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An Epistemological Perspective through the Natural
Sciences, Social Sciences, and Buddhism
—A Basic Study for the Introduction of Social
Scientific Methods to Shin Buddhist Studies—

Fumiya Sakow

to practical values, framed the modern social sciences this school of scientificity-seekers in social disciplines tended to keep themselves away from value-judgment. They studied and discussed in 1920's Vienna and are referred to as the Vienna Circle, a group of scientific philosophers presided by D. Schullic. Their epistemological postures are named generically logical positivism, which started from the common criticism: 1) most of the barren philosophical polemics are made by their 'ambiguous' terminology and by their 'meaningless' ways in setting propositions, 2) the most appreciable parts of conventional philosophies lie in their elements based on the theories of empirical sciences and the logical analyses of daily languages. Standing on such critical stances, the logical positivists attack the stronghold of the metaphysical or theological interpretations of the foundations of human experiences, which was traditionally defended by philosophers. Their common goal is to combine the positivism which admits the supremacy of empirical scientific epistemology with the view which insists 'the transcendental infallibility of logics and mathematics' (they maintain so because only these two disciplines observe the rule of using languages only rationally).

In the dark age of Nazis' rule over Europe, many of the Circle member took refuge in the USA and impacted the American social sciences very much; maybe because their thorough-going rationalism had fit in with America's unique philosophy of pragmatism. The US-naturalized logical positivism was called 'analytical philosophy' and met the demand to cut off the then popular ambiguous and irregular usage of wholistic notions in US social sciences, especially in her political science. Thus this school's scientifying method influenced the formation of the behavioral school or the system analytical approach.

However, the position of logical positivism is often criticized in that its complete value-free attitude will abstract the effective relevancies between social theories and actual social problems and may result in conserving the establishment in a society.

v) the Chicago School and Behavioralism:

So-called 'behavioral revolution' is a sudden blooming of the American social sciences, which emerged and swiftly swept over their whole fields as powerful as its mother country. One of its founders is Charles E. Merriam; he taught at the University of Chicago in 1920's. As his disciples followed him and formed a center of this new school, they are identified as the Chicago School (which gave birth to H. D. Laswell, H. F. Gosnell, V. O. Key, L. D. White, G. A. Almond, D. B. Truman, and other outstanding scholars). To make political science a true science, Merriam presents some guidelines: 1) to positively introduce interdisciplinary methods such as statistics, sociology, psychology, etc., 2) to promote field surveys and collaborative researches, 3) to recommend studies of politics in its dynamism, such as the study on political process. And he sets the two main goals to which the discipline is supposed to contribute: 1) elimination of wasteful elements in human political behavior, 2) liberation of political possibility of human-beings

to their fullest extent. The common goal for the Chicago School's studies might be symbolically shown by Laswell's statement: their concerns are not the formal and static approach to the workings of institutions but, "to find out who behaves how under what condition".

Behavioralism, which spread much wider beyond the founders' intention across the disciplinary borders, became a generic name for varied theories and approaches to scientific traditional social disciplines. But, we can enumerate their common denominators as follows: 1) inquiry into the regularity of behaviors, 2) analysis of only practically observable phenomena, 3) quantification, 4) research based on a standardized theory, 5) priority to basic researches (they tend to avoid the wasteful labor in applied researches) 6) elimination of value-judgments, 7) interdisciplinary cooperations, 8) emphasis on methodology. By shaping its framework in accordance with these criteria, behavioralism bade farewell to the traditional approaches mainly in two inquiring processes—i. e. the process of setting propositions and the process of making solutions—. Namely, the traditional way of proposition-setting, which are normative and practice-oriented, was replaced by the theory-laden new method of hypothesis-setting; and the conventional way of solution-making based on philosophical speculations was superseded by the verification process of a scientific inquiry. In this manner, behavioral revolution has created a brand new discipline which is discontinuous with the traditions of the field.

As might be expected, such abrupt and extreme scienticism of behavioralism soon came to be criticized from all sides. Firstly, against its scientific methodology, in which the behavioralists try to employ empirical theories and abolish normative theories as much as they can, many criticisms were made by those who insist on the sacrosanct uniqueness of human-beings and social phenomena. Though I do not agree with the naive anti-scientificists who just cling to a sacred human image, the counterarguments raised from this side may still be somewhat significant in that they could deter the scientific extremism. Secondly, the two mutually-related opposers stood defiantly against the behavioralist nihilism on values and participations. The one half of these second opposers insisted the revival of value-judgments in the social disciplines and the other half called for the restoration of 'social relevancies' (i. e. they stress the positive involvements into the ongoing social problems and ask for the practical utility of the academic achievements). These second criticisms must be considered seriously, for they expose the fatal defects of behavioralism which are mostly derived from its paradigmatic rigidity (i. e. the behavioralists think that a given empirical theory will automatically give researchers their research theme in the form of hypothesis, which in turn defines their problem-setting). Here we should remember that 'detachment from reality', 'art for art's sake', and 'paradigmatic rigidity' are the common abuses both for excessive scienticism and for religious doctrinism.

vi) the Frankfurt School and Critical Theories:

'Critical theories' presented by the so-called Frankfurt School is the most systematic and sophisticated one among the antitheses raised against the logical positivism or the behavioralism. This position may be known for the Japanese as the theoretical mother for the New Left Movements in 1960's. The school includes European social scientists over two generations—that is, the first generation consists of M. Horkheimer, T. W. Adorno, H. Marcuse, E. Fromm, F. Neumann, etc. and the second generation composed of J. Habermas, A. Schmidt, A. Wormer, O. Negt, etc. —. They have studied at the Institute for Social Research which was established in 1923 in Frankfurt. As in Japan, some practical variations of 'critical theories' were highlighted in the tumultuous 50's and 60's in the USA.

Though each theory constructed by different thinkers varies in its detail, their common features would be depicted as follows. 'Critical theories' are a series of materialistic social theories in which social realities are described as something 'negative' not as affirmative. And they are prescribed to reform such social realities into more 'rational' ones. The critical theorists were brought up in 1930's Europe which had the historical milieu of the beginning of later capitalism; in which the labor classes, against Marx's theoretical predictions, were found built-in the establishment, while some still successful socialist nations were seen. So, their common concern was to reform the Marxism so as to revive its theoretical effectiveness in the contemporary time; for this purpose they reexamined the German idealism, the philosophical background for Marxism, specifically Kantian and Hegelian ideas, though they neglected the metaphysical aspects of their philosophies (particularly, they overtly criticized Hegelian notion of *Adsoluter Geist*).

They shared the common historical view that social theories in general had ceased to be critical and practical after the collapse of the Hegelian School in the mid-19th century and the age of 'positivism' (they negatively implies, by this term, all kinds of social theories modelled after the natural sciences) had emerged alternately. Therefore, they tried to trace back to the philosophical resources of Kant or Hegel so that they can reincarnate values and practices in their contemporary social theories. Especially, critical theorists attempt to re-integrate the 'facts' and 'values' which are separated in the positivistic theories—i. e. theories like the logical positivism, behavioralism, etc. —. They severely criticize the fact-value dualism in all kinds of positivism in that such dichotomy may simply affirm the status quo of a society and support the interests of its establishment. Also, the facts in a society or among individuals are not seen just as such but are considered in terms of their historical potentials. They always try to find out possible meaning for the totality from among any individual phenomenon observed. In short, 'critical theories' more often take an inductive and involved approach to the problems, whereas the 'positivism' always prefers a deductive and detached attitude to

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An Epistemological Perspective through the Natural Sciences, Social Sciences, and Buddhism

—A Basic Study for the Introduction of Social Scientific Methods to Shin Buddhist Studies—

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Foreword

Concerning the theme of societal practice in Shin Buddhism, many debates have been made about the possibility of the introduction of social scientific methods into practical Shin Buddhist Studies. Fortunately, I could conduct an authentic research on this issue during my extra university study in which I participated as a '86-'87 Rotary Scholar to Rutgers University, N. J., USA. This is a summary of my semester thesis submitted to Dr. Owen's seminar on the epistemology in the social sciences, a requisite seminar in the doctorate course at the Graduate School of Political Science.

On this difficult theme, we were assigned to read representative natural-science philosophies and contending methodologies of outstanding social scientists. Adding the epistemology in *Vijnaptimatrata* (Ideation Only) School of Buddhism, I have tried to comprehend all the epistemological variations in a perspective of my own. Though this hypothesis may have some logical incompleteness, the purpose of my comprehensive theory is directed to contributing to the settlement of recent controversies around the issue of *shinjin* and practice in Shin Buddhist Studies.

I. A Procedural Model of A Scientific Inquiry

To check the similarities and differences supposed to lie between the natural and social sciences, let me present you a procedural model of a scientific inquiry given as a synthetic summary of the explanations by representative natural-science philosophers such as K. Popper, E. Nagel, and K. Hempel (see Figure 1). Referring to the each process of this model, we may notice at a glance most of the heterogeneity and homogeneity inevitably contained between the natural and social scientific inquiries in their epistemological procedures.

Process (1) MOTIVATION for a scientific inquiry: Answering to the question why we human-beings have been driven toward scientific inquiries into nature or society, philosophers of science have unanimously pointed out two main motives. The primary one is rooted in human instinctive urges to know the world including the inquirer himself

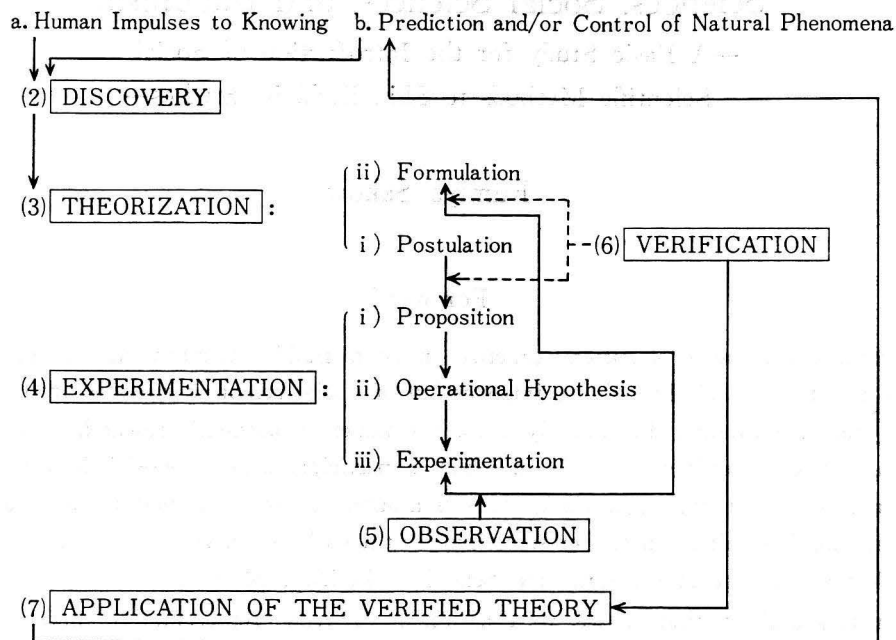
(1) **MOTIVATION** of A Scientific Inquiry :

Figure 1 The Process of A Scientific Inquiry

(a. Human Impulses to Knowing). We had better remember that in this primary motivation science may stand on the same horizon as other human spiritual activities, including religion, lie. I will examine this point in detail in the concluding part of this paper. The secondary one is derived from man's desire for better control over his environments. I will examine this teleological and technological motivation later, too. In this initial process of inquiry, the natural and social sciences have most of their motivations in common. Though it may be supposed that the social scientific inquiries should be motivated in more 'value-oriented' way.

Process (2) **DISCOVERY**: The specific concern(s) motivated and held by an explorer toward a specified object consciously and intentionally, or subconsciously and by happenstance, would encounter the moment of realizing/revealing/disclosing something which the inquirer has been looking for. Such a moment, which may be attained by the help of an accidental inspiration or in the process of a circumspect method is called discovery. In this process we can easily see the qualitative differences, in the ways and meaning of discovery between the natural and social sciences. Namely, the former's may be led in a more sudden flash and mostly by a direct observation, while the latter's may be achieved in a more gradual insight and by a more indirect reflection by an inquirer.

Process (3) THEORIZATION: In fact, the entirety of this process must be arranged over almost all the total processes of an inquiry. That is, this process is ignited by the postulation of a discovery made, and concludes with the formulation of a theory which requires the verification of the postulation by means of repeatable experimentation and its effective observation. Thus it at least needs proper implementation of processes (4), (5), and (6). In a broader sense, however, it demands for its fair functioning the full supports of the whole process of the scientific discovery.

In addition, we had better note that the inferential structure of this process includes the both stages of induction and deduction. The first half of it, from discovery to postulation, is performed by 'inductive inferences'—reasoning, from the particular fact(s) discovered or individual case(s) observed, in order to bring forth a general conclusion or principle—which must be carried out by observing the logical rules such as *modus tollens*, caution for the fallacy of affirming the consent, and others. As for these inductions used in composing a hypothesis, Hempel made a considerable interpretation; "There are, then, no generally applicable 'rules of induction' by which hypotheses or theories can be mechanically derived or inferred from empirical data. The transition from data to theory requires creative imagination". The latter half, from postulation to formulation by means of experimentation, observation, and verification, is practiced mainly by 'deductive inferences'—logical reasoning from the general (a known principle or premise) to the specific (an unknown principle or conclusion)—, about which I will check later. As for the both inferential ways, Hempel gave us a noteworthy comment; "... the premises of an inductive inference are often said to imply the conclusion only with more or less high probability, whereas the premises of a deductive inference imply the conclusion with certainty". Finding such qualitative differences between the two stages of reasoning, we could know the first half of the whole processes of a scientific inquiry (i. e. inductive stages) rather depends on more creative and imaginative endowments of the inquiring scientist. From this understanding, we may realize that both natural and social sciences do not differ at least in their first-half part of this theorization process.

Process (4) EXPERIMENTATION: This is the process of conducting a test of the preceding process. Experimentation, which is a must for both basic and applied sciences for them to deserve thier names, means any action or process undertaken to discover something not yet known or to demonstrate something already known; and it also implies any action or process designed to find out whether something is effective, workable, or valid. Hempel classified such 'test' into two categories: experimental tests and non-experimental tests. He provides the test implications of a hypothesis in a sentence form: 'If conditions of kind C are realized, then an event of kind E will occur'. In this sentence, an experimental test means a method to bring about conditions C and check whether E occurs as implied by their hypothesis, while a non-experimental test means

another method to seek out or wait for the cases where the specified conditions are realized by nature and check whether E does indeed occur. Hempel explained, "When experimental control is impossible, when the conditions C mentioned in the test implications can not be brought about by available technological means, then the hypothesis must be tested non-experimentally".

As is easily agreed, this "When..." is so often the case which most of hypotheses in the social sciences must be in. Therefore, we know that this is the process where the natural and social sciences may most sharply demonstrate their mutual heterogeneity. That is, as a matter of fact, in most occasions social scientific postulations have to rely on non-experimental methods such as long-term observation, computerized simulation, data-analyses of sampling survey, etc., while quite a number of those in the natural sciences can be examined by substantial experiments.

Process (5) OBSERVATION: This process must be fulfilled in close and often simultaneous relations with the preceding process. In this sense, this may be regarded as the assuring and recording aspect of experimentation and we may see the qualitative and quantitative differences between both of the sciences in the similar sense as above. Nowadays' amazing progress of the means to measure social phenomena, such as the developments in mass media, telecommunication systems, social survey technics, statistics, etc. are narrowing the gap between both of the sciences. But it is still difficult in the social sciences to observe the tests or even social phenomena themselves as scientifically as in the natural sciences.

Process (6) VERIFICATION: This process literally means the establishment or confirmation of the truth or accuracy of a fact or theory. Hempel referred, "...a favorable outcome of even very extensive and exacting tests cannot provide conclusive proof for a hypothesis, but they only give more or less strong evidential support or confirmation". In short, even a 100% proof for a hypothesis given by a reliable test may not always guarantee it as a universal truth. Thus the actual problem is how strong its acceptability or credibility would be. As to the factors which define this credibility, Hempel enumerated the following indices: 1) quantity, variety, and precision of the supports to a hypothesis, 2) reconfirmation or additional proof by 'new' test implications, 3) support by more comprehensive theories or hypotheses, 4) the hypothesis's simplicity in comparison with that of alternative hypotheses which would account for the same phenomena ("principle of simplicity").

In this process, the social sciences seem to indicate some discrepancies again. Because many factors which constitute a social scientific hypothesis are not always quantifiable despite the fact that the degree of a hypothesis's confirmation largely depends on its mathematical probability. Credibility in the social sciences remains much more empirical.

(7) APPLICATION OF THE VERIFIED THEORY: Thus-proven hypothesis with

high feasibility is to be admitted as an accountable scientific theory, at least for the time being. As was pointed out by Kuhn, the system of scientific knowledge is on an evolutionary process for ever. So, there will never be a 100% verified theory but will always be a most reliable ones. Related to such eternal incompleteness of the science, Hempel stated, "Theories are usually introduced when previous study of a class of phenomena has revealed a system of uniformities that can be expressed in the form of empirical laws. Theories can seek to explain those regularities and, generally, to afford a deeper and more accurate understanding of the phenomena in question". Here we know the self-reproductive nature of the scientific inquiry. That is, a completion of a set of inquiring processes creates another urge to a further inquiry. And thus reproduced secondary motivation tends to be linked with more pragmatic purposes in favor of human welfare (remember MOTIVATION: b. Prediction and/or Control of Natural Phenomena). In other words, the scientific inquiry is never in a static, closed system but is in a self-developing, 'feedback-looped', and open system.

This pragmatic and feedback nature of scientific re-orientation seems to coincide with Kuhn's famous notion of 'paradigm'. Though the idea of 'paradigm' might be still controversial, I would like to tentatively define it as the theoretical or methodological achievement(s) which is exerting a dominantly normative influence over one or many scientific field(s). As Bernstein stated, Kuhn's original concept is not expected to be used in the social sciences but exclusively in the natural sciences. However, I think there is a kind of paradigms not only in the social disciplines but also in the humanities including theology or Buddhology. For example, just like the former dominance of Newtonian mechanics in physics, there used to be the rule of natural law thought in political science, so is the arbitrariness of Edo doctrines in Shin Buddhology. Just as the dramatic paradigm change occurred from Newtonian to current quantum mechanics in physics, maybe we need a proper paradigm change or shift at a proper time in Shin Buddhology as well as in the social sciences, though their meanings must be different among respective fields.

As is checked process by process, we have gotten hold of the essential homogeneity and heterogeneity lies between both of the sciences. Broadly speaking, the methodological similarities may derive from the factors which nature and society have in common as the objects of inquiries, while the inevitable differences must be born out of the definite disparities between natural or physical phenomena and social or human phenomena. Anyway, this procedural model is shown as a most concise pattern of 'scientific inferences' and a minimum rule to be strictly observed in the natural sciences as well. And for the social sciences, it is an epistemological and methodological example toward which every social discipline is trying to approximate its methods of recognition and theorization; we will take a bird's eye view of representative efforts of this kind in the following chapter.

II. Various Strives to Scientify Social Disciplines

Along with the victorious rise and growth of natural sciences in the academic world since the Renaissance, scholars in the field of social studies, departed from the initial hatred and jealousy which they shared with theologians, have been striving to 'scientify' their disciplines as much as possible. This common proposition became conspicuous after the successful spread of the Enlightenment Movement which, impacted by British empiricism, was promoted by the encyclopedists in 18th century France. But, this urge was culminated as a pressing need swelling over all the social disciplines by the blunt and frontal challenge of Marxism or 'scientific socialism' which suddenly emerged and was widely practiced in the latter 19th century in Europe. It was an 'enfant terrible' born out of European intellectual modernity: this powerfully practical social science had inherited its epistemological, methodological, and ideological frameworks from French materialism, British empiricism, German idealism, (perverted) Christian theology, and natural scientific method.

Almost all the great social scientists, whose strives for scientificity we will examine concisely in this chapter, have achieved their outstanding works with more or less conscious of Marx's 'scientific socialism' as their formidable theoretical rival; from Weber's *Verstehende Methode*, Durkheim's *fait social*, the Vienna Circle's logical positivism, etc. to the Chicago School's behavioralism.

i) Karl Marx and Scientific Socialism:

Marx's reasoning to enable society to be realized scientifically is unexpectedly simple and lucid: he maintains that if the division of labour were allowed to be spontaneous (i. e. left *laissez faire*) the sum total of the productive forces of a society (which originally are nothing else but the total of productive powers of individuals in the society) would come to appear as if it were a process of natural history which is utterly independent from each individual's will or behavior and rather over him. Therefore, when manufacturing products of men are sold as commercial goods, such products will alienate their producers to change the originally social character of human labor into the mere natural attribute of goods (feticization of matters). And the society's productive relations among men will be alienated and come to resemble the mechanical movements among physical phenomena. Thus he concludes that we could effectively apply the empirical method of natural sciences to the observation and analyses of alienated (*Entfremdung*) social phenomena, especially economic aspect of a society in a developed stage of capitalism.

ii) Max Weber and *Verstehende Methode*:

Weber employs more complicated but operational method which is well known as *Verstehende* (interpretation or understanding) *Methode*. As a premise to the idea, he admits, influenced by his friend Rickert, that seeking the universal laws and universally

significant individual phenomena should be commonly concerned by both natural and social sciences. And he holds that though human actions or social phenomena (aggregated individual actions) are seemingly considered very idiosyncratic and hard to be observed, they actually could be interpreted all the more scientifically by objectively understanding (*Verstehen*) the motivations subjectively conceived by each actor in a social phenomenon. This can be possible, since we must be able to understand a human action by sympathizing his inner feelings much better than we recognize a natural phenomenon. Thus Weber concludes we can recognize and interpret social phenomena even more scientifically than natural ones by understanding the objects and interpreting them from their 'teleological connections' into corresponding 'causal connections'. And he advocates some useful conceptual instruments which make the method into practice, such as *Ideal Typus*, *Wertfreiheit*, *Sinnzusammenhänge*, etc. . .

His famous advocacy of *Wertfreiheit* (value freedom) must be noticeable here. This idea connotes the researcher's voluntary halt of any judgement and freedom from any preoccupied evaluation and denotes his positive freedom to appreciate the interpreted object(s) with free references to his own ideal type about it.

iii) Emile Durkheim and *Fait Social*:

Durkheim, a contemporary and competitor of Weber's, is together with Weber one of the framers of sociology, a brandnew social discipline which eagerly wants to be a science. He had completed the approach of 'observative science', the long conceived notion by French positivists. He stresses his unique notion of *fait social* (social fact) by which he means 'the social entity predominantly exists *a priori* to individual consciousness'. For him, the stern definition and implementation of this idea is the alpha and omega of his scientific bases for social theories. In Durkheim's systematic methodology, *fait social* is defined as a unique sort of reality whose traits consist in its 'externality' and 'constraint-ness' to any constituent of a society. Spending the large part of his "The Rules of Sociological Method", he describes and defines this notion concretely and meticulously, warning that this idea should strictly be discerned from its reflections conceived by each individual. As his first and most basic rule "Consider social facts as things" vividly tells us, he intends to realize a recognition level as objective as that in the natural sciences; in so doing he aims to establish a scientific methodology with thorough-going observability in his sociology.

Durkheim, as well as Weber, made positive commitments to the issue of practice. He presented a detailed discussion about the distinction between the normal and the pathological in individuals and society, for he believed that the task of his sociology is to examine the pathological phenomena in a society and prescribe the best treatments for them.

iv) the Vienna Circle and Logical Positivism:

Compared with the above-mentioned three savants who, having committed themselves

them. When Habermas contends the integration of philosophy and empirical survey in his “Theory and Practice”, he maintains the ideal in the above-briefed context.

III. A Perspective to the ‘Scientificity’ Arguments in the Social Disciplines

In the preceding chapter, I have featured the representative positions in the arguments about how to scientify the social disciplines. Although their mutually contending theories may appear very complicated in terms of their correlations, employing a macro perspective, (which I have designed to view over the whole historical discussions of epistemology and methodology) I think they can be envisioned in their mutual relevancies and relativities.

Since their Greco-Roman beginning the western intellectual traditions—i. e. religions, thoughts, philosophies, sciences, etc.—have been characterized in their common impregnable conviction of epistemological, ideological, and ethical dualisms in various versions. That is, the doctrines/thoughts/theories ever conceived and expressed in the western

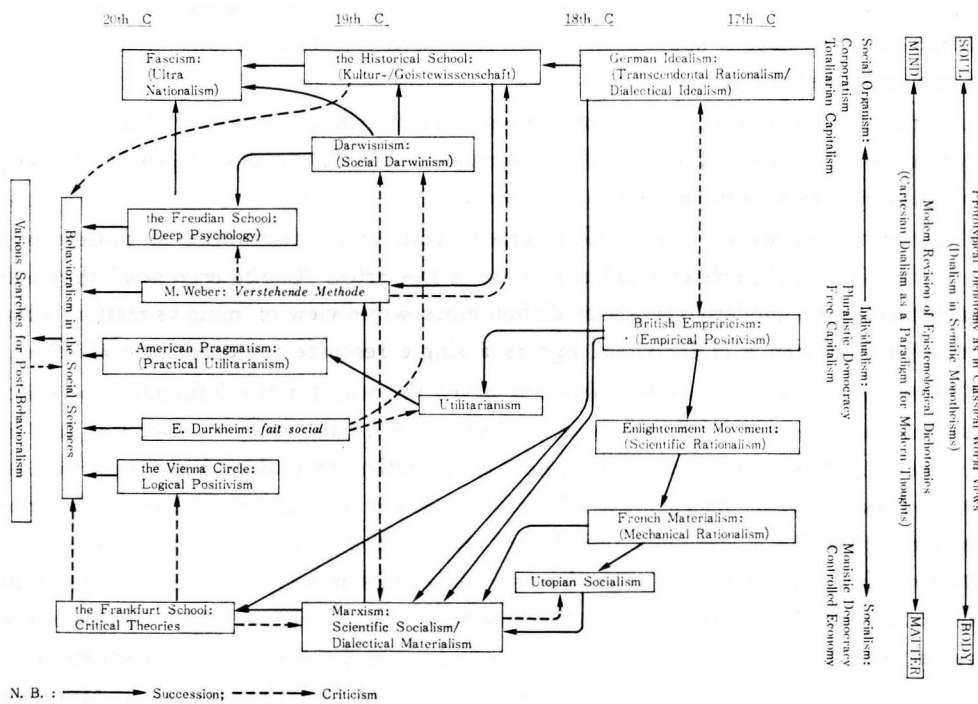


Figure 2 Epistemological/Methodological/Ideological Correlations Among Contending Theories in the Social Sciences

mind, which seems to be corresponding to the tri-layer functional structure of human brain (i. e. the brain stem—instinctive function—, the old brain—emotional function—, and the new brain—reasonable function—). And by the outer environmental conditions, I imply the difference of climates and landscapes which environ the peoples; it must be remembered that Judeo-Christian-Islamic traditions were born in the desert of Middle East and taught among the nomadic races while Asian traditions were born in the monsoon areas of India or China and taught among the agrarian races. In short, I stand on a kind of environment-determination idea: biological and geographical determinants exist *a priori* to religions.

Taking the above-mentioned ideas together, I assume the fundamental difference between the western and eastern religious cognitions as is illustrated on my diagram of Figure 4. To put it briefly, I regard the difference between the '*Faith on God*' and the '*Shinjin* (Japanese translation of *citta-prasada* which means purified mind) *by Dharma*' as the two religious states of mind achievable at the both ends of the diametrically reverse directions of religious consciousness. As is seen on my diagram, in the light of religious epistemology, western religious notion of 'prophecy/revelation' may be thought of the *indirect* indication of the prophet's religious experience taught in the form of 'ethical norms' with the dualistic criterion of justice and evil. While the eastern religious idea of 'bodhi/enlightenment' can be considered as the *direct* exhibition of the saint's religious achievement in the form of 'exemplary way of life' which is beyond the dualistic evaluations.

Some scholars maintain that the origin of religious dualism as well as eschatology can be traced back to Zoroastrianism. Whatever their origin may be, it is evident that religious/ideological dualism has played the atrocious roles in the horrible history of mass conflicts; perhaps because it tends to be linked with ego-ethno-centric fanaticism. Countless wars have fought in the name of God from centuries-long crusades, the fights between Catholics and Puritans, up to current wars between Sunnites and Shi'ite Muslims. We see bellicose tendencies among the western monotheisms much more than the eastern religions; perhaps because they cling to their dichotomous and fundamentalistic faith and practices.

Having examined the mutually heterogenous, but perhaps complimentary, structures and functioning between scientific recognition and religious cognition in the epistemological continuum, we found that the bi-polarity of cognitive spectra is parallel to the issue of 'facts' and 'values' in the social sciences. Also having checked the deficits out of religious dualism, I think we realized that the religious dualism, which has been the main value resources, may be epistemologically regarded as remaining in an indirect or halfway stage which falls short of the perfect religious cognition that I think must be attained only in 'enlightenment'. All in all, we could conclude that the Asian religions, among

others Buddhism, should assume much more responsibility as the value resources for social ideals; to do so, the introduction of social scientific methods must be indispensable for Shin Buddhist scholars to expound the down-to-earth meanings of Shin Buddhism.

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intellectual history have been more or less based on the world view of a twofold distinction.

As many scholars of the west and east pointed out, these overwhelming inclinations to dualism may be prototypically originated from the two major spiritual resources of the occident—namely, the religious or ethical dualism of Hebraism and the philosophical or scientific dualism of Hellenism—. The Hebraism, the prototype for Judeo-Christian monotheistic traditions, has taught westerners a predominantly dualistic world views (i. e. the sharp distinctions between, the Creator and the creature, human-beings and other lifes, civilization and nature, soul and body, etc.) which tend to be discussed in relations with its self-evident ethical criterion between justice and evil (or good and bad, right and wrong). It also teaches the individuality of each man and his soul and the existence of substantial entities. On the other hand, the Hellenism, the original resource for the western philosophies and sciences, has taught them epistemological and methodological dualism in learning things; it provides a unique way of thinking to recognize the truth—i. e. convincing the cognitions formed on the cognitive structure of '*noesis vs noema*', the truth can be known and described by the logical usage of human reason through experiences—. Even the modern way of scientific inquiries, as we have seen in chapter I, is constructed on the same 'subject vs object' cognitive structure as one molded by this Hellenistic epistemology.

As for such ethical and cognitive prototypes of Hebraism and Hellenism for the western dichotomous world view, I would like to symbolically call them 'soul (spirit) vs body' dualism shown as an ordinate on my Figure 2.

These prototypes were revised and emerged again at the beginning of modern age. As is epitomized in the epistemological premise of Descartes, "*Cogito ergo sum*", they were reconfirmed by his modern version of dichotomous world view of 'mind vs matter'; which approves the existence of individual ego as a single resource for dualistic evaluations.

This modern version of western dualism paved the way for the bifurcation of epistemological and ideological discussions in philosophies—i. e. the split between the rationalism and empiricism concerning the issue of cognitive ground and the confrontation between idealism and materialism around the debate of the world/history nature—. Concretely, around the argument of whether transcendence (*a priori*) or experience (*a posteriori*) is the most reliable cognitive basis, in earlier times Continental rationalism got disunited with the British empiricism. Later, on the German idealism, which was established by Kant who successfully synthesized the rationalist and the empiricist, positions, came to with French materialism, the most radical wing of the Enlightenment Movement which was detonated by contact with British empiricism, in the polemic of what the force driving history is.

By the various patterns of the linkage of these three epistemological schools with

some social/political values (I tentatively designed a continuum of values which ranges from socialism to supra-/trans-individualism centering on individualistic values and superimposed it on Figure 2.), there have formed several schools of social sciences which hold different ideologies. Such combinations also raised some different political situations. For example, during the late 18th to 19th centuries the French materialism was succeeded to the historical materialism or Marxism that completed this position and the distorted interpretations of German idealism gave the ground for the rise of fascist movements, while British empiricism and its various derivatives supported the stable growth of capitalistic democracies, especially among Anglo-American nations.

Linking the two evaluational ordinates of 'mind/idea (soul) vs matter (body)' and 'supra-/trans-individual vs social' (three cognitive postures of idealism, empiricism, and materialism seem to have ideological affinities with supra-individual nationalism or totalitarianism, individualistic liberal democracy, and socialism, correspondingly), we could have a prospect for the correlative positions as are deployed on Figure 2. of the representative social theories which we have surveyed in chapter II. Firstly, Marxism, which was declared in 1848, is the successful scientification of the ideal of utopian socialism which was a lineal descendent of the French materialism. Marxism is also a critical synthesis of German idealism and British empiricism in that it has founded the historical materialism (or dialectical materialism) by interpreting Hegel's dialectical idealism in a topsy-turvy way and coined the idea of 'exploitation' and 'class struggle' by criticizing the Classical School of Economics constructed in England. Secondly, Weber has established his position of 'interpretative sociology' through his strives to *aufheben* the two pairs of mutually-confrontational epistemological and ideological schools. That is, he squarely grappled to synthesize the historicism (which is on the direct lineage of German idealism) and the rising Marxism on one hand; and he tackled the hard problem of 'scientification' by critically synthesizing the split of German academism between the epistemological position of *Geist-/Kulturwissenschaft* (the spiritual or cultural sciences) and that of *Naturwissenschaft* (the natural sciences). Thirdly, Durkheim, in establishing his sociology as an 'observable science', started from the positivistic traditions and harshly criticized the utilitarian individualism which is on the lineage of empiricism in order to elucidate his central idea of '*fait social*' as a rigidly external and restrictive entity. However, he was a Cartesian optimist who believed that the value-free approach to such objectified social facts must guarantee the scientificity of the discipline; in other words, his point is the reconfirmation of dualism between man and society.

Comprehending the basic postures of the two greatest authorities, Marx and Weber, and the unique stance of Durkheim as above, let us continue glimpsing the positions of social scientific schools representing our century. In Germany, logical positivists or the Vienna Circle inherited the best rationalistic elements of the traditions since the En-

lightenment Movement and refined them from a mere mechanical positivism into a rigidly logical one. Meanwhile, in and around Berlin, there remained the stronghold of German historicism, the social disciplinary version of the German idealism, which was later influenced by then emerged social Darwinistic ideas to present an ideological background for the tragic surge of ultra nationalism or fascism in this nation. Contemporarily, facing reactions in European politics and the setbacks of Marxism, the Frankfurt School began conducting various inquiries, that would later be known as the critical theories, to revitalize the scientific socialism. It must be remembered, as we see now, that many of this century's innovative efforts in the field of social sciences were made mostly in the Continental nations, particularly in and around Germany.

In recency, the discipline's academic strivings of this kind are mainly being conducted in and around the USA. We may rightly regard both of the behavioral revolution and post-behavioral searches as a large-scale enterprise to digest and synthesize all the epistemological and methodological traditions born in Europe; i. e. Weberian or Durkheimian sociologies, logical positivism, the Freudian or Jungian Schools of psychoanalysis and deep psychology, critical theories, etc., though the pure Marxism may be dealt with just as an object of criticism.

As in other fields of social systems, we can see a qualitative difference in the epistemological stances of social sciences between the Anglo-American tradition and the Continental European tradition. That is, in terms of the extent of theoretical range, that of the former remains in a narrower amplitude of ideological swings, carrying along the traditional empiricist moderation. On the other hand, that of the latter has historically shown the widest amplitude of epistemological and ideological swings between the bi-polar extremes of idealism and materialism.

After World War II, the fascist regimes, a perverted product of the extreme position of idealistic polar, were totally wiped out and its political organization banned. And now we live in the world which is antagonistically torn between the liberal democratic and capitalistic regimes, which are endorsed by the empiricistic social principles, and the social democratic and communistic regimes, who insist they embody the social principles based on rationalistic materialism. From an epistemological point of view, I recognize that the current hazardous confrontation between the West and East camps must also be derived from the fatal and chronic mental pathology of western dualism. But, unfortunately we may not expect for example, any theory of behavioral science to play an effective role in solving this lethally dualistic confrontation. We could do nothing but to hope for the successful outcome of post-behavioral researches.

Among the various searches by post-behavioralists, Feyerabend's propagation of 'scientific anarchism' must be noteworthy. He bluntly avers, "Science is an essentially anarchistic enterprise: theoretical anarchism is more humanitarian and more likely to encourage

progress than its law-and-order alternatives.” and proposes to throw off all the yokes of ‘rationalistic’ procedures currently imposed as a must in scientific inquiries. From his viewpoint, almost all the efforts by the philosophers of science and the framers of social sciences seemed to have been made just to consecrate such yoke of rationalism. He raises a frank question to this sanctuary, regarding it as a paradigm-idolatry, and contends that true intellectual progress can be made only by epistemological and methodological ‘*laissez-faire*’. He believes only such ‘scientific anarchism’ can let the potential creativity of scientists blossom to its fullest opening. It is also very remarkable that Feyerabend comments, “...the debate between science and myth has ceased without having been won by either side. ... Thus science is much closer to myth than a scientific philosophy is prepared to admit. It is one of the many forms of thought that have been developed by man, and not necessarily the best”. His point is that the importance of scientific knowledges is only relative and the whole range of human spiritual activities is in a continuity, which perfectly agrees with my own opinion.

In the last chapter, I would like to present you my own hypothetical perspective for the wholeness of human cognitive realms and propose the significant role hoped for Buddhism.

IV. A Hypothesis of the Epistemological Continuum Ranging between Religion and Science

As we know, there are varieties of epistemological or intellectual human achievements that are ordinarily classified into varicolored genres of spiritual activities such as religion, arts, metaphysics, philosophies, humanities, the social and natural sciences, etc... People may agree that religion is on the opposite side of science and both of them might form the two poles between which these varied spiritual activities stretch. Though I do not assume the digitally stratified hierarchy among these variegated genres, I conceive an analogous hypothesis that they must constitute an epistemological continuum which ranges between the two poles of ‘religious cognition’ and ‘scientific recognition’. This intuitive vision of mine has been brewed in the similar views made in the epistemological fields such as general linguistics, phenomenology, structuralism, and other brand new epistemological achievements.

This concept is hypothetically drawn on Figure 3, citing a figurative analogy of ‘color cube’ to which my idea of bi-polarized cognitive spectra seems to be aptly compared. The color cube, known as a teaching material used in the class of fine arts, is a warped ball which three-dimensionally exhibits all the varieties of colors according to each color’s number/degree/tinge around the axis of gray scale stretching between the two poles of pure black and pure white. The scientific recognition, which can be made only in the cognitive structure where the observer (subject/*noesis*) and the observed (object/*noema*) are strictly divided and dualistically confronted, might be likened to the one pole of cognitive modes; in which the object, a thing/phenomenon with a color-solid-like nature,

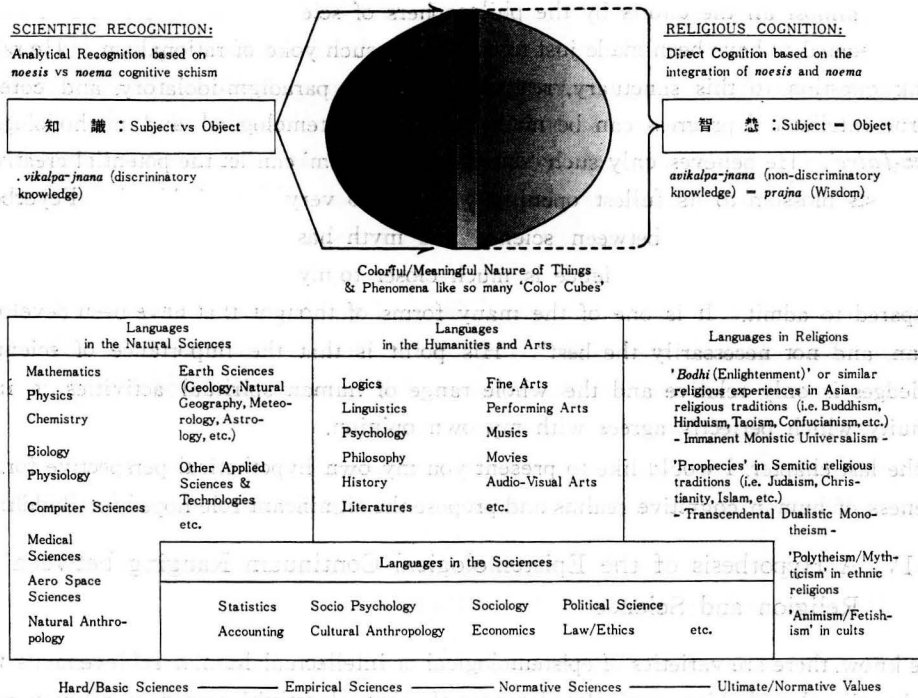


Figure 3 A Hypothesis of Cognitive Spectra on the Epistemological Continuum

is grasped and described only by its two poles of black and white, abstracting most of its rich and colorful contents in-between. In other words, the most logical/analytical/mathematical way of seeing things is nothing else but the approach to understand them only by their both extreme attributes; by their two edges of black and white, or 0 and 1. In this meaning, the cognitive systems such as computer languages, mathematics, physics and other basic natural sciences are regarded as typical disciplines deployed toward this pole of recognitions.

On the other hand, as we may empirically consent, the artistic perceptions take much more wholistic approach to the same object, trying to grasp and taste all its colorful contents as they naturally are. And, interestingly, the ultimate cognitions or experiences revealed in representative religious traditions are considered to belong to such another ways of seeing things and form the other pole of cognitive spectra; where the cognitive separation between the subject and object becomes very ambiguous or ceased at all. Specifically, I think the religious cognition in Buddhism must be the most completed

and ultimate one in which the *noesis* and *noema* are integrated perfectly. Because the attainment of the deepest religious experience in Buddhism, which is the ultimate goal of the teaching, is referred to as *Bodhi-citta* (the enlightened mind which is perfectly awakened to Dharma, the Universal Law full of Wisdom and Compassion) and its cognitive attribute is known as *prajna*, the 'non-discriminatory Wisdom' (*avikalpa-jnana*) which is the antonym of sciences as 'discriminatory knowledges' (*vikalpa-jnana*). The *Dharma* in Buddhism is the equivalent of *Die Absoluter Geist* in Hegelian philosophy and of God in Judeo-Christian religions. In such a meaning the epistemology of Buddhism must form the other pole of human cognitive spectra, or the diametrically other side of the cognitive systems in basic natural sciences.

Understanding of the bi-polar structure of human epistemological continuum as is sketched above, I would like to roughly arrange representative genres of human spiritual activities as seen on Figure 3., according to their relative apportionments assumed between the two poles. At this point, we should pay attention to another attribute of this continuum; that is, the centripetal force which works to pull recognitions toward the religious pole is naturally accompanied by value-/norm-requirements. Whether the ethical norms pertain to western religious traditions or the existential life-values derived from eastern religious traditions, the momentum towards artistic/religious pole is inevitably relevant with the problem of value-judgment. By the same token, the impetus which pulls recognitions to the scientific pole must be with the demand of value-freedom. Thus we can see the dilemmas between facts and values in the social sciences, which attempt to cover the wide-ranged problems of man and society, visually on this figure. However, in this very nature of the social sciences, I believe there are positive reasons for us, the researchers of religious values, to try to introduce social scientific methodologies into our discipline.

Postword: Buddhism as the Ultimate Value Resources for the Social Sciences

In conclusion, let me make a brief reflection on the problem of ultimate values. As Weber stated, there have been two major value resources: the 'transcendental dualistic monotheism' of Judeo-Christian-Islamic traditions and the 'immanent monistic universalism' of Asian religious traditions. Briefing the point of my interpretation of the origin of such bifurcation, I will give a prospect for the possibility of epistemological and ideological breakthrough in our stalemated world views by introducing the Buddhist value system into the epistemological frameworks achieved in the social sciences.

The diagram drawn on Figure 4 is my own 'ideal type': a synthesis of the old and new interpretations of human mind by the *Vijnaptimatratā* (also known as the *Yogacara*) School of Buddhism and by the deep psychology. It is well known that the revolutionary analysis of the human mind by the deep psychological (or psychoanalytical)

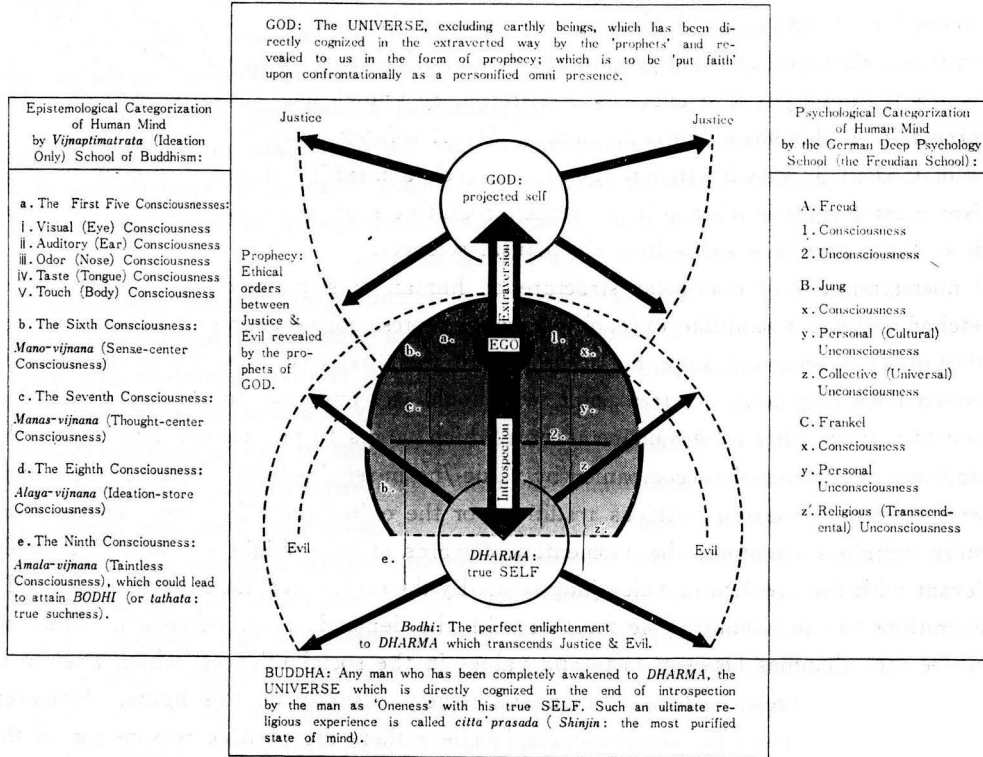


Figure 4 Dharma and God—the Two Diametrically Reversed Ways of Universe Cognitions—

school, which was founded by S. Freud in the late 19th century, have exerted a great influence upon many social sciences and thinkers. One of the biggest shocks was their unanimous assertions of the existence of sub-/unconsciousness and its important functions in the human psychology. Though I can not detail each theory here, Freud's interpretation of unconsciousness as a result of cumulative personal repressions, Jung's remarkable assertion of the *a priori* existence of 'collective/universal unconsciousness', and Frankel's noteworthy theory of 'religious/transcendental unconsciousness' may be roughly superimposed on my diagram as is shown.

However, the most amazing but less known fact is that most of the novelties revealed

by these psychologists had been already presented, in a similar but more profound context, by the *Vijnaptimatratā* School of Buddhism in the 5th century in India. This school's theories was transmitted to China in the 7th century and formed the *Fahsiang* School then to Japan in the 8th century and was established as the *Hosso* School. As the term *Hosso* (translation of *Dharma-laksana*) implies the 'character of *Dharma* (here it means the phenomenal aspects of the Universal Law denoting anything both material and mental)', the main purpose of the school was to investigate the nature and qualities of all that exist. Though there are many theoretical variations, we can see the common framework of the school's deep psychological/phenomenological interpretations of mind as follows: A. Common Premises: 1) In our structural functioning of consciousness, there is a most fundamental resource of every consciousness, i. e. the *Alaya-vijnana* (store consciousness). 2) The theory of 'ideation only', which regards every element have either the nature of 'interdependence', or that of 'imagination', or that of 'real truth'. 3) The *Alaya-vijnana*, the consciousness in which the true and the false unites, can transform itself into the *Amala-vijnana* (taintless consciousness), which is as pure and taintless as *Tathata* (thusness); so that man can attain the mere ideation and the *prajna* (Perfect Wisdom). B. Stratification of Consciousness: 1) The First Five Consciousness—i. visual (eye) consciousness, ii. auditory (ear) consciousness, iii. odor (nose) consciousness, iv. taste (tongue) consciousness, v. touch (body) consciousness, 2) The Central Three Consciousness—vi. *Mano-vijnana* (sense-center consciousness), vii. *Manas-vijnana* (thought-center consciousness), viii. *Alaya-vijnana* (ideation-store consciousness), and 3) The Perfectly Enlightened Consciousness—ix. *Amalavijnana* (taintless consciousness). C. The Dynamism of Conversion from (delusory/taintful) Consciousness to Wisdom: Though I omit the speculative explanation of how this conversion happens, this is the most religious part where this theory decisively differs from deep psychology—I tentatively call this 'our mind's bottom openness to the outer universe'. Thus, I think we can roughly draw the ideogram of this theory as a bottom-opened dome, superimposing it on the psychological ideogram, to have Figure 4.

I currently conceive that religions are essentially derived from 'a sort of *direct cognition of the universe including the thinker himself*' which must have been attained by a limited number of *religious genii* (i. e. Abraham, Confucius, Shakya-muni Buddha, Rao-tsu, Jesus Christ, Muhammad, etc., etc.) in respectively *different times and places* and were taught through *different cultures* (these different circumstances imposed *Seinsgebundenheit* on every religion). As about the reason why the above-mentioned bifurcation occurred despite all the religions must be having the same root in that their common essence is 'a special sort of direct cognition of the universe', I assume it may have been caused by the interaction of the inner mental conditions and the outer environmental conditions. That is, by the inner mental conditions, I mean the stratified consciousness structure of human