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A MODEL FOR INTEGRATING THE CHRISTIAN FAITH
AND THE SCIENTIFIC MIND SET

by

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Introduction

Building a model for integrating the Christian Faith and the Scientific Mind Set is not just an interesting, abstract philosophical question. Rather, it has potential for opening up a whole new conceptual arena where committed scientists and committed Christians may meet and interact without either one having to relinquish his personal integrity or be doomed to live with a "schizophrenic" mind (*Blamires, 1978:70*). Such a model must meet the criteria of science and practicality of application to present time and space. Attempts at integrating religious belief systems and science are not new. Integration as the binding relational concept in faith-science equation may be placed on a continuum from total separation to total integration.

In antiquity there were examples of near total integration as can be seen from two examples: Egypt: In Egyptian theology, "Each system in its day was an attempt to explain man and the world and their relation to each other. These systems dealt too with man's origin and his fate. They cover the whole field not only of what we now call religion but also of what we now call science" (*Needham, 1955:94*). China: In the Far East, "Religion has been one of the most fundamental factors in Chinese life and education. In early times the people believed that Heaven, the ultimate principle sanctioned the tradition which all men should follow blindly" (*Frost, 1966:21*).

The relationship of Christian faith and science, hotly debated in the sixties and seventies, has often been portrayed in terms of conflict or crisis, or as *Cauthen (1969:7)* puts it: "The most obvious feature of the current landscape is the theological crisis brought about by the growing intensity of the scientific secularized consciousness of modern western man."

The remainder of this paper systematically analyzes the proposed relationship and its wider context by defining concepts and the pervasiveness of the scientific mind set in our Western Society. Existant solutions are examined, an alternative new model is

presented.

Pervasive and Influence of Science in the Western World

In the seventies many scholarly works focused on the phenomenal growth and impact of science on society. Whereas in the past there had been individual scientific work, "post-modern" science had a profoundly liberating impact making man "prepared to accept the utterly novel and unexpected, and even the seemingly incredible or paradoxical, and to think about them imaginatively and even unconventionally if necessary" (*Schilling, 1973:30*). Concurrently with modernization came also access to education. Whereas in the past education had been accessible largely to the elite (*Noll & Kelley, 1970:94-95*), now it became available to the masses.

There was "concrete material mediation between science and daily life provided by technology" (*Ladriere, 1977:10-11*). The man in the street could reap its benefits by acquiring money and education. The school soon became "the universal church of a technological society, incorporating and transmitting its ideology, shaping men's minds to accepting this ideology, and conferring social status in proportion to its acceptance" *Reimer (1971:19)*. Science as "possession of knowledge" (*Webster's Third New International Dictionary*) became a desirable value by itself. Even "Puritans fully embraced the scientific study of the physical world" (*Ryken, 1986:168*).

The apparent success of physical sciences took off in bandwagon effect of international competition after the Russians launched the first Sputnik into space. Silent silhouetted groups gazed into the sky waiting for the little dot of light in 1957 to announce another significant step towards man's emancipation. "Science became so successful that it has inevitably earned a great and strange reputation..." primarily "because of its record of success in dealing with inanimate nature" (*Weaver, Warren in Rapport & Wright, 1963:15*).

Paralleling the development of science was the emergence of "utilitarian industrialism" accompanied by "the sharpest impairment of religious beliefs" (*Gouldner, 1970:274-5*). Whereas in the past "no one could be an atheist with impunity and without endangering himself" (*Neusch 1982:10*), the nineteenth century gave birth to men like Ludwig Feuerbach (1804) who has been called the "father of modern atheism" who is "evidently the source of the entire modern criticism on religion. He directly influenced Marx, Freud, Nietzsche and others" (*Neusch, 1982:3*), and atheism took off as a social movement. It would be misleading, however, to say that these men caused atheism to flourish. "If they have had the audiences they have, it is because they have been able to express with clarity a state of affairs which many people experience." (*Neusch, 1982:7*)

A whole new discipline developed, based largely on atheistic and/or nonreligious premises. Although "for more than a thousand years Western Culture had been based on the Christian idea that man is created in the image of God" (*Brunner, (1948)1949:2*), "increasing number of people today live as if God did not exist" (*Neusch, 1982:8*) and do not possess many "religious perceptions" (*Berger, 1977:78*). In fact, it could be said that there has developed what could be termed a secular, scientific mind set, fostered by the educational system.

"Education everywhere is a means of preparing the individual to live effectively in a specific culture," (*Frost,1966:12*) Western cultures favored the secular model. In the name of religious freedom, in the United States, they demand government owned institutions like educational institutions "must abstain from subjugating the capacities of its children to any legal standard of religious faith, with as great fidelity as it abstains from controlling the opinions of men" (*Noll & Kelly,1970:215*).

Not only do educational institutions of higher learning not provide religious instruction, they go further by denying

students the opportunity for integration of faith and learning. In Western society the secularization process by which "sectors of society and culture are removed from the domination of religious institutions and symbols" has reached new heights. Education has been emancipated from ecclesiastical authority (*O'Dea & O'Dea, 1973:211*). Science and religion "are seen as mutually irrelevant to each other, even by some religious leaders." (*Schilling, 1962:5*).

Let us find what kind of mind set emerges out of this cultural diversity.

Definition of the Scientific Mind Set

Perhaps the best starting point is to assume that "a scientist is what a scientist does" and see what kind of profile emerges, with such different views of scientific processes. Some, like Kuhn, reject the idea that science progresses by accretion and emphasize the revolutionary character of paradigmes. "Where old theories are replaced by incompatible new ones" (*Kuhn: 1970, 1, 2*). Lowrance (*1985:45*) in turn sees scientific knowledge as "accumulative and intellectually progressive, preserving orthodox knowledge and carefully building upon it, all the while striving to supercede it with more powerful knowledge."

Perhaps the most "striking aspect of science today is the increasing extent to which it is socially organized" (*Ladriere, 1977:19*). There is actually a scientific, even international, community (*Snyder, 1978:79*) actively engaged in "continual cross-fertilization of theory and experiment" (*Ladriere, 1977:28*). This is true at least of the sciences that may be described as empirical.

With the success of science and technology there also emerged "a basically optimistic ideology of progress, which saw science and its application as the pre-eminent tool of culture and believed it could be shown that the spread of scientific rationality was demonstrably going to open up practically

limitless possibilities of qualitative growth for mankind" (*Ladriere, 1977:137-138*).

There has been some backlash, but the scientists tend to remain a relatively optimistic group on the whole. Nevertheless, scientists differ among themselves about some of the most central aspects of science which shows that "science is not monstrous and monolithic, but is a very human enterprise, exhibiting the same lively and useful diversity which one finds in philosophy, art, music, etc." (*Rapport & Wright, 1963:23*).

Within the various factions of the scientific community disagreements and arguments have raged over many issues polarizing and dividing people sometimes temporarily, sometimes permanently into separate camps, and seemingly ongoing debates center around issues such as: evolution vs. creation, hard-core vs. soft science, macro vs. micro theory, pro and con Middle Range Theories (*Merton, 1957 & 1967*), pro and con deductive/inductive theoretical models, etc.

Despite this diversity, certain general criteria, and a cluster of values social scientists seem to cherish (although the clusters for other scientific disciplines are quite similar) emerge. The scientist accepts that there is "a clear methodological demand that hypotheses be subjected to the disciplined critical dialogue of the scientific community against the background of well-established theoretical belief and commonly experienced phenomena" (*Snyder, 1978:188-9*).

Generally speaking this dialogue includes sharing with one's peers how the problem was tackled scientifically. Some widely held values in this respect are as follows. (*Jevons:1973,47*); Science is:

1. Empirical, based on fact.
2. Logical and objective.
3. Because of the above, its conclusions are tentative (*Jevans says certain.*)
4. Quantitative.

5. A specialized activity.

Therefore, for the purposes of this paper, the scientific mind is defined as the mind set necessary to be a practicing scientist in a community which adheres to the above criteria.

Let us now proceed to examine the counterpart, a person with Christian faith so that we can ultimately proceed to our goal of finding out if the Christian faith can live in the same body with a scientific mind and/or if Christians and Scientists can find any common ground or universe of discourse to have a meaningful dialogue.

Definition of Christian Faith

In the way faith is defined lies the key to the integration dilemma. In daily life there is a habit of using the concept faith "in a general way without precision of meaning" (*Douglass, 1978:29*). Even when faith is defined more precisely it tends to elude our grasp. Which is the correct way, if there is one? Is Christian faith assent to a set of doctrines like the Westminster Confession, or some other creed or beliefs, less elaborate? Is it Protestant? Catholic? Or is faith an emotion or deep conviction? Or is it "the relationship between man and the superhuman power he believes in and feels himself to be dependent upon" (*Schoeps, 1966:3*). Some claim that the origin of religion remains hidden. "We possess no evidences of the beginning of religion. But wherever men live on earth, religion springs into being" (*Schoeps, 1966:7*).

Visible religious organizations like church or groups have become vital elements to people in their definition of faith as an exercise of religion. The religious group "is essential for supporting the individual's beliefs and norms" (*McQuire, 1987:17*). Some religious faiths involve more of a group phenomenon than others. Where the Catholic church is dominant, the group's power over the individual is monopolistic. This organic character of Catholicism stands in stark contrast to the protestant

individualistic pluralism. (Dobbelaere, 1981:58-59)

Rather than adherence to group norms, faith is a "person's free response to the revelation of truth, a response out of an enlightened mind freed from the shackles of opinion and prejudice." (Holmes, 1987:68)

It becomes clear that social definitions of faith, be they individualistic or corporate still present problems. The scientific mind balks at what it calls "blind faith" and yet, in attempts at an operational definition of something as dynamic as faith fails to capture its essence. Static prints of cognitions or beliefs will not suffice. Some have tried to capture its dynamism by analyzing Christian faith on psychological developmental models. (Fowler:1981,113&133).

Faith is related to religion but not identical with it. Each is dynamic growth, or is renewed through its interaction with the other. It is an error of modern identification to equate faith with belief (Fowler:1981,10); (Smith:1977,1979).

Perhaps the essence of interactive faith is not empirically measurable but can only be conceptualized and its presence felt in the life of the individual who activates the concept. The biblical definition of faith is "the substance of things hoped for, the evidence of things not seen" (Hebrews 11:1) "and as gifts of God" (Ephesians 2:8). The dutch theologians Berkouwer (1954:190) differentiate between "general human faith" and the "divine gift" of "saving faith."

If this concept of faith is more than a cognitive, anthropocentric concept, dynamic rather than static, interactional rather than stationary, it could be likened to a living cell wherein parts are in ever moving suspension, yet living and revolving and identifiable as a cell. It is possible to analytically disassemble the cell, yet when impact, it has a life and dynamism far surpassing the sum of its parts. If faith is similar, with God-man-environment in constant interaction, what consequences does it have for potential integration of the Christian faith and the scientific empirical mind?

Previously Offered Solutions for

Integrating Christian Faith and Science

Integration is seen as weaving both elements into some kind of mutually acceptable relationship without the one assimilating or usurping the integrity of the other. To find this integration is so important that Whitehead already in 1926 said that "When we consider what religion is for mankind and what science is, it is no exaggeration to say that the future course of history depends upon the decision of this generation as to the relations between them" (*Whitehead, 1926:260*). Integration attempts have generally not focused on the dynamic saving faith, but either on religion or beliefs. To get some of the flavor of the anti-integration pro-integration controversy, some quotations are listed below:

Anti-Integration:

"We now realize that there are both practical and logical reasons for thinking that the insertion of the concept of God into a scientific theory cannot contribute to the solution of any scientific problem. It does not help us to provide scientific explanation of any phenomenon, or to predict the occurrence of any natural event. This is, no doubt, the fundamental reason why physical scientists resist any suggestion that religious categories be incorporated in their theories" (*Schilling, 1962:197*).

"No man of science, whether Christian or not, would have the impudence of using the word "truth" to mean belief in Christian Science. Please do not misunderstand me; that belief is respectable but its masquerading under the cloak of science is not" (*Needham, 1955:8*).

Pro-Integration:

"I believe that the best route toward an appropriate theology of secularity is by way of a biblically informed, metaphysically elaborated, and scientifically relevant doctrine of creation, in which Christ is seen as the clue to cosmos as well as to history" (*Cauthen, 1969:45*).

"In the light of this analysis the task of contemporary theology comes plainly into view. It must show that a Christian affirmation of a transcendent God defined as creative power and redemptive love is a viable option for modern man shaped as they are by the currents springing from science and secularization. Theology must be able to demonstrate that Christian faith is credible in the light of a proper understanding of the findings of modern science and relevant to the worldly fulfillment of human existence. The underlying requirement for the accomplishment of this theological venture is the elaboration of a philosophical framework which can bring together in a coherent conceptual structure the implications of contemporary scientific cosmology with the biblical vision of man, the world, and god" (*Cauthen, 1969:42*).

"This is not to argue that every theological concept or statement must have a specific empirical correlate, but that theological concepts and statements have a proper place in a coherent system which at certain essential points is

correlated with the empirical world" (*Torrance, 1982:35*).

"It must, in other words, be claimed that it is more reasonable or rational to interpret the universe theistically than to interpret it naturalistically" (*Hick, 1964:8-9*).

As a starting point for a solution I suggest that it may be our dogged adherence to the Platonic, dualistic way of thinking that makes us feel we must either integrate or separate Christian faith and the scientific mind, and we do not seek a third alternative. As an alternative solution we propose the Great Conflict Model.

The Great Conflict Model

For the thinking student, alternative solutions to the integration of science and Christian faith must be presented. A scientific approach demands an open mind. The only preliminary concession required for an honest atheist-theist dialogue is a "readiness on both sides to entertain hypothetically the theoretical possibility of the statements, especially the basic statements, made by the other." (*Gibson, 1968:4*) Snyder (*1978:188*) reinforces this view by pointing out that "there is virtually no hypothesis that is itself unscientific. What is properly judged to be scientific or unscientific is THE WAY IN WHICH WE ADDRESS HYPOTHESES." (emphasis added)

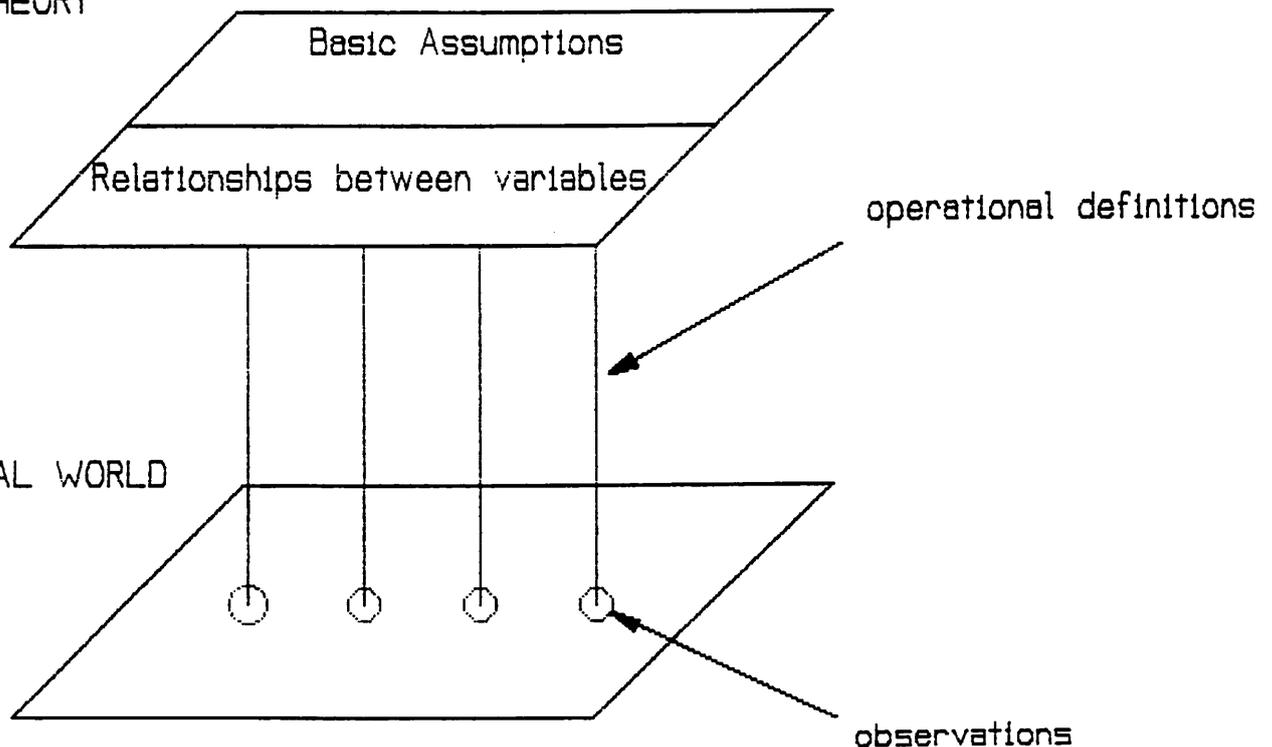
With this in mind I propose a macro-level theory for a social psychological experiment. This in itself is sure to sound as a contradiction in terms since all social psychological experiments are normally done at the micro-level. In addition, for many years now sociologists have been steering away from attempting to construct macro-level theories and along with Merton (*1957, 1967*) have settled for Middle-range theories.

There have been some theories around "the mystery of the eternal coexistence of good and evil" which have been formulated on different levels of abstraction (*Needham, 1955:4-5*). Most conflict theories have dealt with some form of dialectical materialism and Christian theist interpretations have been made

from the firm conviction of "thus saith the Lord" relative to human "history" as the story of "creation, fall, redemption and glorification." (Sire,1988:36) This view of history has been commonplace in Christian circles for over a thousand years. (Baumer,1960:121)

What then makes the current conflict frame of reference different from both above mentioned theories? It is stated at a higher level of abstraction than the Marxist conflict theory and does not limit conflict to materialistic considerations. It differs also from the traditional Christian approach in that it is formulated not as a doctrine but as a theory. The model further satisfies a criterion put by Walterstorff (1984:142) for Christian scientists namely that a scholar's inquiries must take their course in the light of the fallen condition of our actual society. The structure of the theory is diagrammed below.

PLANE OF THEORY



This psychological experiment is in a comprehensive lab setting,

includes the total human population, has a manipulation of an independent variable, is longitudinal and is ultimately verifiable at the end of the experiment. Because it is not a one time study but is ongoing, longitudinal, there are time points in the conflict dialectic which were actually predicted at a time before they take place and add the dimension of partial verifiability to the model even before the end of the experiment. However, the ultimate test of verifiability lies in the future.

The Christian Faith is not integrated in the Platonic dualistic sense but is suspended in a dynamic tension of interaction till the end of the experiment.

Basic Assumptions of the Great Conflict Theory:

Given that there was an all wise, loving, self-existent God and given that He created man in his image and given that sin entered his perfect creation and given that even before he created man he gave himself as man's ransom should man fall into sin and given that God died to redeem man and given that God is going to make an end to this world when Christ returns to earth.

Relationships Between Variables:

Given the above basic assumptions, various propositions of relationships can be formulated. Since this is a macro-level theory it will be impossible to enumerate all the possible relationships which will fall under its umbrella. However, we will illustrate its utility by comparing it to Blau(1964) and Homan's(1951) exchange theory. Exchange theory is built on the premises that "any actor (as a maximizer of utilities) may have an interest in appropriating objects without relinquishing any, But no actor has an interest in relinquishing objects without receiving something at least 'roughly equivalent' (to borrow Homan's (1951:285)phrase) - indeed something of greater utility - in return. We would not expect any actor acting on an 'economic' interest, then, to relinquish an object to another without both an expectation of receiving something in return and some means of ensuring the validity of that expectation. Thus a condition for

economic exchange is actor A's belief in a right to demand reciprocation from actor B and some means of enforcing that right against actor B." (Willer & Anderson, 1981:134)

Homan's and Blau's exchange theory, however, explains only purely utilitarian exchange relationships and/or exchange theories based on maximizing self interest. Exchange theory in the Great Conflict's frame of reference can accommodate both self interest and altruistic behavior. Given the Great Conflict premises, there are polarizing forces acting upon the human exchange relationships, the polar forces being God and the Devil, or if you will, good and evil forces. Altruistic exchange proposition runs then as follows:

The more polarized both the actors are towards the good force, the more egalitarian and fair the exchange relationship between actor A and actor B will be. The more polarized actor A is towards the good force, and the more actor B towards the evil force, the more likely it is that actor A will be acting out of altruistic motives and actor B will be acting out of selfish motives. The more polarized actor A is toward the good force, and the more actor B towards the evil force, the more contrast there will be between their behaviors and the more likely B is to experience cognitive dissonance.

Bear in mind that there are also other factors at play in exchange relationships and the final exchange model will be more complex, but we were comparing the simple exchange models for didactic purposes, sufficient to illustrate that Blau's exchange theory may be subsumed under the Great Conflict theory.

Marxian conflict theory in the Great Conflict frame of reference is an interesting proposition. For didactic purposes it is interesting to compare Perkins and the Great Conflict model. Perkins (1985:14) claims that "Christian sociologists must, on Biblical grounds (as well as on the basis of what it means to do good sociology) adopt the Marxian methodological approach to

studying social reality." His reasoning goes further like this: "The founder of the praxis approach, Karl Marx, helped to establish the value-committed thesis that science must be directed by philosophy." Therefore since Christians claim "through faith grounded in the revealed Word of God - that human history is directed by God" they must practice value-aware sociology. And he ends up with the conclusion, "Most importantly, Christian sociologists who adopt the value-free approach will, as Scanzoni correctly insists, have to renounce the goal of ever doing something called "Christian sociology." Once the assumptions of value-free sociology are adopted, the word sociology can never be legitimately modified by any adjective other than the word 'empirical'" (*Perkins, 1985:16*).

Pitted against the Great Conflict theory, the Marxist theory has interesting similarities but more differences. Again for didactic purposes we will put it in proposition form. The more polarized the actor(s) are towards the evil force, the more likely it is that if actor(s) A are owners of the means of production and actor(s) B are workers (wage earners) that actor(s) A is likely to exploit the labor of B. The more polarized the actor(s) A become towards good and B towards evil and the less other actors there are in between on the continuum from good to evil, the more likely it is that war will erupt and the more likely it is that the experiment will draw to a close.

Whereas Karl Marx (1952) saw the remedy in the change of ownership relations and projected a utopian end at the end of the class struggle, the Great Conflict also predicts an end to the human struggle, not only for economic exploitation, but all exploitation caused by the presence of good and evil and the evil force's manipulations. (Actually, God, the good force also manipulated the independent variable by placing a tree of good and evil in the original home of the created pair to test their allegiances.) In a modified sense, even the Marxist theory can be subsumed under the Great Conflict theory.

Summary and Conclusion

As we have seen, there has been a shift from a society with a predominantly Christian culture to a society with a predominantly secular, if not atheistic or agnostic. This poses both ideological and pragmatic problems for the Christian who is both a committed believer and a committed scientist. Suggestions from a dualistic perspective are, either integrate or disassociate. One must find some way to fuse the values, even if it means using Marxist methodology, or be doomed to the life of a schizophrenic mind.

As an alternative solution we proposed the Great Conflict Theory as a frame of reference, actually as a great umbrella theory under which most other theories could be subsumes, illustrating that by the use of exchange and Marxist conflict theory. The role of faith is dynamic, personal and experiential, kind of suspended outside the explanatory theory and its hypotheses, yet informing the theory without posing its information as dogma, only as tentative, scientific theories until they are verifiable, partly during the long term experiment and ultimately at the end of the experiment, if and when Christ returns to the earth.

Faith itself, as conceptualized, is not empirically verifiable during the experiment. It is only conceptually defined as a dynamic relational interaction between God-man-environment, in fluid movement yet held together. The only way the reality of its existence can be felt is by activating its dynamism on a personal, individual level, by accepting its moving force which the Christians call the holy spirit. As to the theory, I invite you to test it out and to activate the conceptualization of the dynamic faith.

- Baumer, Franklin L.** *Religion and the Rise of Scepticism.* New York: Harcourt, Brace & Co., 1960.
- Berger, Peter L.** *Facing up to Modernity - Excursions in Society, Politics and Religion.* New York: Basic Books, Inc. Publishers, 1977.
- Berkouwer, G. C.** *Faith and Justification.* Grand Rapids, MI: William B. Eerdmans Publishing Company, 1954.
- Blamires, Harry.** *The Christian Mind.* Ann Arbor, MI: Servant Books, 1978.
- Blau, Peter.** *Exchange and Power in Social Life.* New York: John Wiley & Sons., 1964.
- Brunner, Emil.** *Christianity and Civilization.* Parts I-II. London: Nisbet and Co. Ltd., Reprinted 1948 and 1949.
- Catholic Encyclopedia, The.* V.5 and V.13. New York: The Encyclopedia Press, Inc., (1912)1913.
- Cauthen, Kenneth.** *Science, Secularization and God.* Nashville & New York: Abingdon Press, 1969.
- Chidester, David.** *Salvation and Suicide.* Bloomington & Indianapolis IN: Indiana University Press, 1988.
- Dobbelaere, Karel.** *Secularization: A Multi-Dimensional Concept.* London, England: SAGE Publications, 1981. (International Sociological Association)
- Douglass, Herbert.** *Faith Saying Yes to God.* Nashville TN: Southern Publishing Association, 1978.
- Fowler, James W.** *Stages of faith - The Psychology of Human Development and the Quest for Meaning.* San Francisco, CA: Harper & Row publishers, 1981.
- Frost, S.E. Jr.** *Historical and Philosophical Foundations of Western Education.* Columbus, Ohio: Charles E. Merrill Books, Inc., 1966.
- Gaebelein, Frank E..** *The Pattern of God's Truth.* Oxford: Oxford University Press, Inc., 1968.
- Gibson, Arthur.** *The Faith of an Atheist.* New York: Harper and Row, Publishers, 1968.
- Gouldner, Alvin.** *The Coming Crisis of Western Sociology.* New York: Basic Books, Inc., 1970.
- Hick, John.** *The Existence of God.* New York: The MacMillan Company, 1964.
- Holmes, Arthur.** *The Making of a Christian Mind.* Downer Grove, IL: Inter Varsity Press, 1985.

- Holmes, Arthur F.** *Contours of a World View.* Grand Rapids, MI: William B. Eerdmans Publishing Company, 1983.
- Holmes, Arthur F.** *The Idea of a Christian College.* Grand Rapids, MI: William B. Eerdmans Publishing Company, 1975.
- Homans, George.** *The Human Group.* London: Routledge and Kegan Paul, 1951.
- Jevons, F.R.** *Science Observed— Science as a Social and Intellectual Activity.* London: George Allen & Unwin Ltd., 1973.
- Kuhn, Thomas S.** "Logic of Discovery or Psychology of Research" in Lakatos, Imre, and Musgrave, Allen eds. *Criticism and the Growth of Knowledge.* Cambridge: Cambridge University Press, 1970.
- Ladriere, Jean.** *The Challenge Presented to Cultures by Science and Technology.* Paris, Liege: Unesco, 1977.
- Lowrance, William W.** *Modern Science and Human Values.* New York, Oxford: Oxford University Press, 1985.
- Marx, Karl.** (Ed. Friedrich Engels) *Capital and Manifesto of the Communist Party.* Chicago, London, Toronto: Encyclopedia Britannica Inc., 1952.
- McDarbh, John.** *Psychoanalytic Object Relations Theory and the Study of Religion.* New York: University Press of America, 1983.
- McGuire, Meredith B.** *Religion: The Social Context.* Belmont, California: Wadsworth Publishing Company, 1981.
- Merton, Robert K.** *Social Theory and Social Structure.* rev. enlarged ed. London: The Free Press of Glencoe, Collier-MacMillan Ltd., 1957.
- Merton, Robert K.** *On Theoretical Sociology.* New York: The Free Press, (1949)1967.
- Needham, Joseph.** (Ed). *Science, Religion & Reality.* New York: George Braziller, Inc., 1955.
- Neusch, Marcel.** *One Hundred Years of Debate over God - The Sources of Modern Atheism.* (transl. Matthew J. O'Connell) Ramsey, NJ: Paulist Press, 1982.
- Noll, James William & Kelly, Sam P.** *Foundations of Education in America - an Anthology of Major Thoughts and Significant Actions.* New York: Harper & Row Publishers, 1970.
- O'Dea, Thomas & O'Dea, Janet.** *Readings on the Sociology of Religion.* Englewood Cliffs, NJ: Prentice-Hall Inc., 1973.
- Perkins, Richard.** *Values, Alienation, and Christian Sociology.* Christian Scholars Review Vol.XV No.1, 1985.

- Rapport, Samuel and Wright, Helen (Eds).** *Science: Method and Meaning.* New York: New York University Press, 1963.
- Reimer, Everett.** *School is Dead: An Essay on Alternatives in Education.* Harmondsworth: Penguin, 1971.
- Ryken, Leland.** *Worldly Saints - The Puritans as They Really Were.* Grand Rapids, MI:, 1986.
- Schilling, Harold K.** *Science and Religion.* New York: Charles Scribner's Sons, 1962.
- Schilling, Harold K.** *The New Consciousness in Science and Religion.* Philadelphia, PA: United Church Press/Pilgrim Press Book, 1973.
- Schoeps, Hans-Joachim.** *The Religions of Mankind.* Garden City, NY: Doubleday & Company, Inc., 1966.
- Sire, James W.** *The Universe Next Door.* Downers Grove, IL: InterVarsity Press, 1988.
- Smith, Wilfred Cantwell.** *Belief and History.* Charlottesville, VA: University Press of Virginia, 1977.
- Snyder, Paul.** *Toward One Science- The Convergence of Traditions.* New York: St. Martin's Press, Inc., 1978.
- Torrance, T.F.** *Reality and Evangelical Theology.* Philadelphia, PA: The Westminster Press, 1982.
- Webster's Third New International Dictionary.* Springfield, Mass: G & C Merriam Publishing Co., 1965.
- Whitehead, Alfred North.** *Science and the Modern World.* New York: MacMillan, 1926.
- Willer, David & Anderson, BO (Ed).** *Networks, Exchange and Coercion.* New York, Oxford: Elsevier, 1981.
- Wolterstorff, Nicholas.** *Reason Within the Bounds of Religion.* Grand Rapids, MI: William B. Eerdmans Publishing Company, 1984.