

Memoria technica

& Hisab al-jummal Under The Mughals

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Abstract: "The credit for advancement in arithmetic, algebra and geometry goes entirely to the Muslim intellectuals and mathematicians. Much before the breakthrough in which Muslims invented 'zero' every civilization was dependent on the use of alphabets. These alphabets had numerical values. The use of alphabets for writing sums remained in vogue for a very long time but this was a very cumbersome and tedious method and often caused confusion. With the invention of 'zero' revolution was brought about. Before this invention Muslims too depended on their alphabets i.e. *abjad* and they too had numerical values. Islamic architecture, almost throughout the Islamic world, never allowed the old system to die. Rather a new phase was initiated by which the dates of the construction of the monuments were concealed in pieces of poetry and were inscribed on the facades and salient places of the buildings. The system is known as *tarikh* or the chronograms. Not much research has been done on this very engrossing and interesting aspect of Islamic culture in general and of Islamic architecture in particular. This short article focuses on how the dates were construed for monuments, and how they were concealed in meaningful couplets or *ruba'is* which eulogized the monument as well as its builder."

The Arab historian Al-Baladhuri has not only furnished us with an account of the conquest of Sindh by the Arabs, but also describes the early Arab missions to India in detail.¹ Most of these missions were carried out during the period of the *Khulafa-i Rashidin*. There is a particular reference to the presence of Arab missionaries at the town of Thana near Bombay (now Mumbai). A place called Bharoach near Gujarat was also visited by the early Arabs. These places of great antiquity hold many interesting relics to this day.² Reference to the Arabs exist in many of the Devanagiri inscriptions of this regions and the Arabs are termed as *Tajikas*.³ Abu'l-Hasan al-Mas'udi who visited Western India in 303A.H./915A.D., saw various mosques on the western coast which were then well kept.⁴

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References

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6. Iqbal, *The Reconstruction*, p. 120
7. *Al-Qur'an*, 31:28.
8. Iqbal, *The Reconstruction of Religious Thought in Islam*, pp.148-149.
9. Lectures on "Realism" delivered by Dr. Syed Zafarul Hasan at the Aligarh Muslim University in 1931-34. See also: Syed Zafarul Hasan, *Realism: An attempt to trace its Origin and Development in its Chief Representatives* (Cambridge: Cambridge University Press, 1928), "Introduction", pp. 38-39 and passim.
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13. Dr. Burhan Ahmad Faruqi, *Mujjaddid's Concept of Tawhid*, Lahore: Institute of Islamic Culture, 1989, "Preface", p.iv.
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If the nature and implications of knowledge or religion are to be grasped, they must be studied with reference to the philosophic and religious consciousness in their most highly developed forms. But just as the question: what is the nature of knowledge (metaphysical) and what are its implications, can not be discussed without reference to philosophers like Kant and Hegel, in the same manner the question of the nature and the implications of religion can not be answered without reference to the most highly developed religious consciousness of Muhammad (peace be upon him) himself.¹³

Iqbal has very emphatically and beautifully referred to the same principle in the following line:

Now, since the transformation and guidance of man's inner and outer life is the essential aim of religion, it is obvious that the general truths which it embodies must not remain unsettled. No one would hazard action on the basis of a doubtful principle of conduct. Indeed, in view of its function, religion stands in greater need of a rational foundation of its ultimate principles than even the dogmas of science. Science may ignore a rational metaphysics; indeed, it has ignored it so far. Religion can hardly afford to ignore the search for a reconciliation of the oppositions of experience and a justification of the environment in which humanity finds itself. That is why Professor Whitehead has acutely remarked that "the ages of faith are the ages of rationalism". But to rationalize faith is not to admit the superiority of philosophy over religion. Philosophy, no doubt, has jurisdiction to judge religion, but what is to be judged is of such a nature that it will not submit to the jurisdiction of philosophy except on its own terms. While sitting in judgement on religion, philosophy cannot give religion an inferior place among its data. Religion is not a departmental affair; it is neither mere thought, nor mere feeling, nor mere action; it is an expression of the whole man. Thus, in the evaluation of religion, philosophy must recognize the central position of religion and has no other alternative but to admit it as something focal in the process of reflective synthesis. Nor is there any reason to suppose that thought and intuition are essentially opposed to each other. They spring up from the same root and complement each other. The one grasps Reality piecemeal, the other grasps it in its wholeness. The one fixes its gaze on the eternal, the other on the temporal aspect of Reality. The one is present enjoyment of the whole of Reality; the other aims at traversing the whole by slowly specifying and closing up the various regions of the whole for exclusive observation. Both are in need of each other for mutual rejuvenation. Both seek visions of the same Reality which reveals itself to them in accordance with their function in life.¹⁴

Beauty, and of God. Critical method consists in Distinction, Determination, Implication, and Limitation. Distinction consists in Distinguishing Cognate values, which are liable to be confused with one another. For example, knowledge is distinguished from apprehension, opinion and belief. Determination consists in determining the essential nature of the value concerned, e.g. knowledge and morality. Implication consists in analyzing the implications, that is, the necessary positions because of which each value can be conceived as reliable. For example, in knowledge the existence of the subject to know, of the existence of the object to be known, of the capacities of knowledge possessed by the subject and of the quality of the object that it admits of being grasped by the subject capacities of knowledge must be affirmed.

Limitation consists in defining the limits of the validity of the value concerned and to avoid overlapping or conflict between the facts of different consciousnesses. For example, the implication and concepts of knowledge are valid within the domain of knowledge, and *the freedom of will is valid only within the domain of moral consciousness. Thus distinction, determination, implication and limitation are sought with reference to each form of consciousness.*¹²

The enquiry pursued on the principle of criticism leads to the result that Metaphysics as a demonstrable body of knowledge is impossible. It puts an end to rationalism- to the supremacy of the theoretical reason, and thereby emancipates morality, art and religion from the bondage of theoretical reason. That is the pre-rationalistic stage is unreflective, rationalism and empiricism are the reflective stages, and criticism is the stage which may be called the stage of "reflection on reflection".

Now as the reflection on Islam, the immediate followers of the Prophet of Islam are predominantly religiously minded. They are fully convinced of the revealed truth. Subsequently comes the stage at which the conviction of its truth wavers and the stage of reflection sets in the whole history of Islamic thought----rational theology, ash'arite reaction against it, and the mystic attempt to re-affirm Islamic ideology on the basis of direct intuition, (first-hand knowledge and empirical verification), are nothing but attempts to satisfy the craving for the knowledge of reality.

We may now proceed to consider Iqbal's attempt and try to see how far it is compatible with the logical development of philosophic thought and how far his conclusion are compatible with Islam? In doing this we shall follow the following method:

development of ideas."¹⁰

If we consider the growth of human thought in the light of the above principle, we find that there are three stages of its development namely, rationalism (dogmatism), empiricism, scepticism and criticism.

The problem of Philosophy is: **what is the ultimate nature of reality, and what is man's place in it?** The formulation of the problem assumes that **Reason is capable of solving this problem.** Man makes this assumption without further ado. This is rationalism. Philosophers made this assumption **unconsciously.** In Plato it became conscious. When consciously assumed the principle comes to mean that Reason and Reason alone is the faculty competent to grasp the ultimate nature of reality. It leads to the position that Reality in its essential nature must be conceptual, universal, necessary and eternal. Consequently, according to rationalism the perceptual, the particular, the contingent and the temporal are not real. But the multiplicity and conflict of results, arrived at by this method, that is the Philosophies based on it, e.g. the dualism of Descartes, the monism of Spinoza, monadism of Leibnitz led to the distrust of this principle. The reaction affirmed the opposition viz, **that not reason but sense experience alone is the organ of knowledge.** This is empiricism. Reality according to empiricism is perceptual, existent, particular, contingent and temporal, and consequently, the conceptual, the universal, the necessary and the eternal are chimeras of our brains. Empiricism, passing through Locke and Berkeley, reaches its climax in the scepticism of Hume.

But man cannot rest in scepticism, in the despair of all knowledge and in the total distrust of his capacity to know. The only way out is criticism, i.e. the determination of the limits of our capacity to know. Kant with the fullest consciousness raises the critical problem: what are the limits of Pure (theoretical) Reason. Reason (theoretical) is not, finds Kant, capable of knowing absolute Reality. But it can only know the world of experience. However, our moral nature brings us into contact with the ultimate reality. His work is truly criticism. The principle of criticism may be expressed thus. Reason (the principle of rationalism) and Experience (principle of empiricism) both together are the faculties of knowledge and they are valid within limits. It denies that the ultimate essence of the world can be grasped by Reason or its apparent nature by the Reason alone without sense.¹¹ Critical Philosophy starts from the side of the subject itself and raises the question as to the fundamental aspect of the subject, that is, what is the nature of the knowledge consciousness of the moral as, of the aesthetic, and as of the religious consciousness, instead of asking about the nature of Reality, of Good, of

in order to achieve the purpose as pointed out by Iqbal himself, must fulfill the following requirements:

Firstly, it must satisfy the coming generations in this respect that it is compatible with the highest stage of the logical development of philosophic thought.

Secondly, it must tend to make Islam as a message to humanity, more intelligible to the modern mind without jeopardizing its essence as revealed.

Hence it is necessary firstly to point out the principles involved in the logical development of philosophical thought and the stages involved therein, and secondly to determine the method to evaluate the attempt of Iqbal with reference to these requirements. The principle underlying the logical development of philosophic thought is brought out in the following words by Dr. Syed Zafarul Hasan:

Development means gradual progress towards an end. A progress cannot be called a development unless we see it to be moving towards an end: nor an element of the process can be called a development unless it is a step towards the end. These steps must consist in bringing out one element or the other, which go to constitute the end. This is the very notion of development whether you seek it in Aristotle or Hegel. How development comes about more particular by external and internal causes helping the actualization of capacities, or to put it more simply by coming forward favourable circumstances. This conception first arises in connection with organisms. There seems to be a yearning in the organism for actualization. There is some obstacle in the way; a negation of this obstacle (another opposition) is necessary. This negation (opposition of opposition) is called favourable circumstance.

"In the history of the development of ideas what happens is this. An aspect of truth is asserted as the whole truth because of the enthusiasm which it inspires. This excites to the affirmation of the neglected aspect of the truth, again as the whole truth and for the same reason. The opposite assertions cancel each other; a medium of reconciliation occurs and the whole truth with the exclusion of the false element comes to light."

"This process may revive itself if there are further subordinate elements of truth which must come out. This is the dialectic of Plato and Hegel. The inmost nature of thought attests to the truth of this dialectic. It is a process of controversy between the individuals or between one's own mind"

This may or may not be true chronologically; but logically, that is, methodically this is the only reasonable and intelligible method of tracing the history of the

principle. Such attempts find expression in Berkeley's Subjective Idealism.

The attempt to construct metaphysics on the categories of moral consciousness finds expression in Fichte's system of metaphysics. Shelling's Philosophy is an attempt to evolve a metaphysics on the Concept of Aesthetic Consciousness. Pantheism and anthropomorphic Theism are the attempts which use the concepts and implications of metaphysics. One of many differences being that in Pantheism emphasis lies on immanence as a principle of explanation and Anthropomorphic Theism on creation as a principle of causal explanation.

Now the metaphysics evolved by Iqbal leads to the obliteration of the fundamental distinctions between knowledge, Artistic, Religious and Mystic Consciousnesses with the result that the different implications of these consciousnesses are distorted under the stress of one or the other modification of the theoretical yearning.

The attempt at the "Reconstruction of Religious Thought of Islam" consists in bringing out that there is no conflict between Islam and modern knowledge; rather they are in positive harmony with each other/ one-another. This has been the trend of all the attempts at reconciliation in the history of human thought. They have really originated either in the difficulty to consciously reject one and accept the other of the two systems claiming to be the solutions of one and the same problem and yet conflicting; or in the difficulty to grasp the nature of their fundamental implications and the limits of their validity and have consequently ended in obliterating their fundamental distinctions. For example, in the thought movements of the world, Neo-Platonism was an attempt to reconcile Hellenistic thought with Christianity; Scholastic Philosophy was an attempt to reconcile rationalistic philosophy with Christianity. Among Muslims, Mu'tazilite Dialectics is an attempt to reconcile Islam and rationalism, and Pantheistic Mysticism is an attempt to have a direct experience of the revealed truth in order to get first hand knowledge of Ultimate Reality. The result in every case has been the obliteration of distinction between the implication of the religious and speculative consciousnesses. Similar is the case with individual attempts. Among ancients Aristotle tried to reconcile Pre-Socratic empiricism and Platonic rationalism and ended in rationalism. Among moderns Hegel tried to reconcile Pre-Kantian rationalism with Kantian criticism and became a rationalist. Among Muslims Farabi tried to reconcile Aristotelianism with Platonism and ended as Platonist. Shah Waliullah tried to reconcile Ibn Arabi's Pantheism with Al-Mujaddid's apparentism and turned into a Pantheist. Iqbal's attempt is not essentially different from those made in the past. The attempt,

religious consciousness when directed to seek communion with God. The form of question which is raised by the theoretical consciousness is what is the nature of such and such fact or value or ideal? While that of the practical consciousness is how can I realize such and such value or ideal?

Now, when scientific consciousness is directed to know the inorganic (physical) domain of reality it aims at explaining the facts within that domain through the concepts of substance (matter), cause- effect (mechanical), quantity, and number. These principles are competent to explain the facts that lie within the organic domain. But the moment the scientific consciousness tends to explain the inorganic facts, these principles become invalid. When the scientific consciousness is directed to know the physical aspect of reality, it aims to explain them through such concepts as: self (ego), consciousness, cognition (knowing), affection (feeling), conation (willing), and spontaneity purposiveness.

The practical consciousness is directed to the ideals of knowledge, of morality, of beauty, of communion with God, separately or to all these ideals collectively. The implications of the realization of these ideals are freedom, immortality, existence of God, creation, and revelation. Not only each form of consciousness, but even each science tends, in the enthusiasm for its principles of explanation or for the implications of the realization of the ideal, to evolve a metaphysics of its own. Consequently, it is led to transgress the limits of the validity of its principles. For example, a Physicist, in enthusiasm for the categories of his thought, believes that they are absolutely valid--- valid even beyond the domain of Physics, and comes to materialism. Materialism reduces spontaneous activities to mechanical movements and denies the essential characteristics of the organic and the psychic phenomena, and not only turns out to be incompatible with the moral and religious yearnings, but also makes the direct apprehension of the objective reality inconceivable. Similarly, in the enthusiasm for the categories of Biological thought, one may be inclined to evolve a metaphysics which may be called Evolutionism, which would deny the existence of inorganic reality by reducing even the inorganic conscious and the self conscious to the merely organic and thus would explain away freedom, God, Creation and affirm life alone as fundamental and elanvital as the essence of Reality.

Not different from Physics and Biology, Psychology too tends to regard its categories and has been led to construct Idealistic systems of Metaphysics which deny the essential characteristics of the purely physical and organic facts, and the entire reality is reduced to the concepts of Psychology with emphasis on one or the other concept as a fundamental

knowledge (scientific and metaphysical) are identical. Hence they must be reconciled when they seem to conflict. The origin of this conflict can be conceived in this way. The scientific consciousness proceeds to know reality in parts. When it is directed to various parts or aspects of reality it has its own respective categories and the principles of explanation. These categories within their proper limits represent the nature of a particular part of reality. For example, Substance, Cause, Effect, Quantity, Number are the categories of physics. They systematize the various elements in the inorganic domain of reality. But if the category relevant to one department of knowledge and competent to explain only that portion of reality is overemphasized and taken to be the higher principle, i.e. if it is taken the whole of truth, or in other words if the science is raised to the dignity of metaphysics, it involves itself in inextricable contradictions, and this happens generally because of the enthusiasm felt for a principle which has proved itself competent to explain a part or aspect of reality successfully. But a category has its place in the organic system of categories; it is not able to stand by itself and fulfill the function of the whole system. By itself each of the categories is incomplete and incapable of satisfying the demand of thought for completion. Hence it seems clear that if categories, partial truths in themselves, are thus set up for ultimate truth and principle of explanation and applied also to spheres other than their own and as adequate to them they would destroy such spheres by neglecting their distinctive features, which could appropriately be explained and represented only by other categories. This is the trend of all disciplines, Physics, Biology, Psychology, Metaphysics, Ethics, Aesthetics, Logic and Theology. Each of them is keen to evolve a metaphysics of its own on the basis of its own categories and prove to obliterate the fundamental distinctions which do not admit of being explained by them. How each of the different disciplines/ sciences tends to evolve a metaphysics of its own is traceable from the following analysis:

The subject consists of two fundamentally different attitudes namely, theoretical and practical. The theoretical attitude is the yearning of man to grasp the truth as it is. The practical attitude consists in realizing some value or ideal in transition from imperfection to some sort of perfection. The yearning after truth again may be differentiated as scientific consciousness when directed to parts or aspects of reality to know them separately, and as speculative consciousness when directed to know the reality as a unified whole. While practical attitude may be distinguished as knowledge- consciousness when directed to realize the ideal of knowledge, as moral consciousness when directed to realize morality or the moral ideal, as aesthetic consciousness when directed to realize the ideal of beauty of harmony, and as

*of despairing humanity. Surely the present moment is one of great crisis in the history of modern culture. The modern man stands in need of a biological renewal. And religion, which in its higher manifestations is neither dogma, nor priesthood, nor ritual, can alone ethically prepare the modern man for the burden of great responsibility which the advancement of modern science necessarily involves, and restore to him that attitude of faith which makes him capable of winning a personality here and retaining hereafter."*⁸

Now it is such a religion that Iqbal conceives in reconstructing the religious thought of Islam. This reconstruction consists in reconciling of religion (Islam) with knowledge (metaphysical and scientific), because both religion and knowledge are human values and can not be retained side by side unless they are reconciled, while on the face of it they seem to conflict. For example, the freedom of the will, the immortality of the soul and the existence of God, on which religion is based, are believed by empirical metaphysics to be nothing more than mere concepts of pragmatic value. Revelation which is a fundamental of religion, is regarded by psychology to be a hallucination, and the subject [recipient] of revelation a psychopath. Creation out of nothing, which is one of the fundamental positions of religion is denied by biology and replaced with evolution. Efficacy of prayers, without which religion would lose all its significance, is denied by classical physics on the ground of the mechanical causation. Iqbal starts with the assumption that classical physics has learned to criticize its own foundations, and that a result of this criticism the kind of materialism which is originally necessitated, is rapidly disappearing; and the date is not far off when religion and science may discover hitherto unsuspected mutual harmonies." Hence has arisen the possibility of harmonizing Religion and knowledge [science].

Dr. Syed zafarul Hasan in his review on the six lectures when they were delivered by Iqbal at Aligarh, pointed out that the reconciliation sought is possible in two ways: "either by proving that what religion says is the truth and science and philosophy really agree with religion; and by refuting science and philosophy where they disagree with it. Or by showing that the domain of religion is different from that of science and philosophy; and where religion speaks of things with which science and philosophy deal, its purpose in speaking of them is not the same as that of science and philosophy; i.e. it does not aim at telling us like, science and philosophy, what the nature of such object exactly is; it only aims at the moral and religious conclusions - the guidance that can be drawn from them."⁹

Iqbal takes the former course the tacit assumption of this course is that the problem, the method, the solution and the purpose of religion and

history and its artificial resurrection constitute no remedy for a people's decay. "The verdict of history, is that worn-out ideas have never risen to power among a people who have worn them out. The only effective power, therefore, that counteracts the forces of decay in a people is the rearing of self-concentrated individuals alone. Such individuals reveal the depth of life. They disclose new standards in the light of which we begin to see that our environment is not wholly inviolable and requires revision."⁶ Iqbal is conscious of his genius. He seeks to offer a fresh impetus to his people by revising Religious Thought of Islam as a type of metaphysics which may afford the possibility of a living experience of the kind of biological unity embodied in the verse:

"That your creation and resurrection are like the creation and resurrection of a single soul"⁷

Because he feels, " Wholly overshadowed by the result of his intellectual activity, the modern man has ceased to live soulfully, that is from within. In the domain of thought he is living in open conflict with himself, and in the domain of economic and political life he is living in open conflict with others. He finds himself unable to control his ruthless egoism and his infinite gold-hunger which is gradually killing all higher striving in him and bringing him nothing but life-weariness. Absorbed in the 'fact', that is to say, the optically present source of sensation, he is entirely cut off from the unplumbed depths of his own being.The technique of medieval mysticism by which religious life, in its higher manifestations, developed itself both in the East and in the West, has now practically failed. And in the Muslim East it has, perhaps, done far greater havoc than anywhere else.Far from reintegrating the forces of the average man's inner life, and thus preparing him for participation in the march of history, it has taught him a false renunciation and made him perfectly contented with his ignorance and spiritual thralldom. The modern Muslim in Turkey, Egypt and Persia is led to seek fresh sources of energy in the creation of new loyalties, such as patriotism and nationalism. Disappointed by a purely religious method of spiritual revival [renewal] which alone brings us into touch with the everlasting fountain of life and power by extending [expanding] our thought and emotion, the *modern Muslim fondly hopes to unlock fresh sources of energy by narrowing down his thought and emotion*. Modern atheistic socialism, which possesses all the fervour of a new religion,rises in revolt against the very source which could have given it strength and purpose. Both nationalism and atheistic socialism, at least in the present state of human adjustment, must draw upon the psychological forces of hate, suspicion and resentment which tend to impoverish the soul of man and close up his hidden sources of spiritual energy. *Neither the technique of medieval mysticism, nor nationalism nor atheistic socialism can cure the ills*