its variables:

"There is thus one and only one highest good: to apply always and everywhere, the ideal form of goodness, i.e. so to rearrange the empirical elements of every concrete situation that they cease to conflict and thus destroy one another's potential value, and begin to work together and thus become true elements of that ideal situation in which all positive values are fused together into a single, harmonious systematic actuality. While, however, there is, ultimately, only this one highest good, it will necessarily take many shapes and many names, according to the varieties of concrete situations." The Function will be constantly converted by substitution into an ever-changing succession of doctrines. For this concrete idealization as the only adequate expression of the highest good, Lodge cites Philebus, 60cff.

Hunting for this explanation, the need of which haunted him, Plato has Socrates admit, "Now reason intimates to us, as at first, that we should seek the good,

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not in the unmixed life but in the mixed."(79) Then they mix the "truest sections" of pleasure, wisdom, justice, etc. and look for a functional form, just as the discoverer of the Binomial theorem, must have tried all kinds of binomial mixtures to get his Propositional Function, and as Einstein is mixing the "truest sections" of gravity and electro-magnetism to get an Unitary Doctrinal Function for physics. Whether Plato succeeded or not, that was his method.

He furthermore wrote as though he were well aware of the danger of mistaking what a modern mathematician would call "propositions" for "propositional functions" and warned against arriving at a "Doctrinal Function" when all they really had was an incomplete, not truly related set of Doctrines", and also against careless substitutions. At least his criticism in Philebus 17 says practically that: "The wise men of our time are either too quick or too slow in conceiving plurality in unity. Having no method, they make their one and many anyhow, and from unity pass at once to infinity, without thinking of the intermediate steps."

For Plato, as for Aristotle, the Good, in all the dialogues necessitates the full use of variables, - the full realization of capacities, e.g. ample opportuni-

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ty to pass from a babe of brass parentage to a man of gold, to progress from artisan-birth to philosopher-immortality. (80) In order to make complete substitutions, Aristotle craved long life for mankind or continuous success through descendants. (81) Plato was so fearful of incomplete substitution with its nihilist consequences that no one span of mortal life appeared to him sufficient to insure complete fulfillment. His functional instinct demanded aeons of transmigration; and as soon as souls even sensed a perfect "form" during their wanderings between incarnations (or were vouchsafed a glimpse as in the Cave allegory) they were sent scurrying back to the world of men to real-ize it by substituting for its variables the values of human experience. (82)

This is, after all, one of the most enduring and persistently recurrent convictions of all reasoning. It is Heraclitus' Logos and Fire (Function and Variable) neither real except as realized in each other. Hegel turned up with it in his couplet

"What is reasonable is actual
"What is actual is reasonable." (83)

To him Reasonableness was a Doctrinal Function and the actualities of experience were the values for the variables, the two reciprocally converting potentiality into actuality. Again Plato's ideas were much more of this nature than they

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were isolatedly Absolute, for it is Plato who asks, apropos of his Ideas, "Can a man help becoming like that with which he holds reverential converse?" (84) which is to say; Can a man help insinuating himself as an admissable value for a variable in an inviting function such as the Good?

The Inspirational Aspect

No interpretation of the dialogues can prove acceptable to Platonists, unless it catches the spirit of the great inspirational passages as well as it ferrets out a meaning in the dialectic arguments. The great "truths" of the myths and allegories are tenderly cherished by those imbued with the spirit of Plato.

J. A. Stewart, as a leader of the Instrumentalists, deals with this aspect as the aesthetic side of Plato's experience. He calls it experience because he is disposed to seek the meaning of the Dialogues in toto as an expression of psychological experience, and with great conscientiousness he approaches the Ideas first methodologically as "scientific points of view" and then aesthetically as "expression of the Experience from which Art and Religion draw their inspiration." (85) "It is not," Stewart acknowledges, "by his Logician's faculty of connected Discourse, extraordinary as that is, but by his Seer's power of fixed Contemplation that Plato has been, and still is, a living influence." (86)

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As objects of contemplation, there is, if it may be so termed, an eternal "thereness" about the Ideas. They are "there" for the souls in this life to aspire to, for souls in a life beyond to be identified with, for souls re-incarnated to appreciate more with each incarnation. I have already discussed eternity in the aspect of constancy (pp. 30-31) and such constancy may be for aeons instead of mere generations. Practically, a "constant" reality may be "fixed and eternal"; metaphysically, however, no limit of time, space or form can be put upon it. There is no _proof_ (except the successive and persistent experience of knowers through the aeons) that it _must_ endure forever exactly as it is; there is no _proof_ (again except the degree of its constancy experientially verified) that it will not endure forever. Metaphysically, then, it should not be shocking to think of its changing and on the contrary there should be no disappointed dread lest it fail to change. The fact is we don't _know_ - at least not yet.

The possible satisfaction in the whole matter lies in conceiving "eternal verities" and "particulars" so related that they are functionally stable, though not necessarily strictly static, always rediscoverable by inductive experience for each generation, always recallable by aesthetic contemplation, and yet infinitely variable so that, as William James said of pure experience, it can admit into reality "without making over, evil as well as good, discon-

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tinuities as well as continuities, unhuman as well as human, plurality as well as unity, chance and novelty as well as order and law." It is very much magnified and yet very much like the thrill a mathematician may enjoy in having the binomial theorem admit positive and negative integers, powers and roots, finites and infinites, rational and irrational numbers, without making them over and yet when actually functioning how different, how much greater they all are than they ever were or can be per se?

I have spoken also of emotive effects in connection with the translation of the Dialogues. That effect must be borne in mind all through. Emotive words and passages carry conviction and Plato used them constantly. The point is to recognize them as such, even when they are not specifically labelled "myth" or "allegory". It must be this which Stewart has in mind in presenting the aesthetic interpretation of Plato's dialogues. Ogden and Richards have stressed this instrument for obtaining both effect and interpretation in their book on "The Meaning of Meaning" in which they point out that socially made language symbols can hardly be metamorphosed into magic repositories of immutable "meanings" (87)

At least one should not be deceived by a failure to distinguish between the Symbolic (symbolizing something common to all who use the language) and the Emotive use (stirring a personal, internal, purely subjective response.) Certain words by long association, these writers

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point out, become stimuli themselves, regardless of what they originally symbolized or what the speaker or writer may think he is symbolizing when he uses them. "Beauty" for example, is a word which, regardless of any application or referent, can stir response by its mere vocalization in an awed or respectful tone. "Beauty" emotively is indefinable - "there are no equivalent words to be substituted for it, for no possible substitutes will similarly stimulate human emotions." (88) This effect occurs also in rhythmic or artistic groupings of words, regardless of both the words and their referents. Plato could and did write emotively very often. The only problem in emotive writing is its subjectivity, - the impossibility of knowing whether the writer and the reader inwardly respond alike.

More carries this Emotive value over into structural reality when he says "The fact that all peoples and all ages have some word, more or less precise, for the beautiful and the just, and have the same motions in their souls towards that which they call by these words, shows that some constant force is at work through all the variety of its manifestations. The objects and acts that appeal to an Australian head-hunter as beautiful and right may in some respects be quite the contrary of what would receive the approbation of a Christian bishop;

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but beauty and justice, or rightness, have the same place and function in the soul of the one as of the other. These, Plato would say are the absolute Ideas which both head-hunter and bishop know, whereas in the application of these Ideas to particular objects and acts they fall into the region of opinion." "If", he continues, "you admit the reality of the Idea of Justice, you will love the Idea, and your love will be established upon something fixed..... On the other hand, if you say that justice is merely a name for facts which have nothing in common, you are taking away all that gives to justice a firm hold upon the human heart." (89)

If the Functional theory can help in this quandary, it will have proved its merit. The emotive use is acknowledged. Is an Idea then an autonomous pattern spiritually recognized and intellectually justified, or is it an autonomous Function intellectually and inductively attained and spiritually justified? As the pragmatists would say, "What difference does it make how one comes to know it as long as the Idea has the same effect in both cases?" That, after all, is the main point. It is true More did protest, "The point of supreme importance for the Platonizer today is not that he should be able to define the operation of Ideas" (90) but he also said that it matters very much, in its effect on your own personality and activity, how you conceive of the Ideas operating in or

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being a factor in your own life. (91)

Once removed from considerations of practise, and once in a region of pure thought it always becomes more and more dizzying to try to tell symbols, ideas and referents - or words, thoughts and things apart. It becomes all too easy if not inevitable to exalt a linguistic necessity into a logical necessity. Because our language necessitates an undefinable name for the infinitely varied and variable experience of Beauty, for example, then that linguistic necessity for an indefinable but recognizable label begins to seem a logical necessity for an indefinable but mysteriously knowable thing. Hence the so-called self-existent metaphysical entities. Exploiting the economy of Symbolisms, in order to make abstractions into a basis of metaphysical knowledge, "into proof of another world of pure being where entities 'subsist' but do not exist is unwarrantable." (92) Of course such exploitation means hypostatization, ugly as that charge is.

Socrates avoided that mistake. The incomparable Greek used every device of language to educe a definitive symbolization for virtuous acts in toto. Nevertheless, when he had argued justice or any other virtue with other Athenians, until they had exhausted its linguistic possibilities, there is no evidence of his saying, "And this, which we have arrived at today, is Reality, - our words are but symbols for true Justice, a structural feature of the universe." On the contrary, the great seeker for

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virtue was wont to say in substance, "Worthily argued; we are progressing toward a more effective meaning for our own references which we symbolize by the word 'Justice', May we discuss it farther in the hope of endowing it with richer meanings."

Arriving at any concept with sufficient agreement to count on its having a consistent emotive effect in social use, whether for an Australian head-hunter or a Christian Bishop, does introduce an Absolute quality into thinking. Any word thus exalted or chosen as the name for such an exalted concept or, so be it, for such a social reality, becomes more than a name; it becomes a power, and its power is that of the invariant in mathematics. An invariant is defined by Keyser as signifying something which when other things connected with it suffer change remains itself unchanged. (93) What but relations can have that nature? An invariant relation, a law of nature, a propositional or doctrinal function among variant terms - such is the Absolute, with no-one quicker than Socrates to insist that one be ready to admit it when what he thought was a Propositional Function or Doctrinal Function turns out to be only another proposition or doctrine to add to the many already existent. From him must Emerson have caught the spirit which led the sage of Concord to plead "Be honest with each day's change of opinion and trust to the inherent harmony of your own nature to produce an ultimate whole." (94)

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The Platonic Idea is, however, supposed to mark quite an advance over the Socratic definition. Plato goes on to Doctrinal Functions. Socrates had the $x + y = 9$ type of function; Plato could deal with the $n + 1$ systems, like $(x + y)^{n + 1}$ where x and y can be <u>any</u> two quantities ever conceivable, i.e. Plato's variables admit of unlimited substitutions.

Then Plato supplemented the Socratic theory with ἀνάμνεσις . He knew he had gone beyond anything which could be verified per enumerationem simplicem. It is the same sense of emancipation from particulars which Einstein has reannounced in commenting on the fact that the thing which distinguishes his new theory from Newton's and Hertz's is "the degree of formal speculation, the slender empirical basis, and the boldness in theoretical construction."

In a system like this, anamnesis seems to be suspiciously implicated in the mysteries of the inductive leap. In accounting for what happens when one leaps from a mass of particulars to the formulating of a functional relationship, it seems probable that Plato, in the spirit of his Meno contention (95), would say that he had a gradual or sudden "recollection" of "eternal, perfect forms" i.e. "the Idea of just that thing" and was now recognizing it in its shadows or illusory copies (96).

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I now revert to the suggestion offered on page 83 of this thesis as to cumulative comprehension. Suppose that social realities like beauty (as discussed on pages 90, 91, 92) have begun to be realized. No one person can define beauty, no one person knows or can even imagine all beautiful things, yet may not the cumulative effect exist - not subsist metaphysically, but exist emotively - for him who is sensitized to draw on it? Such concepts are at first mere abstractions symbolized for the convenience of the thinking mind. Gradually they become socially emotive, or as Hegel puts it, they become subject. The African head hunter is thrilled by a decapitated victim; the Christian Bishop is thrilled by a saved soul; the gum-chewing straphanger in a subway station thrills at a gaudy fashion plate; the ancient Greek was thrilled by a nude athlete's litheness. The enunciation of this thrill may range from a grunt to a prayer. The objects and the expression vary but the emotive effect is the bond of sympathy, and the basis for the conviction that there is a universal something in all this kindred "feeling".

What is that something? Is it telepathy or a yet unknown form of communicable energy, or what is it which makes these sympathies cumulative? There can be no denying that it is "felt" more than any individual experience alone would warrant. Such a concept is supra-human. Ocean waves rippling in the sunlight, coconut fronds whispering

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anticipations in a morning breeze, a loyal dog defending his master through great danger, aeon's of evolution's amazing inventiveness, all these and millions of other like instances are never created in man's mind alone. They are, however, not only <u>in</u> this cumulative concept but they <u>make</u> it for man to label "beauty" or "courage" or "Happiness" or whatsoever he will. As we sense these things, we "throw out figurative language" at them and <u>think</u> that we are naming an "Idea". What we are really doing is "recollecting" Being as it universally <u>is</u> (not as it was in the beginning and ever shall be) but as it <u>is</u> at the instant of conscious recognition. We are recalling into ourselves what we are feeling beyond ourselves. What we call it makes no difference whatsoever, but as soon as any indication of it, from a dog's wagging tail to the Bishop's prayer, becomes widely enough recognizable as a symbol of a kindred feeling of satisfaction, then man hypostatizes some label for the whole situation. Thus he hedges in this properly functional relation of <u>experience and reminiscence</u>, makes it a static "thing"; and thereupon it is relegated to the past, for what is completed is over. From then on new experiences are increasingly apt to lead to invalid results when any attempt is made to fit them into a fixed or static reminiscence.

Knowing that literal language was inadequate to expressing any such cumulative universals, Plato, going

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farther than Socrates, frankly resorted to myth and allegory to show what sort of a world this would be if linguistic devices were "real entities". This device of "universals", i.e. the best human expression of cumulative functional reality would, in a mythical world be "real" patterns for the Gods and for all things which live. Humanity would depend on them for understanding as it now depends on the sun for vision (Republic). Transmigrating souls would go a-charioting to view them (Phaedrus). Inspired humanity would be in ecstacies over them (Symposium).

Methodologically, as Stewart would say, Plato was adhering closely to Socrates' plan of inductive definition to attain an adequately meaningful symbolism for mankind's use as an instrument of information and communication. In his more aesthetic writing, Plato presented the universe as if the maximum achievements of linguistic intepretation were structural Realities. May not this be the import of such an allegory as the Phaedrus myth?

In the Phaedrus myth, that which in earlier discussions has been inadequately symbolized by the word "Justice" exists as a Reality (amidst other Virtues) far beyond the outer heavens where gods and the most perfect

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souls of all generations may view it. "Viewing" it this way would, in a functional analysis, mean that each observer gets beyond his own personal contextual situations which he commonly attaches to the symbol "Justice". He senses the intensive totality or potency of the symbol as a composite of <u>all</u> its references and of <u>all</u> its contextual situations for <u>all</u> people or <u>all</u> beings. He sees it as a spectator of all time and eternity. Then, with this vision - or expanded comprehension, he may return - or as Plato has it, transmigrate to the world, to his personal world again, to make use of that comprehension. Thus it can be argued that the Ideas <u>are real</u> by virtue of a cumulative inductive force; their functional form is intuitively sensed, (by the Seer's power of contemplation, if you will) and they are expressed with variables as well as language will permit; once sensed, recollection (ἀνάμνησις) retains those Ideas through all the tests of substitution of current values, and deduction of inferences.

Aristotle, for all his failings as a critic of his master's Ideas, displayed his own true brilliancy in defining not the function but the variables. Whereas Plato struggled, - with the futility which More remarks, - and against his own true functional sense, be it noted - to enunciate a conception of the Good as the Good, Aristotle simply announced that his chief good, i.e. Happiness, <u>is</u>

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a function; - an end, yes, by virtue of its inclusiveness of unlimited values for its variables, - but still a function, abstract, symbolic and withal meaningless if not used, but he did define what can and does make it mean something, namely fulfilling the variables of human capacities. (97)

Unfortunately, Aristotle eventually fell before the human temptation to fix a single valuation as the perfect one. Hoever much a modern thinker may want to sympathize with the ultimate Aristotelian choice of Contemplation as the faculty or value which fits so perfectly that it may indeed be used as synonymous with the function itself (98), still, to preserve Happiness as a true function and not a dogmatic proposition, this fixation on a single substitution must be counted dubious. Either Aristotle came to mistrust his function's infinite possibilities to afford room for all perfectly used human faculties, and so conservatively resorted to one chosen one; or he yielded to the almost unavoidable temptation of a writer to turn autobiographical and to accentuate his own best faculty at the sacrifice of lesser ones. This narrowing of the range of variables is as though someone insisted that the binomial theorem works perfectly only with positive, whole numbers, although it can be used with others. Such limiting specifications reduce any doctrinal or propositional function to a mere doctrine or proposition and however noble

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that doctrine or proposition may be, still it is not the function it started out to be.

There were not then and there are not now many functionally trained people who can recognize a function, neither true nor false in itself, but serving as a generic matrix for producing specific doctrines and propositions by successive substitutions of admissable values for the variables. Inevitably people have spun in circles of deliberation on what Plato's Doctrinal Functions might mean per se, but they have gone ahead and <u>used</u> Aristotle's doctrines and propositions.

Naturally scholars are justified in making such remarks about the two men as those which were quoted from Stewart and Zeller on page 19. Aristotle's propositions were different from Plato's propositional functions by virtue of substitution of the values for the variables. Aristotle cannot be understood until his philosophy is treated as one fulfillment of that of Plato. Socrates worked up to Propositional Functions; Plato went on to Doctrinal Functions, and Aristotle calculated problem after problem by substituting values for the variables in both.

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V

CONSEQUENCES OF FUNCTIONAL PLATONISM

Platonism was perpetuated by organized Christianity. Plato's own academy, founded in 387 B.C. was carried on by his pupils and their successors until 529 A.D. (99) However feeble or distorted the pure Platonic teaching may have been towards the last, still the persistence of this Platonic institution until well past the time of the great Church Father, St.Augustine, must have given what has already been explained as emotive value, or a sense of current reality, to any references to Platonism in the early Christian era. The Academy, by then, it is recorded was "the principle support of heathenism, propagated in secret" (100). Institutional Platonism bearing Plato's name was, therefore, known by direct contact for two centuries after Constantine's Christianizing decree.

That Christianity in its pure, original aspects had made early contacts with the Greek mind is well-known through Paul's visit to Athens (101), and the Greek influence in the Pauline epistles and doctrine is the subject of extensive comment.

Graeco-Christian Continuity.

A brief resumé of the historical course of the Graeco-Christian continuity, even at the risk of mere repetition of familiar facts, will best pave the way for continued

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functional analysis of the results.

The apostle John is said to have gone to Ephesus about 66 A.D. when Titus siezed Jerusalem. Others prominent in the Christian movement also sought refuge there. Here, where the rugged Ionians had early settled and traded, and where Greek vigor of thought was still to be felt, St. John put into form his views, which are so notably illuminated with Greek conceptions.

Both Paul and John insisted on the pre-existence and divinity of the Saviour, As these two were under Greek influence many are the parallels drawn between their phraseology with its implications and the Platonic views on Being and the Divine Order. John's use of the λογος (102) for the Christ, is constantly referred to by Christian scholars, as paralleling the embodiment of the εἶδος of Plato. Paul's blending of the mystical vein with the dialectic spirit is also acknowledged to be a Greek effect. It is at least a characteristic of genuinely aspiring souls first made verbally forceful in the Platonic dialogues. (103)

The pessimism in the Christian struggle to overcome evil, which, by the way, called down condemnation from Persian religionists, who accused the Christians of blasphemy in conceiving God as the creator of evil, opened the way to Platonic dualism in Christianity. Plato, to be sure, had perhaps synthesized or at least colored his own views of Being and Not-being (104) by the traditions of the old Eleusinian and Orphic mysteries, especially the latter. The Eleusinian

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mysteries were the established religion of Athens and were more characteristically Greek in having no definite doctrine of organic sin. The Greeks were prone to look on sin as an accident of the individual or situation, and once direct or indirect retribution was made, no taint remained behind. Evil seemed to be an incidental and negative sort of fallacy, whereas in the Orphic mysteries, evil was more organic than functional. A complete dualism of soul and body resulted from systematizing the Dionysian myth into a religion, which aimed to redeem the soul from the generic duality of the Titanic evil and Dionysian good.(105) The Greek influende in this respect may have contributed to the sense of organic sinfulness which the Christians proclaimed as the consequence of the fall of Adam.

The dualism of an imprisoning body and an immortal soul again marks at least a kinship of feeling in the Pauline and Platonic teachings, for where Socrates describes the eager impatience of the soul for release from its mortal bonds. (106), Paul gives reassurance after death that "as we have borne the image of the earthly, we shall also bear the image of the heavenly, " "For this corruptible must put on incorruption and this mortal must put on immortality" (107) Early Church Fathers, such as Justin the Greek and Clement of Alexandria, nevertheless, jealously preserved the direct line of Christian-Judaic teaching, by contending that all which Christianity received from Plato was originally taken by

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Plato from the prophetic utterances of the Jewish Messianic stream of thought.

That the Christians should stress immortality and not uncommonly also pre-existence of the Soul and also the co-eternity of Christ with God became psychologically almost inevitable during the persecutions by the soldier emperors, when everything temporal seemed ill-fated or doomed.

As the attack against Christianity was severest in North Africa, the glowing figure of the period was Origen, the Alexandrian church teacher, 185-254, who, seeing how resistant the faith proved under such stress, first articulated the conviction "that the gospel, by its inherent power, and without help of miracle, would supplant the religion of the heathen" (108) Little wonder is it then that Origen came to be known as the Adamantine, and became practically the founder of systematic theology through his vigorous apologetic writing on the inherent merits of the faith.

After the first two antagonistic emperors, Septimius Severus, 193-211, and Caracalla, 211-217, had tried to suppress Christianity, some efforts were made to amalgamate new and old faiths while an increasing interest in Oriental systems either diverted or tempered the attack. It broke out again, however, and ultimately Decius, 249-251, exacted formal renouncing of Christian tents before magistrates, and in a panic at a pestilence, Gallus ordered all subjects to sacrifice to Roman Gods. Valerian, 253-260, capped the climax by ordering executions of church officials, but thanks to the tolerance of

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his son, Gallienus, the bishops were restored to office. After that there was a decline of persecution, with the exception of Diocletian's outbreak in 303, and in 313 Constantine decreed tolerance for both religions, and followed this soon by decreeing that Christianity was the official religion for the Roman Empire.

Could any sequence of events have made it more difficult to identify Christians? Between those who, it may be assumed, had become afraid to call their faith their own, in spite of others who were steadfast under persecution, and those who, it may also be assumed, flocked with sheepish ignorance to the Christian standard when it became the official standard, it was inevitable that some adherents would be pretenders, and some both within and without the fold would hold confused or erroneous opinions on what Christianity really might be. This period consequently saw the establishment of (1) the "rule of Faith" to detect heresies, (2) the canon of New Testament scripture, (3) restriction of the Lord's Supper observance to communicants only, (4) increased authoritativeness of the Bishops.

Centralizing of authority led to the problem of apostolic succession to prove the right to authority and the gradual ascendency of prestige into a hierarchy of archbishops, with those of Antioch, Alexandria and Rome most prominent, and the whole, elaborate system of diocesan church government. The Greek influence appeared again in the forming of the synods,

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somewhat similar to the Greek political system. The laity were gradually excluded from the synods, for which guidance by the Holy Ghost was more and more assumed.

By 170 the primacy of the Church at Rome was established, and Peter's precedence among the apostles was recognized. At that time, however, the Church at Rome was chiefly only the guardian and not so much the expounder of apostolic teaching. With standards thus far fixed, the policy of excommunication was adopted from the Jews, to be followed in due order by systems of penance. The Church, no longer fighting for bare existence, began trying to steer its way between heathen worldliness and oriental mysticism.

Contrast of Hellenic and Christian Methods.

Probably the most significant point in all discussions of Hellenism and Christianity is the contrasted methods of approach which Paul Elmer More explains when entering upon his five volume discussion of Hellenism and Christianity. For both pagan and Christian, from Plato to St. Chrysostom, he says, the elements of religion, namely philosophy, theology and mythology, remain the same, "but it is true also that, as we pass from Pagan to Christian, the order of assurance and of temporal acquisition among those elements undergoes a complete reversion, and the lesson we take to ourselves will depend on our attitude towards what is no less than a revolution within the circle of the Greek Tradition. To the pagan, particularly the Platonist, philosophy was the dominating element; here was the starting point of religion and

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the sphere of whatever certainty is attainable by man: Here he thought he was dealing with facts and was standing on a foundation of proved knowledge. In theology he believed he was still close to ascertainable truth, yet removed a step from the region of immediate experience. Mythology carried him further afield from positive assurance, though it might be indispensable as the expression, more or less symbolical of necessary truths.......

"The mind of the Christian moved in the opposite direction. With him, so long at least, as he remained orthodox, what the pagan called mythology was the starting point of religion and the field of certainty. The incarnation, with the whole economy of salvation, he regarded as a verifiable historical event, in which the imagination had no part; unless this fact were nakedly and objectively true his faith was vain and his preaching a lie. Symbolism for him entered with theology: and though he might be ready to perish for his conception of the Trinity, he would not deny that his terms for the relation of the three persons one to another were an inadequate translation into human speech of truths that surpassed mortal comprehension. In a way his theological definitions were admittedly more symbolical than the Platonist's. The divergence becomes again complete when we pass to philosophy. Here, where the Platonist thought he could move securely if anywhere, the Christian, so far as he distinguished philosophy from revelation, saw only the

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blind groping of a ruined intelligence, which, unaided by divine Grace, might catch a glimpse, afar off and shrouded in clouds and thick darkness, of its true home, but in the end must sink into doubt and despair." (109)

More bears this out by contrasting such passages as the following:

Plato: "A life without criticism, or reflection on its meaning, is unworthy of a man." (110)

St. Basil: "For if to live for us is Christ, it follows that our conversation ought to be about Christ, our thought and our conduct should hang upon his commands, and our soul should be formed in his likeness." (111)

Resuming now the historical development with this contrast in mind we can approach the theology of St. Augustine who summarizes and interprets the whole content of traditional Christianity, and who shows his own Hellenic-Christian attitude in the two following quotations:

> "This name of my Saviour, Thy Son, had my tender heart piously drunk in deeply treasured with my mother's milk and whatever was without that name, though never so erudite, polished and truthful took not hold of me." (112)
>
> "Let these two theologies, then, the fabulous and the civil, give place to the Platonic philosophers, who have recognized the true God as the author of all things, the source of the light of truth, and the bountiful bestower of all blessedness." (113)

Alexandria was the great center for doctrinal interpretation and there a great university and library were soon followed by the first theological school. There, also,

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the Platonic influence became recognizably predominant.

Justin, born of Grecian parents, the first of the Church Fathers outside of the direct Apostolic line, was one who early reversed his order of thinking in the way that More has noted. Beginning to distrust reason per se, Justin resorted to simple faith in the undemonstrated "truths" of the Messianic prophets. The Logos, he explains, as incarnate in Christ alone and yet obviously working in the philosophers, a "rational potency" brought forth from the eternal, unbegotten and unmoved God to create the world. (114)

Athenagoras, the Athenian, formulated the first definite line of a priori proofs for the unity of God. The Logos, he affirmed, came forth from God to be the prototype of the world and the active force in all material things, and thus he avowed a dogmatic belief in a sort of imitation theory for the relations of God and the world, somewhat parallel to the Platonic theory of Ideas in its traditional form.

Irenaeus, 140-202, a conspicuous opponent of the Gnostics, carried on the participation view, reviving the old third man argument against archetypal separateness. He also protested against transmigration or permanent separation of soul and body.

Perhaps the most non-Greek attitude and writing was that of Tertullian, 160-222, who considered philosophy

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the mother of heresies. His most unique contribution was the introduction of Roman legal conceptions and phrases into theology. Be it not overlooked, however, that Roman Law was much colored by the teachings of the Greek Stoics, who wrote the jus naturale into the Roman code.

Clement of Alexandria, like Paul and John, insisted on the pre-existence of Christ, and also of the soul. He emphasized trial in purgatory, which is closely parallel to the Platonic emphasis in the great myths of the Phaedo, Phaedrus, Sumposium, Republic X and Gorgias. Creation, he believed, is as eternal as God, and in Christ, the divine and the human, to borrow Uberweg's simile, "interpenetrate each other as when iron is heated through by fire." Like Justin, he credited Greek genius with enlightenment by the divine Logos. Any positive knowledge of God, however, he thought impossible, as He is nothing that can be predicated of another thing (115). The Son alone is knowable positively.

Origen, 185-254, already mentioned as the founder of systematic theology was, thereby, also the founder of deductive doctrine, which began with what More calls the "myths", and he is <u>certain</u> of the myths but gropes in the realms of mere "intelligence". By the Scholastic period, this systematic theology was entrenched behind formidable structures of dogmatic scriptural and ecclesiastical premises and heavily armed with syllogistic sequences. According to

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Origen, one should start with the highest dogmas and end with the realm of existence farthest removed from the heavenly source, whether that be matter or evil spirits, - a distinctly Christian and non-pagan line of approach. So it continued until the Scholastic controversies in the Thirteenth Century again freed philosophy so that it could wander at will outside the enclosures of theological premises, to arrive again at doctrines of God and the universe in its own way, which in previous and also in later centuries frequently proved to be quite the reverse of systematic theology.

Starting, for example, with Galileo's "playing" with mere matter, many a philosopher-scientist today boasts that he is more religious in the presence of his "inspiring mysteries" of power and order, than the old school theologians confronted by the "awful mystery" of reconciling recalcitrant matter and evil to an old, fixed order, which axiomatically excludes them, and of redeeming a fallen people to a pre-accepted divine power, who created them from no necessity, but, by necessity, disowned them.

Christian Theism

The basic theistic assumptions of the Catholic Church which first successfully synthesized Judaism and Hellenism, were briefly as follows by the Third Century, A. D.:

An eternal, original, immutable God, innately acknowledged by the human mind.

A creative force, - Logos.

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A bond with estranged humanity - the Son.

A spirit proceeding from Father and Son.

Theophilus was the first to make theological use of the word "Trinity" and Tertullian converted it into the basic dogma, although it remained for Augustine to establish its full significance as a creedal point.

The "trinity" in which the Logos and Son are identified as the second member very promptly made apparent the relational problem of Unity in Trinity, or Trinity in Unity, Identity with Difference of Difference in Identity. Then arose the theories of subordinationism, consubstantiality and modalism, the old Platonic problem of imitation, participation or instrumentalism, with the inferred problems of creation, time and evil. The angle of approach to this problem, according to Tixeront is the heart of the whole difference between Western and Greek theology. (116) The former posits primarily the divine, substantial unity, and the latter fundamentally asserts the distinction of three persons. The same contrast is noticeable in their respective Christologies, - one beginning with identity and the other with distinct duality. This further illustrates More's distinction of the Hellenic progress from philosophy to mythology and the Christian's reverse order.

We seem to have here the difference between Euclidean and experimental mathematics, and also between the spirit

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of the Realists and the Nominalists of the Scholastic period. To revert to More's contrast, - the pagan wants to know, the Christian does know. St. Thomas Aquinas, patron saint of Catholic education, recorded it in the Thirteenth Century, when he referred to philosophy as that which goes from man to God, whereas theology goes from God to man.

The pagan starts with what is observable and can be expressed and throws out figurative language at what is beyond. In so far as this goes, I do not see that More's interpretation of the Phaedrus myth can be very different from mine. It is the mythological "as if" of what is on beyond inductive experience. The traditional Christian, however, takes the non-realizable, or non-perceptive event or thing as "self-evident" and deduces from that all he can for experiential purposes, however little that may be. For him the Ideas do exist, that's an axiom - and he feels clumsy only in his articulation of them, and much more bewildered in application than in appreciation of them.

This is Augustine's contention, about the inadequacies of human expression of such an axiomatic myth as the Trinity;

> "When it is asked what the three are, we betake ourselves to the finding out of some special or general name under which we may embrace these three; and no such name occurs to the mind, because the supereminence of the

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> Godhead surpasses the power of customary speech. For God is more truly thought than He is uttered, and exists more truly than He is thought." (117)

His existence is sure, the thought is clear, but we can only throw out figurative language at what the Trinity means in changeable, illusory, human experience. Just the reverse of what the pagan attempts with figurative language. Augustine even criticizes Scripture for using "figurative language" to express human experience of the presence of God, for he argues that referring to God's "anger" or other disturbing emotions, is merely using familiar phrases to insinuate a vague impression into the common mind. (118)

Essentially the same distinction is made by Hegel between the traditional and non-traditional, as follows:

> "The manner of study in ancient times is distinct from that of the modern world, in that the former consisted in the cultivation and perfecting of the natural mind. Testing life carefully at all points, philosophizing about everything it came across, the former created an experience permeated through and through by universals. In modern times, however, an individual finds the abstract form ready made." (119)

The question is whether the two modes of approach, the Hellenic and Christian, coming from opposite directions did actually meet in genuine agreement of thought in early Christianity in spite of differences in words. Pagans might well wonder why More terms their inductive gropings (which so often lead to marvelous illuminations of cumulative possibilities) the sure road to doubt and despair. Certainly

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the master of inductive gropings, Socrates, had less doubt and despair in going on to his paganly mythical afterlife (120), than many an avowed Christian doubtfully and despairingly inadequate in his own soul per se, needing professional unction to guide him to what are supposed to be his "certainties". However, More does qualify the "blind gropings of ruined intelligence" by admission of Divine Grace as a guide and that Divine Grace, he, at times, identifies with Socrates' Daemon (121), which after all, may be the sentiment of forms which steadies one in the Inductive Leap. But then the pagan has to wonder what similar certainty steadies the Christian in his blind, deductive subsuming of the elusive particular experiences under the universal, axiomatic certainties of his myths.

Sensing this predicament of the Christian, St. Augustine, in the rudimentary stages of his conception of God, according to Walter Van Saun in his thesis on "St. Augustine's Idea of God", "discerned the inability of the human reason to discover unaided certain truths and recognized the need of the 'authority of the scriptures'."(122)

It was this sort of thing which was heroically faced by two alignments of thinkers inside the Church itself in the Scholastic period, when the Realists assumed the universals and tried to account for particulars, while

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the Nominalists assumed the particulars and tried to account for the universals. All in all, the heretics who, in the dark ages, tried to rationalize the Father, Son and Holy Ghost; the insurgent Nominalists who, in the middle ages, tried to rationalize the universals; and the so-called Liberals of the Protestant era, who try to rationalize their way to God, seem to be carrying on the Greek traditional method as defined by More; while the orthodox Christians have incorporated among their axioms such of the Greek traditional content as was accepted by the Church Fathers.

To trace this contrast through the early controversies to the point at which the neo-Platonic Augustine left it as the dominant Doctrine of civilization, we must go back to the events which led up to the Nicene council in 325 and to the council at Constantinople the same year.

Other forms of belief, whose exponents claimed to be true Christians had branched off from the official line of descent of the apostolic theology and classic philosophy. The Gnostics, the strongest dissenters, were not altogether disposed to draw on philosophy for substantiation of approved Christian doctrines, but were frank seekers for what seemed to them best in Oriental, Greek and Christian systems. They claimed a deeper gnosis than the mere "authority" of either apostolic or classical tradition. As eclectics, they tried to reduce Christianity to a philosophy, which proved to be markedly Platonic. The Absolute, for them,

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was ineffable and could have no predicates (traditional separatist Platonism.) Evil and matter were identified very much as by Plato. Naturally then they tried to refute the incarnation of Christ in human flesh as implying oneness with evil (or Platonic non-being.) The Absolute, they suggested, emanates chains of existences, and these chains of existences or aeons may be the first recognition of history as philosophy.

The Manicheans had a practically distinct religion of their own although they articulated it in the Christian terminology. Headed by their Persian founder, Mani, with his Semitic and Babylonian traditions, they were ascetics to a considerable degree, and yet primarily aimed at rationalizing religion on the basis of the dual kingdom of light and darkness.

Such was the general status of Christianity with its load of Greek tenets when the internal difficulties of doctrine first became acute. The Greek Christian Church centering at Alexandria and Antioch, had sharp schismatic controversies throughout the Fourth Century, especially with the Arian heresy. Practically all the avowed heresies which made any headway, namely Sabellianism, Arianism, Nestorianism were an attempt to rationalize away the paradox of divinity and humanity in one, the divinity of Christ and the human incarnation of the Logos. Arius the Alexandrian presbyter, forced the issue of subordinationism or adoptionism and

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consubstantiationism. He is known to have been particularly brilliant in Aristotelian dialectic and syllogistic intricacies, and starting from the premise that God is absolutely transcendent and unable to communicate himself otherwise than by means of creation, he syllogistically proved "all that is outside the only God has been created ex nihilo" and hence that the Word is "adopted" of God and the Holy Ghost is probably a creation of the Son. (123) Deposed in 321, Arius still retained the ardent backing of powerful ecclesiastics, and in his subsequent travels so disseminated his doctrines that they persisted in Constantinople and Asia Minor until Theodosius compelled orthodoxy in 380, and they also came back with noteworthy force in the barbarian converts headed by Ulphilas, bishop of the Goths.

The Council of Nicea, however, in 325 put a technical conclusion to the issue, and authorized as official Christianity the full divinity of Christ, consubstantiation and all that it implies as to grace and redemption. This council was compelled to make fine distinctions regarding the very word οὐσία, which had proved such a stumbling block in the mental relationship of Aristotle and Plato. Yet Tixeront warns students of this period to guard against emotive misinterpretation of such terms as οὐσία, ὑπόστασις, φύσις, for "after all, they were already a part of the domain common to all cultivated minds, and, when using them, the Fathers did not give them any other meaning than the one

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generally assigned to them, nor did they intend in any way to sanction the philosophical theories with which these words were associated." (124) Tixeront may be overcautious in this regard, but it is true that the Fathers further departed from the Hellenic influence by substituting υἱός for λόγος in the Nicene records.

As to the Athanasian triumph in the Nicene decision, Überweg, reporting it to be more a "specificially religious and ecclesiastical " victory than a scientific one, notes a change as follows:

"Whether the dogma, which Athanasius successfully advocated be thought to mark a real advance toward a purer expression of the idea of God and man as united in one, or whether there be found in it a concealed tritheism, which afterward Augustine and others again modified so as to make it more consonant with the monotheistic idea, the historic fact must in any case be acknowledged, that the Athasian form of the doctrine in question,not only in respect of terminology, but also in respect of conception and application, was not known in the Christian church from the beginning, but marks, on the contrary, a later stadium in the development of thought." (125) The situation consequently was, and for that matter still is, that the authority of priority for one set of views is pitted against the authority of official sanction for another set.

Arius was exiled, but Constantine's successor, Constantius whose sister, Constantia, was disposed toward Arianism, let

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loose a storm of disputation with all kinds of hair-splitting, including the prolonged debate over homo-ousios "of one substance", and homoi-ousios "of like substance". Twenty different creeds are said to have been presented by insistent adherents within a quarter century.

At Constantinople in 381, the Cappadocians succeeded in determining the ultimate Greek terminology by stressing the word ὑπόστασις. In God, they declare there are three hypostases, and only one substance (οὐσία), i.e. only one God. The three hypostases are included, as it were one in the other (circumincession) and have only one action, as well as only one knowledge and only one will; these three persons are moreover equal and equally adorable. (126) St. Jerome later thinks this smacks too much of Arianism so he contends that hypostasis is <u>essence</u>. Harnack also claims that the Cappadocians and the Greek Church which followed them are surely only "Semi-Arians who speak the language of Nicea." (127)

There was also the Donatist controversy in North Africa, a consequence presumably of Diocletian's persecutions, for, according to Leclerq, "In reality their opposition was a national movement of the African populations against the Empire even more than a revolt in the domain of faith." (128) Their chief contentions were that public and notorious sinners and especially prevaricating bishops and priests, do not belong to the Church, and outside the true Church, sacraments cannot be administered validly. This "error" finally succumbed to the council action, Augustine's debate and the Arab invasions.

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In that same general period, external pressure was tremendous, for then began the Gothic invasions and these ill-reputed invasions were not all evil. The Visigoths, between the Black and Baltic seas, had become Arian converts, due to the teachings of Christian captives. Eager to escape persecution, Ulphilas, the Gothic Arian bishop, peaceably entered Roman territory with his Christians about 355. Although it would be too long a diversion from the main theme to follow all subsequent developments chronologically, may it be borne in mind that this barbarian influence started in the year after the birth of Augustine and was a co-factor in all the developments of his time.

Very briefly, - by 370, both the Huns and Goths were in political ascendancy within Roman bounds, and Theodosius was made regent in the East and there supported the Nicene doctrine of the Trinity. Ulphilas died in great disappointment, with the Nicene creed endorsed at Constantinople in 381. The great Christian Visigoth, Alaric, loyal to Ulphilas, fought the death-blow to paganism, and during the sack of Rome protected the churches of St.Peter and St.Paul. The Visigoths, following Alaric, went into Gaul and Spain, still spreading Arianism, and forced the Vandals (who, however, had caught the Arian"taint") on into Africa, where, under Genseric, they persecuted the Orthodox and promoted Arianism. Summoning Attila, the Hun, "the scourge of God" to his aid, Genseric's barbarians threatened the whole of official Christianity's civilization. Then arose Leo, Bishop of Rome, who stemmed the tide with gold and persuasion,

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and thus tremendously enhanced the prestige of the Roman Church. Though he could not completely stop Genseric and his Vandals who conquered Italy in 455, he modified the threatened horrors of the conquest. As the emperors let go, Leo and his successors tightened their hold on leadership.

Orthodoxy made a gain in 496 in converting Clovis, King of the Franks, the then dominant barbarians. In the mean time, Odoacer easily became master in Italy, only to be overthrown by Theodoric the Great, an Arian Ostro-goth, who, however, tolerated Catholic Christianity. The final invasion of heathen Arianism was with the Lombards who pressed into northern Italy, but these migrating Teutons with their mixed religions, also felt awe for the Catholic priests with their tremendous dignity of conviction and personality. F.W. Kroencke, in his thesis for the doctorate at the University of Cincinnati, showed that the barbarian influence was not all bad, that it contributed a marked chastity and distinct family code (129), but its brutal aspects also exalted the Catholic priesthood and especially the Roman prestige, by virtue of contrast.

In the face of all heresies, the Latin Church Fathers vigorously protested against rationalizing God into an inaccessible monism or transcendence with no humanity through Christ to insure the mystical kinship of man and God. (130). As Tixeront explains:

"We may notice that in all this there is very little philosophy; nothing at all of the lengthy dissertations regarding

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the concepts of percepts and nature, in which the Greek mind takes delight, but simply a plain and vigorous affirmation of what the Church believes, - a belief which is as yet felt and lived rather than intellectually analyzed." (131) Tixeront also maintains that the Fathers describe philosophy as vain learning, richer in words than deeds, and adds, "Besides it has been made useless by the advent of Christ" (132), which of course falls in with More's specification of the Christian order, with confidence in mythology first and philosophy last.

After the Nicene council's decision, the victorious Athanasius was exiled five times and suffered many an injustice, but the storms of both extremes could beat against him only to recede again, never breaking through to inundate the official Church. Probably Gregory of Nyssa made the last strong stand prior to the Scholastic period, to separate theology and philosophy.

Augustine's Theology.

Into a very turbulent sea of theology then ventured Augustine to chart the channel of tradition through which the ship of the Church sailed with impressive steadiness until the scholastic period, the Twelfth to the Fifteenth Centuries, when dredging for new or deeper meanings materially widened the channel but did not essentially alter the course. So on to the next great storm in the Reformation when the winds and

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deep flowing counter-currents of Arianism and other heresies, now in new forms, set the theological sea to raging, with the Church playing its anchors back to firm holds in the Augustinian course. Inasmuch as this policy has been continued, we have today such statements as that of More:

"Withal I am convinced that in certain important matters the Latin, and I may add the Teutonic mode of thought has perverted the stream of philosophy and religion, and that the need of the modern world becomes daily more urgent to make a return to the purer source of our spiritual life."(133)

Augustine, born in 354, was well fitted for his task as the opponent of heresy, reconciler of internal strife and interpreter of doctrine. All the turbulence of worldliness and mysticism had seethed in his own heart. Son of a tolerant pagan father and an ardent Christian mother, he was fully keyed to the tension of the barbaric-Arian and Catholic Christian issues, with his sympathies towards the latter but no blindness towards the former. His school days at Madaura, which was mostly pagan, tinctured his early Catholicism at least with speculations. At the cosmopolitan seaport of Carthage, while studying law, a passion for wisdom welled up in his alert young mind. Sonn then, the Manicheans, with their ostensible appeal to reason, had him in their ranks. Eventually and inevitably, however, he inclined toward a moderate scepticism, but while teaching rhetoric at Milan, he became acquainted with Ambrose, and subsequently enrolled as

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a catechumen in the Catholic Church. There, he found himself mistaken in his supposition that Catholicism believed God to be bounded by human form. From that point on, his own ideas of God began to clear up, as carefully traced and defined by Van Saun. (134)

There may be easily identified in all the theistic controversies the old Platonic problem of the One and the Many, and the interest of the present discussion is how the Functional impulse persisted. Plato tried to think it through by Socratically starting from the many in the early dialogues, and in the later ones, he tried to take it up in both the notional and particular regions, and in the Timaeus comes to the conclusion that each world, - i.e. the realm of Ideas and the realm of the particulars, - has <u>both</u> unity and plurality. In the Paremenides, he shows the similar functional relation of the realms to each other.

The early theologians face their form of this issue first in the Trinity as the Being of God, much as Plato at times discussed the notional region independently of the ordinary realm of particulars. Then they made an effort to examine the relation of the Trinity to the created world - of the notional to the particular realm. Both of these efforts must be examined.

St. Basil seems to have been one of the first of the very few who had a clearly functional view. St. Basil argues

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that οὐσία is

> "that which is common to the individuals of the same species (τὸ κοινόν) and that which all equally possess, that on account of which they are designated by the same word, while this word designates no particular individual. But this οὐσία cannot really exist, unless it is completed and determined by some individuating characters. These characters have received various names: they are called ἰδιότητες, ἰδιώματα, ἰδιάζοντα, σημεῖα, ἴδια γνωρίσματα, χαρακτῆρες, μορφαί. If we add these individuating characters to an οὐσία, we have an ὑπόστασις. An hypostasis is a determined individual, which exists apart by itself, and which comprises and possesses an οὐσία although it is opposed to it as the proper to the common, the particular to the general." (135)

Tixeront's criticism of St. Basil's argument is worth quoting because in truth it emphasizes it more than it discounts it. "We may observe," he says, " that this definition is incomplete and that it seems to identify too closely hypostases with individual substance, with the individual and to make the individual characters the constituent elements of personality." (136)

This much warning seems amply justified for, as Bertrand Russell so strongly insists in his own presentation of Propositional Functions (137) one cannot be too much on guard against mistaking a mere proposition for a propositional function and vice versa. Tixeront, noting this danger in St. Basil's explanation, nevertheless goes on to point out with more scrupulous care,

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> "The divine οὐσία is not itself an hypostasis, because, although it is individual, it does not exist separate by itself, but in the Persons, who have it in common. The divine Persons, on the contrary, oppose one another and therefore, each has a distinct existence, which does not admit of being confounded; they have nothing in common except the οὐσία ." (138)

The divine Persons then are just as separate as x, y, and n + 1, which have nothing in common except their functioning in the binomial theorem, or any other like οὐσία , which in turn "does not exist separate by itself" but in the variables (or Persons) which have it in common. We have already seen that St. Jerome was afraid this Cappadocian doctrine implied the Arian homoi-ousios, but his fears hardly seem well grounded. X, y and n + 1 are not of <u>like</u> substance to $(x + y)^{n+1}$. They are separate entities, and without a theorem as very sum and substance of their functioning, they would have nothing in common. On the other hand, though the binomial theorem is also individual, it <u>exists</u> only <u>as</u> x, y and n + 1. It seems then rather definitely a case of homo-ousios.

Very few, if any except Basil so definitely asserted that the οὐσία cannot really <u>exist unless</u> it is completed and determined by some individuating character, i.e. variables with real values. Yet none pretended to conceive the Godhead without the three distinct Persons (the individuating characters) Father, Son and Holy Ghost. They were, nevertheless, extremely persistent in affirming and reaffirming the independence and completeness and separate self-sufficient existence of the

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οὐσία or God per se, existing not prior in time but prior in fact to that which He is known as being. Gregory of Nyssa, for example, taught that "the life of the word of God must be an independent life (αὐτοζωή), and not a mere life by participation (ζωῆς μετοῦσα), since in the latter case it would lose its simplicity. In trying to carry through this thesis, Gregory himself had to admit that it is such an unspeakable mystery that it cannot be clearly known. (139)

Inasmuch as the summation of early Post-Nicene theology exists in Augustine's works, the test comes in studying those. One cannot afford to do this, however, without full recognition of inevitable uncertainty in the results. One may succeed in finding a suggestion or tendency, which will contribute to the prestige or weight of a given contention and yet be no nearer to the truth of what Augustine himself meant than would be some one else who found quite a different contention. Tixeront frankly sets forth the difficulties in the way of arriving at true meanings, when he says:

" In Augustine's profound surveys of the many and diverse problems to which he applied himself, every detail is not made to harmonize with every other, nor is each accurately stated. Impelled as he was by circumstances and at the same time exceedingly conscious of the mysterious character of the truths which Christian theology strives to expound, St. Augustine had occasionally hesitated, groped

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his way as it were, and suggested various solutions, which, if separated from the context, may easily be falsified. He has written a book of Retractiones." (140) That book was written close to the end of his life and only such researches as that started by Walter Van Saun of the University of Cincinnati on the relative significance of various stages in Augustine's own views can ultimately evalute any presentation of Augustine's views. In the mean time one can only present various currents which met in and coursed through his impressive speculations.

That there was a functional intent distinctive enough to make an impression is attested by that cautious critic, Tixeront himself, who writes:

"What then are these Persons, who are really distinct, yet do not divide the divine unity and simplicity? The Holy Doctor gives as an answer the theory of relations. These Persons are relations, and relations that are not identical with the substance or the nature, since they are not something absolute; while, on the other hand, they cannot be called accidents, <u>since they are essential to the nature</u>, and like it, eternal and necessary." (141)

To turn to Augustine's own professions, we have such statements as these:

> "I would boldly say, that the Father, Son and Holy Spirit, of one and the same substance, God, the Omnipotent Trinity, work indivisibly...." "In my words," he goes on, "the Father, Son and Holy Spirit are separated, and cannot be named at once.....And as, when I name my memory and intellect

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and will, each name refers to each severally, but yet each is uttered by all three; for there is no one of these three names that is not uttered both by my memory and my intellect and my will together (by the soul as a whole); so the Trinity, together wrought both the voice of the Father, and the flesh of the Son, and the dove of the Holy Spirit, while each of these things is referred severally to each person. And by this similitude it is in some degree discernible, that the Trinity, which is inseparable in itself, is manifested separably by the appearance of the visible creature; and that the operation of the Trinity is also inseparable in each severally of those things which are said to pertain properly to the manifesting of either the Father, or the Son, or the Holy Spirit."(142)

Augustine even goes so far as to illustrate a reciprocal dependence by a discussion of the nature of "greatness" wherein he explains.

"But since God is not great with that greatness which is not Himself, so that God, in being great, is, as it were, partaker of that greatness; - otherwise that will be a greatness greater than God, whereas there is nothing greater than God; therefore He is great with that greatness by which He Himself <u>is</u> that same greatness." (143)

But Augustine does not stop here. Likening this to the relation of three essences he goes on to prove actual identity, instead of distinct relation, "God Himself is His own greatness." Similarly Augustine literally identifies οὐσία and ὑπόστασις; and also οὐσία and essence. (144)

Always and incessantly he wrestles with this problem. Its main aspects are fairly consistently as follows:

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1. The unchangeableness of God; - the word "unchangeable" appearing in nearly every chapter.

2. The unity of the Trinity.

3. The distinctness of <u>three</u> Persons.

4. God the sender, not sent, not prior in time, but prior in existence.

It is the Holy Doctor's own opinion that "Whatever in its own self-same substance is now after another mode than it once was, is discovered to be mortal in so far as it has ceased to be what it was." (145) Hence we revert to the problem of the Invariable Variable, which is termed by Augustine variously (directly or by implication) the Unsent Sender, or the Unmade Maker, or the Unchanging Changer. I refer to such statements as describe God to be "making things that are changeable without change Himself," (146) or "God alone makes and Himself is not made." (147)

Augustine repeatedly goes over the ground of this problem. He knows such statements can be challenged. St. Basil said outright that the οὐσία itself depends for its own existence on the individuating characteristics which manifest it. Not for Augustine, however, is it necessary for an Unmade Maker to have anything to make. He will not apply here his own statement quoted above that insofar as the self-same substance is now after another mode than it once was (i.e. having ceased to make anything) it is discovered to be mortal, insofar as it has ceased to be what it was (i.e. it no longer survives all things which suffer change or

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death.) Probably no-one has more conscientiously analyzed this paradox than St. Augustine, himself, who, thereby, ultimately arrives at an almost Kantian dualism of realms. Throughout, Augustine sticks to the irreversible priority of God paradoxically involved in the co-eternity of the Father, Son and Holy Spirit, and as long as he restricts himself to discussion of the Trinity, (148) like Plato sticking to the notional realm of pure entities, he mostly maintains the functional relation already explained on page 130.

There are noteworthy contradictions, however, as when he stoutly insists that God alone should be called essence "For He is truly alone, because He is unchangeable; and declared this to be His own name to his servant Moses, when He says, 'I am that I am.'" And, Augustine adds, "He is called both essence and substance", in respect to himself and not relatively to anything." (149) This assertion comes after a protracted discussion of the quite different relation which exists (notionally) between God and the Trinity, and that which exists between ordinary Universals and Particulars as, for example, the relation of Man to Abraham, Isaac and Jacob; of Tree to the laurel, myrtle and olive; and of Animal to the horse, ox and dog. God, he says, is not similarly relative to the Persons of the Trinity.(150)

> "So, " he argues elsewhere, "we may understand God, if we are able and as much as we are able, as good without quality, great without quantity, a creator though he lack nothing, ruling from no position, sustaining all things without

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> 'having' them, in His wholeness everywhere, yet without place, eternal without time, making things that are changeable, without change of Himself, and without passion."(151)

Thus Augustine seems to arrive at the quandary which Plato faced in the Parmenides. Is the doctrine of Ideas applicable throughout or only in a special realm? Augustine seems not to have gone as far as Plato in answering it. When the former tries to present the notional and particular worlds together, i.e. the Trinity and the Created Universe, he shapes his arguments to the aforementioned Kantian conclusion, but to establish this contextually one must at least briefly trace through his account of the Trinity and the Universe of Man.

In defense of the unchangeableness of his changer, Augustine argues,

> "Are we to believe that it suddenly occurred to God to create man, whom he had never before made in a past eternity, - God, to whom nothing new can occur, and in whom is no changeableness? The Psalmist goes on to reply, as if addressing God Himself, 'According to the depth of Thy wisdom Thou has multiplied the children of men?' .... For this is a depth indeed, that God always has been, and that man, whom He had never made before, He willed to make in time, and this without changing His design and will." (152)

In De Trinitate, one finds the clearest statements of the relation of the Trinity and the created universe. Here also is his nearest approach to a functional interpretation:

> "Because, therefore, the Word of God is One, by which all things were made, which is the unchangeable truth, all things are simultaneously therein, potentially and unchangeably; not only those things which are now in this whole creation, but also those which have been and those which shall be. And therein, they neither

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> have been nor shall be, but only <u>are</u>; and all things are life and all things are one; or rather it is one being and one life."(153)

Then the great Theologian assumes the defensive again, by immediately arguing against the implications of reciprocal interdependence of one existence explained by the other, for he says:

> "Since 'in the beginning' the Word was not made, but the Word was with God, and the Word was God, and all things were made by Him', neither had all things been made by Him, unless He had Himself been before all things and not made."(154)

When he faces the issue of redemption - of reconciliation of the made to the Maker, he seems to admit a change of mode, for at least one member of the co-eternal unity, Christ. In this case he presents a truly functional reciprocity, a co-adaptation;

> "By being made partaker of our mortality, He made us partakers of His divinity..... For (as it just occurs to me) what I mean is precisely that co-adaptation which the Greeks call ἁρμονία." (155).

As always, however, Augustine equally insists that God's relation to the universe is necessary for the universe, whereas the universe's relation to God is not necessary for God. God's existence apparently is functionally involved with the existence of the three Persons in the Trinity, but equally apparently there are constant contradictions as to any functional cooperation or co-existence of the Trinity and the created Universe. Commentators unite in this observation for, as Tixeront declares, Augustine insisted God does not <u>have</u> to have a universe (156)- the

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Unmade Maker does not have to make anything. Überweg notes Augustine's contention that God was under no necessity in creating the world. (157)

This seems to indicate a definite break in the functional hierarchy. With Plato, this was traced, according to the pagan order recognized by More, from value to Doctrinal Function. With the great Christian Theologian one must seek evidence in the reverse order, from Doctrinal Function to value. Augustine's assumed Doctrinal Function is God. The Doctrines, themselves variables, are the three Persons of the Trinity, - Father, Son and Holy Spirit. How variable are they? Very variable, as anyone studying the church Fathers realizes for they were all absorbed in trying to find in that mid-region of theology, as More lists it, a vast variety of Propositional Functions of divinity and humanity, good and evil, eternal and temporal, etc. through the whole gamut of theological concepts based on the Trinitarian premise. The Greek pursuit bore out the Kantian contention "Percept without concept is blind" or as Bergson says, " There are things which the intellect will seek but which it alone can never find." And now the Christian pursuit seems to bear out the counter contention, " Concept without percept is empty" or "There are things which instinct can know but which it alone will never seek."

Descending the functional scale, from mythology, concept or instinct to philosophy, percept or intellect, the

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theologians ran on to their worst difficulties in the step from Doctrines (the Trinity) to Propositional Functions. Humanity and Divinity were specific propositional functions for the Christ doctrine in the ultimate Doctrinal Function, God. Then, of course, arose the problem of specific values for the variables in the Propositional Functions. What is immediate good, and evil, immediate humanity and divinity of soul, which can, by substitution, identify man with Christ, without invalidating the Christ doctrine as axiomatically taught?

Seven books of De Trinitate (158) attempt to work this out. Man's memory, intelligence and will, for example are values which, if substituted in ascending hierarchies, lead to the true Trinity. It is an imposing series of arguments, but as Tixeront says, " It would seem for the moment that St. Augustine meant to attempt a rational demonstration of the Trinity; but in reality he gives simply analogies of this great mystery." (159)

One of the nearest approaches to consistent tracing of what Keyser would call the beauty of form of an autonomous truth is in the arguments which Augustine entitles " In What Manner Christ Wills that All shall be One in Himself."

> "So the Son of God Himself, the Word of God, Himself also the Mediator between God and men, the Son of man, equal to the Father through the unity of the Godhead, and partaker with us by the taking upon Him of humanity, interceding for us with the Father in that He was man, yet not concealing the He was God, one with the Father, among other things speaks thus: 'Neither pray I for these alone' He says, 'but for them also which shall believe on me through their

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word that they all may be one; as Thou, Father, art in me, and I in Thee, that they also may be one in us: that the world may believe that Thou hast sent me. And the glory which thou gavest me I have given them; that they may be one even as we are one.'" ..... "Namely, that as the Father and Son are one, not only in equality of substance, but also in will, so those also may be one, between whom and God the Son is mediator, not only in that they are the same nature, but also through the same union of love. And then He goes on thus to intimate the truth itself, that is the Mediator, through whom we are reconciled to God, by saying, 'I in them, and thou in me, that they may be made perfect in one.'"(160)

There are, furthermore, passages which preserve this attitude in the discussion of evil, even as Aristotle would have discussed it, as inadequate, or insufficient substitution, which Tixeront briefly notes (with a reference to De Civitate Dei XII:7) - "For sin is not necessary, nor is it intended by God.... It consists in choosing a lower good in preference to a superior good; strictly speaking it has no efficient cause, but only a deficient cause." (161). Überweg agrees in the interpretation of the same passages that evil has no <u>causa efficiens</u>, but only a <u>causa deficiencs</u> and therefore, that "an absolute good is possible but absolute evil is impossible." (162) This is precisely what Augustine says in De Natura Boni as follows:

"Nature, every nature considered as nature, is good, its being evil consisting in a decrease of its good.... Absolute evil would be for it not to exist at all; but it is precisely then that evil becomes complete negation.

"... Properly speaking, evil is not the absence of any good whatever, but the privation of some good which ought to be had and which befits such a nature." (163)

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In spite of such notable passages, this question of evil presents a typical Augustinian contradiction, for he repeatedly elsewhere makes evil very positive and efficient in the person of the Devil.(163) In fact Augustine literally identifies the method of functioning of good and evil with each other in the chapter heading "As Christ is the Mediator of Life so the Devil is the Mediator of Death." Thereupon one has to wonder if the attitude on evil in De Civitate Dei and De Natura Boni is not genuine, or whether Christ mediates life as a <u>causa deficiens</u> instead of a <u>causa efficiens</u>.

All in all much remains to be said about the meanings Augustine had in mind, although one hesitatingly elaborates anything radically modern from the Augustinian writings, especially in view of the fact that his Retractiones reviews all his own works with corrective remarks which "for the most part were intended to restrict those of his earlier opinions which were deemed too favorable to the sciences and to human freedom, so as to make them strictly accordant with the teaching of the Church." (164)

The teaching of the Church was orthodoxly Athanasian, and the nearest Athanasius comes to a functional view is in avowing, "The Word has become man, that he might deify us in Himself," but he, too, was primarily concerned with the notional realm or the Trinity per se, which again brings us to the general tendency towards what may be called a Kantian separateness of realms.

To present Augustine's effort to do something about the paradox of transcendence and immanence, priority and

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co-eternity, the question whether an Idea survives all things which change and die, I can but quote in part from Augustine's own pronouncement on the Platonic Ideas:

> "For ideas are principles, certain forms, stable and unchangeable, reasons of things which themselves are not formed and hence are eternal and always in this manner possessing themselves, which in the divine intelligence are contained. And since they neither arise nor perish, according to them nevertheless are said to be formed all which is able to arise and to perish and all which has come into being and perished..... Each thing is created according to its own idea. Where indeed should those ideas be thought to be unless in the mind of the Creator? For not outside of Him is anything considered to be placed when according to it He constitutes which He has constituted. For to think thus is sacrilege. Because if these reasons of all things which are to be and have been created are contained in the Divine mind, they are not in the Divine mind unless they are able to be eternal and unchangeable; and these original reasons of things Plato called ideas."(165)

"With this interpretation of the Platonic Ideas in mind, it is interesting to compare with Plato's handling of the relation of the Idea and Things, Augustine's solution of it in De Trinitate:

> "If a lord is not so called unless when he begins to have a slave, that apellation likewise is relative and in time to God; for the creature is not from all eternity, of which He is the Lord. How then shall we make it good that relative terms themselves are not accidental, since nothing happens accidentally to God in time, because He is incapable of change, as we have argued in the beginning of this discussion? Behold! to be the Lord is not eternal to God; otherwise we should be compelled to say that the creature also is from eternity, since he would not be a lord from all eternity unless the creature also was a servant from all eternity. But as he cannot be a slave who has not a lord, neither can he be a lord, who has not a slave."

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Then follows an analogy of the relation between God and his creatures, which eventually proceeds:

> "Certainly to be the Lord of man happened to God in time. And that all dispute may seem to be taken away, certainly to be your Lord or mine, who have only lately begun to be, happened to God in time.... that He should be Lord of this or that tree, or of this or that corn crop, which only lately began to be, happened in time; since, although the matter itself already existed, yet it is one thing to be Lord of the matter, another to be Lord of the already created nature. For man, too, is lord of the wood at one time, and at another he is lord of the chest, although fabricated of that same wood; which he certainly was not at the time when he was already lord of the wood. How then shall we make it good that nothing is said of God, according to accident, except because nothing happens to His nature by which he may be changed, so that those things are relative accidents which happen in connection with some change of things of which they are spoken..... Money, when it is called a price, is spoken of relatively, and yet it was not changed when it began to be a price; nor, again, when it is called a pledge, or any other thing of the kind. If, therefore, money can so often be spoken of relatively with no change of itself; so that neither when it begins, nor when it ceases to be so spoken of, does any change take place in that nature or form of it whereby it is money: how much more easily ought we to admit, concerning that unchangeable substance of God, that something may be so predicated relatively in respect to the creature, that although it begin to be so predicated in time, yet nothing shall be understood to have happened to the substance itself of God, but only to that creature in respect to which it is predicated? 'Lord', it is said, 'Thou hast been made our refuge." God, therefore, is said to be our refuge relatively, for He is referred to us, and He then becomes our refuge when we flee to Him; pray does anything come to pass then in His nature, which, before we fled to Him, was not? .... Our substance is changed for the better, when we become His sons; and He at the same time begins to be our Father, but without any change of His own substance. Therefore, that which begins to be spoken of God in time, and which was not spoken of Him before, is manifestly spoken of Him relatively; yet not according to any accident of God, so that anything should have happened to Him, but clearly according to some accident of that, in respect to which God begins to be called something relatively." (166)

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Thus he indicates a temporal, relative world, subject to change; and the extra-temporal, absolute God, not subject to change and to be known only by faith, which certainly does not seem wholly unlike Kant's solution by means of a phenomenal world of change, characterized by the universal time schema, and the noumenal world of which we are citizens by faith. May this again be the earthly state and the City of God, which for Augustine, are eternally irreconcilable?

Augustine makes further assertion of the divine absoluteness: "Whereas both body and soul have a common, progressive development, God does not participate in this growth, because it implies mutability, a property which God cannot assume." (167) Invariably any such dogmatic assertion about what God cannot do raises questions as to his limitations, and if limitations, what of his Absoluteness? Or are the limitations functional and reciprocal, instead of absolute and rigid? Not for St. Augustine.

There is an important comparison, or rather contrast, between Augustine's analogy of the money as the unchangeable in the changeable, and Dewey's analogy of the house structure in the house. The former sees in his analogy a difference of degree but nevertheless an irreconcilable disunity of the unchanging and the changing. The latter sees a characteristic functional relation, with neither factor absolutely unchanging, but with one representing "a constancy of means of things used for consequences."

Having gone to great lengths to establish the

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distinction between a universe of "time passing away by its changefulness" and "changeless eternity", and again affirming a distinction between priority in time and pre-existence, Augustine ultimately acknowledges in De Civitate Dei, "These things are beyond my capacity. But I have thought it right to discuss these matters without making positive assertions, that they who read may be warned to abstain from hazardous questions, and may not deem themselves fit for everything." (168)

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Mathematics and Theology

I have likened this situation in pagan and Christian thought to that which exists between inductive experimental mathematics and the Euclidean, deductive mathematics. The latter has self-evident axioms, and the former has primitive number propositions. The latter assumes a functional concept like three dimensional space and deduces specific values, i.e. specific line and plane relations therefrom and then admits there is no such thing as a real line or triangle, but if there were, it would have to be thus and so. The former assumes or rather uses all the specific values available to human comprehension and with this cumulative total to date, he goes on from values to propositional functions with variables and on to doctrines and Doctrinal Functions, and then admits there is no Doctrinal Function per se, but if all the values, existent or possible, could be recognized and utilized, their function would be thus and so.

Theology does the same thing. As More says, for the Greek it is inductive from philosophy to mythology; and for the orthodox Christian, it is deductive from mythology to philosophy. The deductive theologian has his axiomatic myth, his dogmas a priori and immune against change or denial. How to subsume the individual under them is his problem, how to reconcile man to God or how to redeem each soul from universal sin. The inductive theologian has his specific values and specific aspirations; how to see the possibilities in each

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individual person, thing or event, and then go on to a still higher hierarchy of possibilities and still on to an autonomous functional system - that is his problem. He must learn how to realize the self in the cumulative functioning of the whole. One starts with axiomatic principles and the other with postulated possibilities. Then, as Keyser avows:

"When once the principles, or postulates, are chosen, the die is cast - all else follows with a necessity, a compulsion, an inevitability that are absolute - we are at once subject to a destiny of consequences which no man nor any hero nor Zeus nor Yahweh nor any god can halt, annul or circumvent." (169)

This fate he says is a logical fate, the fate which reigns in mathematics and for the freedom nevertheless possible under it, the reader is referred back to pages 40-41 of this thesis. Further than this, however, is Keyser's own defense of freedom even after the choice is made:

"Where, then, is the intellect's freedom? What do you love? Poetry? Painting? Architecture? Statuary? Music? The muses are <u>their</u> fates. If you love them, you are free. Logic is the muse of <u>thought</u>. When I violate it, I am erratic; If I hate it, I am licentious or dissolute; if I love it, I am free - the highest blessing the austerest muse can give." (170)

Apparently Plato was illustrating the same point when he recorded the myth with which he ends the Republic. When the souls were each choosing a new life, he mused on

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the freedom even of their folly: "for it was both pitiful and ridiculous and wonderful to behold ... in what manner the several souls made choice of their life." But when the choice has been made, the soul must submit it to the spinner, Atropos, "who maketh the destinies irreversible and from thence they proceed directly under the throne of necessity."(171)

Modern inductive mathematics has shown the Euclidean system to be only one of several Doctrines of Geometry instead of the Doctrinal Function it was supposed for 2,000 years to have been. Is that what will happen to traditional Christianity? Is it only one of various God Doctrines? Must induction then involve redefining God?

Well, the pagan "induction", the progress from philosophy to mythology, according to More's five volumes, seems to have arrived at substantially the God (Platonic Good) which Augustine, in his deductive reasonings from mythology to philosophy assumes as axiomatic. It would seem strange if theology were the one field which could not stand the test of a complete act of thought. Dewey's formulation of that act has three inductive steps and two deductive. (172)

1. Feeling a difficulty.
2. Definition of a difficulty
3. Rise of suggestions
4. Mental elaboration of suggestions into an hypothesis.
5. Observation and experiment for acceptance or rejection of hypothesis.

Why should "Christians" as More designates the deductive theologians, spurn the inductive experiments of the pagans,

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heretics or liberals as "the blind gropings of a ruined intelligence"? Why should the latter shrink from the deductive tests of the orthodox?

Instrumentalism would say combine the two in one complete act of thought, or, for that matter of belief, too. Belief seems to start in a difficulty (i.e. some variation from the familiar) perhaps sorrow or inspiring awe. This is defined: suggestions arise for its solution if troublesome, or for its perpetuation if pleasant. These are formulated into a hypothetical or tentative belief, and in the fifth place tested by subsequent satisfaction for acceptance or rejection. I cannot help, however, calling these waves and not steps, for like the billows of the sea, they constantly surge and recede in a perpetual process with unforeseen and as yet unmeasured and barely utilized power.

It is true, if God is and can be known only through mystic experience, theology must be a purely non-communicable subjective science, and the famous "silences" of Buddha would be the whole answer to every direct question on the "axioms" of religion.(173)

Otherwise there may be creative knowledge, such as the functional sequences, with the hope ahead of cumulatively attaining to a wholly autonomous Doctrinal Function which does function even while we are seeking to "feel the soul" of that fact and to give verbal expression to it. Such would be the tendency of an instrumental theory of God. An attempt at

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expressing this was made by O.W. Miller in 1924.(174) in a section headed "Redefining God" in which he argued:

"If we redefine what we mean by the term 'infinite', we may still say that God, though 'finite' is an 'infinite finite' in the sense that space and time, though finite have the characteristic of infinity. A short line is as infinite as a longer one, provided we define infinity by saying that a manifold is infinite if it is similar to a genuine part of itself. The moments in a minute are as infinite as the moments in a thousand years. The points in a short line are as infinite as the points in a longer one. In this sense, a minute is as infinite as a thousand years, and a short line as infinite as a longer one.

"If we apply this definition to personalities as we have applied it to time and space, then we must conclude that human personality is as infinite as divine personality and that the difference between human personality and divine personality is not that of 'finity' and 'infinity' but rather a difference of <u>function</u>."

Thus is revived the Greek avoidance of infinity for not being an attribute per se, but rather a chaotic non-being while a proper sense of true finiteness <u>is</u> a sentiment of forms. In Dedekind's modern, positive definition of Infinity as any manifold which is similar to a genuine part of itself, we have however, a situational interpretation. In the whole number series, for example, the whole series runs to n + 1, its eternal existence depending on persistent continuance of the original

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event, namely, in this case, adding 1, which in the first place gave the series its intrinsic character.

Now take any genuine part of that series say the even or odd numbers or the geometrical progression:

Whole series: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 --n-1
Even Numbers: 0 2 4 6 8 10 12 14 16 18 ----n-2
Odd Numbers : 0 1 3 5 7 9 11 13 15 17 -----n-2
Geometrical Progression: 2 4 16 256 --------n^2

Every part, i.e. each of the three lower series genuinely belongs to the whole above, in that each, like it, persists in existence by virtue of continuing the event which originally gave it its distinctive character, and each is fully included within the whole. Yet there is no greater or smaller, for each goes on ad infinitum. The Infinite is therefore similar to these genuine parts of itself. Thus the Infinite exists in its functioning, which makes the Infinite seem, as Dr. G. A. Tawney of the University of Cincinnati suggests, "a property of events."

If the Infinite is a property of events, one is again caught in the whirlpool of queries: "Does man make God, or does God make man?" - the modern orthodox-humanist contention. From Athanasius to Martin Luther there was a continuous insistence that God becomes man in order that man may become God, but that this functional relation might be truly reciprocal has not been accepted and it has not been so simple to say man made God in order that God might make man, although there is such a doctrine in the ancient Judaic Midrash. (See appendix). What justification may there be for carrying the concept through this way?

Using More's terms, Reasoning Man, starting with philosophy, ascends to a mythology of God, and Believing Man, starting with a mythology of God descends to the problem of man.

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Calling on Plato again, we are told that souls which have successfully emancipated themselves or more literally abstracted themselves from the concretes of physical existence, by progressive steps from generation to being (see pages 65-66), "view the universals" and return, transmigrate again to know those universals as manifested once more in the concrete. As Plato specifically says of the philosopher rulers (175) who have passed through all the experiential stages of training and observation to the ultimate privilege of "applying their understanding to real being".

> "Afterwards, I imagine, as they proceed in their work, they will frequently look both ways, both to what is naturally just, and beautiful and temperate, and the like; and likewise again to that which they can establish among mankind, blending and compounding their human form from different human characters and pursuits, drawing from this which Homer calls the divine likeness and the divine resemblance subsisting among men."

Then by one of his easy elisions from the virtues to God, he repeats this, as "rendering human manners, as far as it is possible amiable to the Gods."

So now reverting to the mathematical phraseology, from personal values, progress is made inductively and cumulatively to the Doctrinal Function of all values, or the All Comprehensive Being of the Universe, or God, and then deductively and inferentially to individual values again to be substituted for the variables of the Divine Function, which in step 4 has attained to creative power. Vice Versa, the theologian starts deductively from a scriptural, ecclesiastical or directly "inspired" axiom;

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he <u>begins</u> with step 4, and having carried it through applications by substitution of human values in step 5, he then devotes the rest of his career to going through the motions of steps 1, 2, and 3 in order to justify or "apologize for" his original premise, for one who does this is known as an Apologist. Augustine devoted a large share of his works to such a task, for he made use of the motto "Intellege ut credas, crede ut intellegas." No-one was more anxious than he to show how Christian truths are in harmony with what is highest and noblest in man, an attempt already referred to on page 137, and elaborated again and again under such headings as "He also intimates that the nature of God may be understood from our understanding of truth, from our knowledge of the supreme good and from our implanted love of righteousness.. " (176) He instructs us that there is a kind of Trinity discernible in man, viz. the mind, and the knowledge by which the mind knows itself, and the love wherewith it loves both itself and its own knowledge." (177) "That there is yet another and more manifest trinity to be found in the mind of man, viz. in his memory, understanding and will." (178) "That even in the outer man some traces of a trinity may be detected."(179)

In such arguments he starts with the particular values of human experience in the hope of arriving at the general form of God. All of this reverts to the discussion of ἀνάμνησις (pages 96 -98). The question is whether an inductive leap from cumulative temporal values will arrive at the same point as a priori intuition has so far afforded as the starting point for the deductive theologians and whether the Theologians subsequent "apologizing" or induction will harmonize with the other person's

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approach via the inductive leap, and finally whether ἀνάμνησις of the crucial point in step 4 eventuates in the same essential interpretation of life in all cases.

St. Athanasius, as interpreted by Tixeront, adhered strictly to ἀνάμνησις as a guide, although he believed that what he recollected was not from pre-existence but from an imprint made by God at birth, "Man, he says, "was created first to the image of God and of the Word. The knowledge and thought of his own eternity were imprinted in his soul; and consequently his destiny consisted in remembering God continually, in preserving in himself His image, the grace and virtue of the Word, and in leading a happy and immortal life, in familiar intercourse with his Creator; for the soul being pure and free from the senses, beholds the Word, and in the Word the Father; and this contemplation enraptures it and naturally increases its desire and its love." (180)

> St. Augustine goes farther. "For", he says, we wish to ascend as it were, by steps, and to seek in the inner man, both in knowledge and in wisdom, a sort of trinity of its own special kind, such as we sought before in the outer man; in order that we may come, with a mind more practiced in these lower things, to the contemplation of that Trinity which is God, according to our little measure, if indeed we can even do this, at least in a riddle and as through a glass." (181)

Again condemning the demonstration of a slave's geometrical "knowledge" in the Meno, he says:

> "If this had been a recollection of things previously known, then certainly everyone, or almost everyone, would not have been able so to answer when questioned. For not eveyone was a geometrician in the former life, since geometricians are so few among men that scarcely anyone can be found anywhere. But we ought rather to believe

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> that the intellectual mind is so formed in its nature as to see those things, which by the disposition of the Creator are subjoined to things intelligible to a natural order, by a sort of incorporeal light of an unique kind; as the eye of the flesh sees thing adjacent to itself in this bodily light, of which light it is made to be receptive and adapted to it." (182)

Is not this incorporeal light the inductive faculty that Poincaré means when he speaks of the man who can arrive at a law as one who sees "the soul of a fact?"

A God who can thus be approached by the incorporeal light of the intellectual mind as well as accepted by intuitive faith, i.e. if one accepts the dictum "Intellege ut credas, crede ut intellegas," the God of such a person must be functionally real or not real at all. Because of the current heresies threatening the existence of the Church, St. Augustine, in spite of his own confessed views, dreaded attempts to rationalize the eternal "axioms". Like Plato who denounced poets but was a poet, so Augustine denounced rationalizing and was a great rationalizer, with the inconsistencies against which commentators issue warning.

Withal, however, it has turned out that Plato and Augustine, pagan and Christian as they are, and solving life from opposite angles, both have a closely similar "myth". Augustine's own words reveal this:

> "Wherefore there would be no changeable goods, unless there were the unchangeable good. Whenever then thou art told of this good thing and that good

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> thing, which things can also in other respects be called not good, if thou canst put aside those things which are good by the participation of the good, and discern that good itself by the participation of which they are good (for when this or that good thing is spoken of, thou understandest together with them the good itself also): if, then, I say thou canst remove these things, and canst discern the good in itself, then thou wilt have discerned God. And if thou shalt cleave to Him with love, thou shalt be forthwith blessed." (183)

Plato discerned it, as for example in the Phaedrus myth, and Augustine assumed it as a dogma.

Augustine respected Plato and yet Augustine contended that "only one sin was past redemption, viz. Blasphemy against the Holy Spirit, which is, according to the Saint, obduracy and the refusal to enter the true church." (184) In line with this is his statement, earlier quoted, that man must depend on the Scriptures. Despite his mother's Christian influence, Augustine himself, as a matter of historical fact, did not arrive at complete dependence on the scriptures until cumulative experience forced him there. Yet in later years, the Holy Doctor counted as beyond the pale any man who arrived at a functional concept or doctrine of God by way of cumulative experience and knowledge. He recognized the value of such an approach as an apology for an already accepted dogma, but he could not trust it to lead anywhere worth-while without a pre-ordained goal, in spite of Plato's example and the similarity of Plato's religion to much of his own.

The inductive approach when analyzed and made apparent always troubles some people. On first studying Dewey's five steps students are apt to protest that the first three are

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wholly artificial, that no-one ever really has a good idea that way, for like Athena, good ideas spring full fledged from the heads of geniuses. Others fear a Sophistic implication - that man is again being made the measure of all things.

As a teacher in a Protestant Theological seminary challenged this view, - " Have I then anything to worship but my own self-consciousness? Is God different for every person?" And as a student for the Jewish Rabbinate demanded, "Can I pray 'O thou Divine Function'?" A religious liberal weekly furthermore runs an editorial "Shall we pray to the Elan Vital?" and decides that we shall not. (185)

To the first be it said, "Why the solipsism?" No truly autonomous Function can have limited substitutions for its variables. Such a restricted God is only a proposition or a doctrine, not a true function at all. Furthermore, as Poincaré says, the <u>inventor</u> (be it self or the cumulative life of the universe with emotive correspondence throughout the whole) who attains to a generalization or propositional function "feels the <u>soul</u> of the fact." Then whoever goes on to a true Doctrinal Function <u>feels</u> the <u>Soul</u> of the Universe. Not the creator? Yes, the reciprocally creative force of true Being. Even if this is granted there is still no denying the immeasurable clumsiness and so far the emotive futility of "Oh Thou Divine Function" or "Thou Holy Elan Vital", with the sanctity of association still attached to such phrases as

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"Thou God of all Being." However that may be, the cumulative soul of all that is conveys a sense of living <u>reality</u> and an eternal power far greater than a god with anthropomorphic passions, will and personality, even though he be non-anthropomorphic in spatial form. It seems as important a step onward as the early emancipation from the whims and crudity of the Homeric hero-gods to a spirit deity.

The world today is full of God doctrines. Their adherents like to believe them autonomous doctrinal functions, but this they cannot be while limited to single, fixed substitutions. It takes real variables, not single values to have true functions. The orthodox Doctrine has for its variables the propositional functions of the Trinity, baptism, conversion, etc. and these are all specifically and singly evaluated according to their own preferences by the Methodists, Baptists, Presbyterians, United Brethren, and all the rest. There are then the Evangelical Doctrine, the Mystic Doctrine, the Liberal Doctrine, the Jewish Doctrine and there is a persistent sentiment that cumulatively from all these and more, there is an autonomous God, sufficient for all. They are all attempts at symbolizing in words an autonomous functional form, and so often they turn out to be $x + y = 9$ or $(x+y)^2$ instead of $(x+y)^{n+1}$.

Greek, Jew, Hindu, Chinese, Mohammedan, all and any who try to articulate their determinative values, unless solely dependent on traditonal axioms, - but any who try to express the cumulative totality of whatever seems to them most Real, - always appropriate or coin words for the indefinable, and as Poincaré asserts (page 49) the new name, once invented or

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adopted becomes creative. Be it the Trinity, or Beauty, or Vidhya or Yahweh or Allah which they use as a name for what they <u>feel</u> inductively or axiomatically as the case may be, to convey the most perfect compatibility of all aspects of Being, nevertheless the yearning for whatever it represents to its adherents is a functional sense into which the variables of daily experience are fitted with individual values, and thus take shape as doctrines of human practice. Such are the Good of Plato and the God of Jesus. All religion, in fact, relies on symbolizing the functional nature of the total of value concepts which determine the direction of Being and Becoming for any individual or group.

I do not see how this interpretation properly understood could be offensive even to a traditionalist like More who, himself, asserts: (italics mine)

"The apex of our aesthetic experience which was attained <u>by the ascending steps of generalization is now conversely regarded as a creative energy reaching down into the world and imposing upon its fleeting substance the forms and order of stability.</u>" This cause, he continues with special reference to Timaeus and Laws, becomes God, "who is, as it were, the reflection in the mirror of the universe - it may rather be the original and no reflection at all - of that daemonic check in the soul which is the cause of truth and beauty." (186)

The first three "ascending steps of generalization" are so formulated in step 4 of a complete act of thought, that they may be "conversely regarded as a creative energy reaching down into the world and imposing upon its fleeting substance

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the forms and order of stability." This cause, or cumulative effect as converted in step 4 may, in the last analysis, be God, known by or through or as that sentiment of forms which recognizes the beauty of autonomous truth and is halted by the absence of it. Is it any different to refer to "that daemonic check in the soul which is the cause of truth and beauty"?

Generations may go on testing each succeeding formulation to see if the autonomous form has been attained, and will go on feeling dissatisfied when the number of inadmissable values continues to be discouragingly great. Every generation brings out new values which prove inadmissable in old forms. The question whether to change the form or to suppress the new values can no longer be settled by Ecumenical councils. Pragmatically the test is made by attempted substitutions of current values; - that is why ministers try to preach Business from gospel texts. Mystically the test is made through the sentiment of forms; - that is why ministers call for an increase of ritual while members of the congregation in the pews quietly try to fit their personal needs and aspirations into the sentiment of the occasion, in the hope of going out feeling less chaotic in mind and heart.

Humanity sensing its own inadequacy craves something human, non-human and supra-human all in one. The medievalist axiomatically accepts as his Doctrinal Function, the Trinity and deductively evaluates all individual lives from that premise.

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Others proceed inductively from experience to "God" with the inductive leap involving an anamnesis, which may be preservation of an intensive totality of experience, i.e. an amassing and an inferring from the cumulative Reality of past strife and achievement, present experience and yearning, and future possibilities all in one. Call it whatever one may, in a truly autonomous Doctrinal Function, induction and deduction are both there, and again, like the inseparable, unceasing waves and tides of the sea, this functionally combined power is as yet untold.

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APPENDIX

SOURCE: Midrash Rabba: Genesis XXX 11

Rabbi Johanan says: (God may be compared) to a shepherd who stands and watches over his sheep. Rabbi Levi says: (God may be compared) to a prince who has officials walking before him. (Interpretation of these statements): According to Rabbi Johanan ----- we (mankind - that is, the sheep) need God (to watch over us); according to Rabbi Levi ----- He (God) needs us (explanation by Matnos Kehuna --- a commentary on this source --- "for there can be no prince without officials", that is, a king can only be a king if he has subjects over whom to rule, and officials who will see that his decrees are enforced.).

ר׳ יוחנן אמר: לרועה שהוא עומד ומביט בצונו
ר׳ לוי אמר: לנשיא שהוא מהלך זקנים לפניו
על דעתיה דר׳ יוחנן, אנו צריכים לכבודו
ועל דעתיה דר׳ לוי, הוא צריך לכבודנו.

Commentary of "Matnos Kehuna" שאין נשיא בלא זקנים

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NOTES

1. Sophist 257

2. Parmenides 130

3. Ibid 135

4. Ibid. There is a slightly different version of this passage which lends itself better to the mathematical treatment in Part III of this discussion.

   "And yet, Socrates, said Parmenides, if a man, fixing his mind on these and the like difficulties, refuses to acknowledge ideas or species of existences, and will not define particular species, he will be at his wit's end; in this way he will utterly destroy the power of reasoning." (Scribner's Edition 1905)

5. Parmenides 135

6. More: Platonism, p. 190

7. Phaedo 100

8. I Cor. 13:12

9. Jowett: The Dialogues of Plato, Vol. I, viii

10. Republic VI, 511

11. More: Platonism, p.p. 182, 187

12. Cratylus 440

13. Magna Moralia, Book I, 1182b

14. Metaphysics, Book B. II, 997 b ff.

15. Ibid, Book B II, 998a

16. Elaborated in Metaphysics Z, Book Vi

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17. Stewart: Plato's Doctrine of Ideas, p. 109

18. Zeller: Aristotle (English translation) i, 162

19. Stewart: Plato's Doctrine of Ideas, p.109

20. Jowett: The Dialogues of Plato, Vol. III p.215

21. Ibid, Vol I, viii

22. Phaedo p. 211 (Scribner's Modern Students Library).

23. Cf. Analogy of the Divided Line, Republic VI, 510

24. More: Platonism, p. 177

25. Parmenides 131-134

26. Ibid 135

27. Euthyphro, Crito, Charmides, Laches, Phaedo, Parmenides, Sophist. In fact, this point is implied or elaborated in nearly every dialogue.

28. Parmenides 166

29. Stewart: Plato's Doctrine of Ideas, p. 114

30. Metaphysics A. IX, 991 a 9; 992 a 24; 992 b.

31. More, Platonism, Chapt. VII

32. Ibid, p.183

33. Stewart: Plato's Doctrine of Ideas, Part II

34. Ibid, p. 6

35. Thaaetetus 178-179

36. Ratner: The Philosophy of John Dewey, pp.24,25. From Experience and Nature. (Italics mine).

37. Stewart: Plato's Doctrine of Ideas, p.45

38. For further illustrations, Stewart takes up the Dialogues ad seriatum in "Plato's Doctrine of Ideas".

39. Phaedo 100

40. Dewey: Essays in Experimental Logic, pp.55-56

41. Durant: The Story of Philosophy, p.1

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42. Hegel: Logic (Wallace Translation), p. 201

43. Keyser: Mathematical Philosophy, pp, 144, 151

44. Royce: The World and the Individual, Vol. I p. 256

45. "Doctrinal Function" is Cassius J. Keyser's term in the theory here explained in brief outline. See his "Mathematical Philosophy", Chapt. III and VIII

46. Cincinnati Enquirer, Feb. 3, 1929

47. Poincaré, The Future of Mathematics, Annual Report of the Smithsonian Institute, 1909.

48. Keyser: Mathematical Philosophy, p.139

49. Ibid, p. 135

50. Sophist 249

51. Spencer: The Data of Ethics (Third Edition) pp.227-228

52. Keyser, Mathematical Philosophy, p.119

53. Republic I, 331

54. Ibid I, 332

55. Ibid I, 337

56. Ibid VII, 525 (Italics mine)

57. Symposium 210

58. Ibid 211

59. Cf. page 18

60. Philebus 16

61. More: Platonism, pp. 181-183 (Italics mine)

62. Ibid, p. 187

63. Phaedo 97

64. Timaeus 48

65. Parmenides 135

66. Jowett; The Dialogues of Plato, p.227

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67. Some authors made II and III one hypothesis.

68. Sophist 257 ff.

69. Mind: Articles by A.E. Taylor, July and October, 1896, and January, 1897. See also Stewart: Plato's Doctrine of Ideas, p.83

70. Pages 81-83

71. More: Platonism, pp. 240-241

72. Laws 165

73. More: Platonism, p.71

74. Ibid, pp 262-263

75. Ibid, pp.268-269

76. Phaedo 97

77. More: Platonism, p. 269 (Parentheses mine)

78. Report of meeting at the University of Minnesota, April 15, 1927. (Parentheses mine)

79. Philebus 61

80. Republic III, 415

81. Aristotle, Nichomachean Ethics, 1177b, 25

82. Republic VII, 515-519

83. Hegel, Philosophy of Law, p. xix

84. Republic VI, 500

85. Stewart: Plato's Doctrine of Ideas, p. 12

86. Ibid, p. 129

87. Ogden and Richards: The Meaning of Meaning,

88. Ibid, p 254

89. More: Platonism, p. 179

90. Ibid, p. 183

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91. Ibid, p. 179

92. Ogden and Richards: The Meaning of Meaning, p. 196

93. Keyser: Mathematical Philosophy, p. 182

94. Emerson: Essay on Self-Reliance

95. Meno 82-86

96. Phaedrus 250-251. Whether anamnesis and the mythological transcendentalism are Platonic or Socratic depends on the order accepted for the dialogues. Lutoslawski's order makes them Platonic; Burnet's makes them Socratic. The main trend of the argument in this discussion would remain the same in either case, although Lutoslawski's order is being followed in the present writing.

97. Nichomachean Ethics: Book I, 7, 1097 b, 16-22; Book X 7, 1177 b, 25

98. Ibid Book X, 7 and 8

99. Demos, Introduction to Scribner's Edition

100. Fisher: History of the Christian Church, p.98

101. Acts 17: 18-34

102. John I: 1-3, 14

103. Notably Meno, Phaedo, Phaedrus, Symposium, Timaeus, Republic X

104. Phaedo and Sophist

105. Fuller: History of Greek Philosophy, Chapt. II, Sect. 7-10

106. Phaedo 61, 62, 83

107. I Cor. 15: 49-53

108. Fisher: History of the Christian Church, p. 49

109. More: The Religion of Plato, pp. 17-19

110. Apology 38

111. St. Basil, Epistola. clix (Migne)

112. Confessions III; 8

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113. De Civitate Dei VIII, 5

114. Uberweg: History of Philosophy, Vol. I pp.293, 297

115. Strom, V, 11, 12

116. Tixeront, History of Dogmas, Vol. II (Translated from the Fifth French Edition by H.L.B.) p. 83

117. De Trinitate VII, 4, 7

118. De Civitate Dei, XV, 25

119. Hegel, Selections - Phenomenology (Loewenberg, Scribner's edition) p. 28

120. Crito and Phaedo

121. More: Platonism, p 272, Religion of Plato, pp 131-136

122. Van Saun: Thesis "St Augustine's Idea of God", p22. Cf. Augustine: Confessions Vi, 6

123. Tixeront: History of Dogmas, Vol II, pp. 25 and 27

124. Ibid: pp. 17 and 18

125. Überweg: History of Philosophy, Vol. I, pp 310-311

126. Ibid: p. 88

127. Tixeront: History of Dogmas, Vol. II p. 82

128. L'Afrique chretienne, Vol. I, p. 345 ff. as quoted by Tixeront.

129. Kroencke: Thesis "Early Christianity and the Family" University of Cincinnati, 1927

130. More: Christ the Word, pp. 167-168

131. Tixeront: History of Dogmas, Vol. II, pp. 291-292

132. Ibid, p. 258

133. More: The Religion of Plato, Preface viii

134. Van Saun: Thesis "St Augustine8s Idea of God" University of Cincinnati, 1928

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135. Tixeront: History of Dogmas, Vol. II, pp. 76-77 (Italics mine). Quoted by Tixeront from Epistola XXXVIII, 3; Nicene and Post-Nicene Fathers, 2nd series, Vol VIII, pp. 137-138

136. Ibid, p. 77

137. Russell: Introduction to Mathematical Philosophy, Chapt.XV.

138. Tixeront: History of Dogmas, Vol II, p. 77

139. Überweg: History of Philosophy, Vol. I pp. 329-330

140. Tixeront: History of Dogmas, Vol II, p. 353

141. Ibid, p 363 (Italics mine)

142. De Trinitate, Book IV, Chapt. 21

143. Ibid: Book V., Chapt10;11

144. Ibid: Book V. Chapt. 8;10. Also De Civitate Dei, XII; 2

145. De Trinitate, Book II, Chapt. 9

146. Ibid: Book V. Chapt. 1;2

147. Ibid: Book V., Chapt. 8;9

148. See De Trinitate: Book V. Chapt. 12 and 13

149. De Trinitate: Book VII, Chapt. V., 10

150. Ibid Book VII, Chapt. 4;5

151. Ibid. Book V, Chapt 2

152. De Civitate Dei, Book XII, 14

153 De Trinitate, Book IV, Chapt, 1;3

154. Ibid

155. Ibid: Book IV, Chapt. 2;4

156. Tixeront: History of Dogmas, Vol. II, p 367

157. Überweg: History of Philosophy, Vol. I, p. 342

158. De Trinitate: Books IX-XV

159. Tixeront: History of Dogmas, Voll II, p. 365

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160. De Trinitate: Book IV, Chapt. 8 and 9;12 Biblical references, I Tim. 2:5, Romans 8:34, John 17:20-22, 23

161. Tixeront: History of Dogmas, Vol II, p. 368

162. Überweg: History of Philosophy, Vol. I p. 343, Quoting De Natura Boni, 8, 16, 23

163. De Trinitate, Book IV, Chapt. 10-13

164. Überweg: History of Philosophy, p. 336

165. Augustini Operum edited by the Benedictines, Vol. VI, pp. 17-18. De Diversibus Questionibus 83 #46. Translated from the Latin by Walter Van Saun.

166. De Trinitate, Book V., Chapt. 16;17

167. Letter cxxxvii, Chapt. III: 12

168. See also De Civitate Dei, XII, Chapt. 16

169. Keyser: Mathematical Philosophy, p. 136

170. Ibid, pp. 136-137

171. Republic X

172. Dewey: How We Think, p. 6

173. Beck: The Story of Oriental Philosophy, p 173

174. Miller: Thesis "The Metaphysical Implications of Instrumentalism" p. 119 - University of Cincinnati, 1924

175. Republic VI, 501

176. De Trinitate, Book VIII

177. Ibid, Bood IX

178. Ibid, Book X

179. Ibid, Book XI

180. Tixeront: History of Dogmas, Vol. II, p 137

181. De Trinitate, Book XIII, Chapt. 20;26

182. Ibid, Book XIII, Chapt. 15; 24

183. De Trinitate, Book VIII, Chapt. 3;5

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184. Sermo LXXI, 5 ff, 21-23, quoted in Tixeront, History of Dogmas, Vol. II, p. 419

185. Editorial, The Christian Leader, March 23, 1929

186. More: Platonism, p. 201

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