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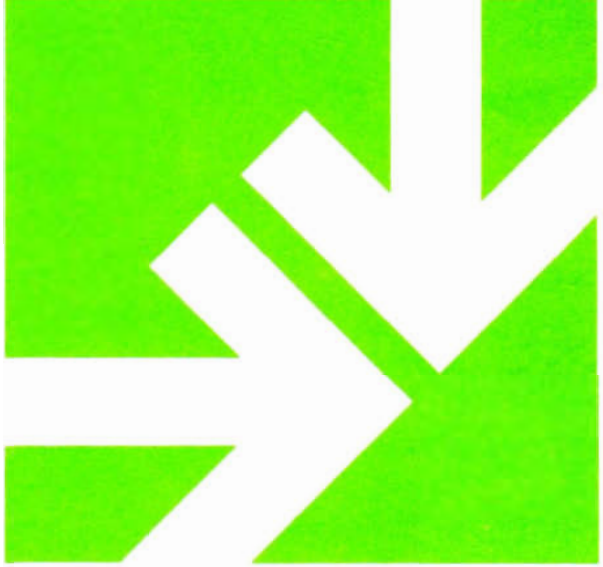

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HUMAN ENGINEERING

and the Christian

"The fear of the Lord is the beginning of Wisdom." Psalm 111:10

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Violence, Psychosurgery and Human Responsibility

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One of the greatest problems confronting the human race at present is the frequency with which violence is resorted to by both individuals and societies. While this is no new problem for mankind, some of the solutions proposed to combat and eradicate the violent behaviour patterns of individuals are new, and these in turn pose further problems. In particular, direct surgical approaches to the brains of violent individuals, while sometimes successful in eradicating the violence, also raise issues such as the inviolability of the human person, the reality of human responsibility and the legitimacy of exerting social control by means of biological manipulation.

Neurosurgical procedures of this kind fall into the category of what is known as *psychosurgery*. This involves the destruction of brain tissue with the aim of treating behavioural, as opposed to organic, disorders. In other words, it is generally carried out in the *absence* of any identifiable abnormality of the brain itself, the tissue that is destroyed being apparently normal. The main current indication for psychosurgery, and the reason for its emergence into the public arena, is uncontrollable violence and rage.

The controversy surrounding psychosurgery takes us well beyond purely medical considerations, and into medico-legal, ethical, philosophical and theological areas. What is more, it highlights the way in which technological answers to what have been considered as traditional questions may be very different from the traditional responses. It brings us face-to-face therefore, with technocracy and its impingement upon traditional, and these are often religious, values.

Christians therefore, cannot shy away from the issues posed by psychosurgery. This is because much that the Christian considers important is brought into perspective by this debate. This does not imply that the Christian response is to be one of outright hostility to psychosurgery, as unfortunately would often have been the case in the past. The issues are far too complex and demanding for such a response. Rather they

should force the Christian to think hard about his beliefs concerning man as a person, man as a responsible being, man as a biological entity, man as an interdependent community of individuals, man as the purveyor of sophisticated technology, and man as a sinner in relationship to his creator-God.

The Debate

While psychosurgery is not confined to the treatment of violence and extreme aggressiveness, most of the issues surrounding it are brought to a head in this area, and I will deal mainly therefore with violence.

In a realm so bereft of hard data and established ethical guide-posts it is hardly surprising that the lines of battle are drawn in highly emotional terms. It is also not surprising to find the protagonists lined up behind well-defined personalities who have succeeded in reducing the issues to their most simplistic framework.

In favour of the present vogue of 'new wave' psychosurgery we find Dr. Vernon Mark and Dr. Frank Ervin who set the scene for the violence debate with their book *Violence and the Brain* (Harper and Row, New York; 1970). While Mark, Ervin and their colleague William H. Sweet form just one of a number of groups throughout the world actively involved in psychosurgery, they have succeeded in gaining the public's attention with their pronouncements on the potential value of psychosurgery in combatting growing urban violence.

For instance, in 1967 these three wrote a now famous letter to the *Journal of the American Medical Association*. In this they suggested that in addition to the environmental and social factors that were undoubtedly important in the urban riots then raging throughout the United States, a third factor was being ignored. This was the possible role of *brain disease*, a factor about which little was known. Consequently, they pointed to the urgent need for research to "pinpoint, diagnose, and treat those people with low violence thresholds before they contribute to further tragedies".

This theme was taken up in greater detail by Mark and Ervin in *Violence and the Brain*, which they wrote in order "to stimulate a new and biologically oriented approach to the problem of human violence". As they do not go into a detailed discussion of the social (or theological) causes of violence, it is easy to gain an unbalanced view of their thesis. Essentially however, they view the problem of human violence as potentially solvable, as a result (one imagines) of biological procedures. Because all behaviour filters through the brain (which is another way of saying: "as a man thinks so he acts") they argue that "studying the relationship between the brain and violence is the best way to get to understand the mechanisms of violent behaviour".

It is difficult to know how far Mark and Ervin would take this principle as they readily concede that all violence is not caused by people with damaged brains. They repeatedly emphasize however, the inadequacy of approaches relying either on the enforcement of 'law and order' or on the correction of social injustices, and against these stress that "many of the individuals who act violently have brain diseases that can be described, diagnosed, treated and controlled".

A vital corollary of this approach is the *need* to detect and treat individuals with malfunctioning brains *before* they commit serious crimes of violence. It is at this point that psychosurgery takes on some of the apparel of both criminology and preventative 'medicine', being advocated as it is as a specific antidote for violence. When viewed in this light, psychosurgery assumes the mantle of the biological answer to social ills, whether imagined or real. And if care is not exercised, it could become the answer *par excellence* to all forms of social deviance; hence, the bitter opposition of some to any form of psychosurgery.

While it would be quite incorrect to suggest that all advocates of psychosurgery would be prepared to take it to these lengths, some serious proposals regarding its use are nothing less than startling. Dr. Kenneth B. Clark, a social psychologist, put his position in these words:

> Given the urgency of the immediate survival problem, the psychological and social sciences must enable us to control the animalistic, barbaric and primitive propensities in man . . . We can no longer afford to rely solely on the traditional prescientific attempts to control human cruelty and destructiveness . . . (Instead we) accept and use the earliest perfected form of psychotechnological, biochemical intervention which would . . . reduce or block the possibility of using power destructively (Presidential Address, American Psychological Association, 1971).

The opponents of psychosurgery take sentiments of this nature as their cue, and in fear of the *mis*application of this technique reject it in its entirety. The fear most often expressed is that of *social control*, psychosurgery being used for the good of *society* rather than the good of the *patient*. It is argued by some that doctors have no right to perform operations on the brains of patients in order to make them conform to society's requirements.

This point-of-view has been forcefully expressed in a number of quarters. A petition produced by an Ad Hoc Committee on Psychosurgery of the National Institutes of Mental Health contained this warning:

> Since psychosurgery can severely impair a person's intellectual and emotional capacities, the prospects for repression and social control are disturbing.

Dr. Peter Breggin, a Washington psychiatrist, and one of the foremost opponents of psychosurgery is more explicit in his condemnation of it. He opposes all forms of psychosurgery on the grounds that not only is there no justification for any of the operations but, to make matters worse, the procedure has a blunting effect on emotions and thought processes. In short, psychosurgery according to him is an "abortion of the brain" and is being used to repress and vegetabilize the helpless, the poor, the female, the black, the imprisoned and the institutionalized. In similar vein, others contend that psychosurgery could be used against dissidents and rebellious groups on the pretext of curbing their antisocial behaviour. More specifically, some lay emphasis upon the threat to blacks suggesting that any increased use of psychosurgery will be used predominantly to suppress blacks.

It should be obvious that the opponents of psychosurgery by-and-large reject it because of its *general* threats to individuals. The issue of violence as such does not feature highly in their arguments, with the result that the proponents and opponents of psychosurgery are arguing along rather different lines.

The Evidence

The debate about psychosurgery is only of significance if psychosurgery is as effective in practice as the protagonists suggest. After all, there is little point in arguing about social control if it is unable to alter behaviour in a predictable and rigidly controlled manner. Neither is it worth pursuing its influence on violent behaviour, if it eliminates violence only at the expense of other normal, social behaviour patterns. What then is the status of the medical evidence?

Before attempting to answer this question it is important to place present-day psychosurgery in perspective. At present, on the order of 500 psychosurgery operations are being performed each year in the United States, and these are being carried out by about a dozen neurosurgeons. This figure should be compared with the 50,000 or so prefrontal lobotomies performed for a variety of mental conditions in the 1940's and 1950's. While it would be shortsighted to place undue weight on this comparison, it is important to realize that current psychosurgery is relatively limited and is under severe scrutiny.

Psychosurgery itself involves the destruction of very small regions of brain tissue, generally by passing an appropriate current through one or more electrodes implanted in the brain. Implanted electrodes have been used for many years to map out functional areas within the brain of experimental animals and man, this technique being referred to as *electrical stimulation of the brain* (ESB). The part of the brain principally involved in clinical and experimental studies of violence is the *limbic system*, the so-called emotional brain. Of the constituent areas of the limbic system the one which has come in for most attention in regard to violence is the *amygdala*.

The basis for believing that the limbic system is involved in some way in aggressive behaviour stems from animal experiments in which this system was either removed or electrically stimulated. When removed, normally aggressive monkeys or cats have been observed to become placid, are easily handled, and do not respond aggressively even to attack by other members of their social group. Conversely, the stimulation of this system converts a quiet animal into one prepared for attack behaviour—as long, that is, as the stimulation is maintained. Numerous studies over the years point towards the same conclusion, that the limbic system and the amygdala in particular are intimately associated with the maintenance of violent behaviour. This applies to human behaviour as well, bearing in mind of course that the violent or aggressive behaviour under examination in most of these studies is essential for 'normal' survival.

A major difficulty with summarizing this type of study is that of generalization. It is very easy to concentrate on the increase or decrease in aggression, as this is the point of interest, and ignore other effects. What is more, far too many of the studies, especially clinical ones, have been inadequately assessed and may therefore prove grossly misleading. It would also be wrong to suggest that the results of the numerous studies undertaken are clear-cut in their results. They are not. Even a small area like the amygdala has a number of probable functions, while it makes numerous connections with other brain regions. This complexity

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of structure, coupled with the relatively primitive state of our knowledge about the brain, all makes for confusion if great care is not exercised in assessing the available evidence.

A recent excellent study of psychosurgery and its many ramifications is that of Dr. Elliot S. Valenstein whose book, *Brain Control: A Critical Examination of Brain Stimulation and Psychosurgery* (John Wiley and Sons, New York; 1973), is a mine of information and balanced comment in this hazardous realm. After meticulously analyzing the results of amygdalectomy operations (destruction of a part or the whole of the amygdala), Valenstein suggests that amygdalectomy is not related to aggression in a simple one-to-one manner. Instead he suggests that its effects on aggression reflect more general deficits such as: 1) an inability to relate visual information to past experience, and 2) a noticeable decrease in responsiveness to most stimuli that normally evoke emotional reactions. As Valenstein himself remarks:

> The primary changes produced by these operations in animals may have little to do with the regulation of aggression . . . It would be very surprising indeed if the brain was organized into spatially discrete units that conform to our abstract categorizations of behaviour.

Psychosurgery in Humans

The decision to use psychosurgery in human patients in an attempt to control extreme violence is rarely a straightforward one. This is because in many cases the violence is associated with temporal lobe epilepsy, while some of the patients are also severely mentally retarded. Not surprisingly, assessment of the results of surgical intervention is accompanied by enormous difficulties.

The drawbacks with using psychosurgery in patients of this type are many. The connection between violence and epilepsy is murky; indeed it is rare. There is no concrete evidence that an individual's violent behaviour is associated with the specific damage located in his brain. As far as amygdalectomy is concerned, it is irreversible and may produce intellectual impairment, a danger of immense significance when contemplating the operation in a mentally normal patient.

Some doctors suggest that psychosurgery should be extended to patients who are only violent, that is, who have no other medical abnormalities such as epilepsy or even an abnormal EEG. It is at this point that psychosurgery takes on overtones of social control. Before becoming embroiled in emotional arguments about this, it is advisable to look at the evidence for

the efficacy of these procedures. Again, the evidence is far from clear. While amygdala lesions in some of these patients have been reported to eliminate or at least diminsh the rage attacks, it remains far from certain that individuals with a history of explosive violence do have specific brain sites triggering violence. Even if they do, are these sites being destroyed by amygdala lesions? The trial and error approach adopted in some instances casts doubt on their alleged specificity.

We are still left with the principle issue connected with psychosurgery and violence. Does it work? To what extent does it eliminate violence *per se*? After all, if psychosurgery can eliminate violence in individuals, it can be regarded only as an indispensable tool for social reconstruction.

As might be expected with an issue as complex and uncharted as this one, a neat summary is virtually impossible. This is particularly true in view of the subjective nature of any summary. Nevertheless the conclusions reached by Valenstein in his book *Brain Control* are worth quoting. After considering at some length the relation between brain pathology and violence, he concludes:

> Although it is possible that there are more cases of abnormal brain foci triggering violence than may have been suspected, there is little to support the view that this factor is a major contributor to the tremendous proliferation of violent crimes that we are now experiencing.

Because Valenstein's detailed analysis of the results of psychosurgical procedures is characterized by extreme caution and by a reticence about generalizing, his conclusions are worthy of note. He writes:

> There seems to be strong suggestive evidence (if not absolutely convincing) that some patients may have been significantly helped by psychosurgery. There is certainly no ground for either the position that all psychosurgery necessarily reduces people to a 'vegetable status' or that it has a high probability of producing miraculous cures. The truth, even if somewhat wishy-washy, lies in between these extreme positions.

A report produced for the National Institute of Neurological Diseases and Stroke in 1974 (*Brain Research and Violent Behavior*) experienced equal difficulty in reaching a succinct conclusion. In part, the report states this:

> Though most of these (psycho) surgical procedures are reported as successful, the evaluation of the outcome is made difficult because of the following reasons: the diversity of symptoms in patient selection, . . . a lack of detail concerning the degree, character, and thoroughness of the follow-up . . . .

A great deal therefore, is unknown about the effects of and response to psychosurgery. It may have dramatic results for good; it may not. Amazing 'cures' have been reported, whereas the more numerous and less amazing 'non-cures' occupy an insignificant place in the report sheets. Psychosurgery is not alone in this, although the endemic inability or unwillingness of psychosurgeons to assess the overall effects of these operations in a thoroughly objective manner cannot be overlooked. The lack of predictability of psychosurgical intervention comes to the fore as soon as we consider the social and ethical consequences of the operation.

An Assessment

A. *Medico-ethical issues.* These follow on directly from the status of the medical evidence regarding psychosurgery, and cannot be divorced from it.

1. *Social control.* As already pointed out psychosurgery is not a clear-cut procedure in any given individual. Violence is not eradicated by destroying the amygdala in the same way that pain is eradicated by removing a diseased tooth. The violence may not disappear; even if it does it may well recur, while other aspects of brain function are inevitably involved. This is simply another way of stating that the brain is so organized that it is just not possible to separate any of its functions in terms of their social implications. The brain is not nearly as simple as some of our cherished ideas. Hence, to suggest that psychosurgery, in anything remotely resembling its present form, is an effective means of social control makes little sense. A dictator wishing to foist his views on society could do so relatively easily using the vast armament of drugs at his disposal. He may resort to psychosurgery in the world of science fiction—it makes exciting reading; in practice though, a few drugs would serve his purpose far more effectively.

2. *Biological control.* Far more serious is the implication in the arguments of some that aggression, in addition to uncontrollable rage, can be eliminated simply by removing some brain tissue. This is an extreme form of *reductionism,* in which the brain region A corresponds to goodness, brain region B to aggression etc. It it just as if man consisted of some number *n* of qualities, each being controlled by a specific brain area. This failure to recognize man's holistic nature and the *social* forces at work in society is indeed alarming. As Valenstein comments:

> It is likely that there are some biological factors that contribute to a propensity toward violence, but we would be in serious trouble if a number of influential people became convinced that violence is mainly a product of a diseased brain rather than a diseased society.

3. *Is psychosurgery ever justified?* This is, I contend, as much an ethical decision as a medical one, and I believe it is a *real* decision. I cannot follow those who consider that psychosurgery should be banned, neither can I agree with those who view it as a routine procedure in cases of excessive violence. There may be instances where an individual is so violent and so out-of-control that it may have to be used. However, before a decision is made a number of allied questions must be answered: will the operation benefit the *patient?;* have *all* alternative forms of therapy been tried?; what are the likely side-effects of the particular operation?; what is the probable cause of the patient's violence—is it definitely brain damage or is it a psychopathic condition or may it be spiritual in origin?; is it in any sense experimental? The answers given to these and other questions will determine whether or not psychosurgery should be proceeded with.

4. *Psychosurgery and consent.* The use of psychosurgery on prison inmates to 'cure' extreme violent impulses has led to considerable debate. The question of whether or not free consent is ever possible under these circum-

stances is a difficult one. This is because, as Willard Gaylin has put it: "The damaged organ is the organ of consent". Also of relevance in this debate is the distinction between a prisoner volunteering for an experiment that may help *others* as opposed to a procedure that may directly affect the condition responsible for *his own* confinement. While free consent may not be completely out of the question under these conditions, the forces militating against it are so great as to render psychosurgery a very unwise procedure on inmates.

B. *Philosophico-theological issues.* These introduce questions of more general concern and of particular relevance to Christians. They revolve around our view of man and principally of the ways in which psychosurgery may contribute to a major revolution in this view.

1. *The normal individual.* Any procedure designed to alter some aspect of an individual's personality immediately raises the question: what *is* a person's *real* nature? This is not a new question of course; it has long been known that damage to the brain or disease of the brain may alter a person's behaviour patterns. The question however, becomes far more pressing when psychosurgery is under consideration, because what was previously unavoidable now becomes subject to man's control.

This question leads on to another: does each of us have a basic personality on which life imposes distortions, or is our personality simply an amalgam of a lifetime's experiences? If it is the former, the whole aim of psychosurgery is to alter personality so that it fits in better with the accepted norms of society. If the latter, psychosurgery is itself one of the experiences of the lifetime, and if justified according to other criteria, is not an unwarranted imposition upon a person's private domain.

Clearly, a great deal of thought needs to be given to ways of determining the identity of a person's nature and personality, and to the extent that these are dependent upon the physical integrity of the brain. An allied question concerns the definition of *normality*. How are we to know when an idividual is normal, that is, normal within the limits of his own personality? And to what extent is normality determined by social, rather than biological, expectations?

These are vital questions in the context of violence and psychosurgery. It is essential that we distinguish between 'normal' and 'pathological' anger, as the latter renders an individual liable to psychosurgery or any other form of medical treatment, whereas the former does not. This brings us back, however, to the fundamental question of whether a malfunctioning brain or the dictates of society constitute the hallmark of pathogenicity.

2. *The inviolable brain.* The preceding point raises the issues of whether the medical profession or society ever has the right to tamper with an individual's brain. Arthur Rosenfeld has spelled out the dilemma very neatly. In writing about ESB he makes this comment: "The notion of a man controlling his own brain is one thing. But the prospect that a man's brain might be controlled by another man is something else again".

Philosopher Robert Neville has expressed himself more specifically and more emotionally with these words:

> The brain, I think, should be conceived as a special environment for the person . . . Modifying the brain, since it's the most intimate environment for our humanly prized emotions and thoughts, is likely to have more pervasive effects than modifying certain other kinds of environment . . . A surgeon operating on a person's brain has gone into the inside of his perimeter of defense . . .

This distinction between an internal and external environment may be a specious one. Nobody would query the removal of a brain tumour or the repair of a ruptured vessel within the brain. These of course are examples of obvious pathogenicity, and yet they are in one sense simply illustrations of an abnormal environment. Is it not allowable then to attempt to improve the internal environment of the brain by appropriate surgical intervention in the same way as we attempt to improve the external environment? Our reaction to this suggestion will depend upon our view of personality as outlined in the discussion above on the normal individual.

3. *The ideal man.* Those who are amenable to the suggestion that psychosurgery could be a legitimate tool for the *improvement* of an individual's brain, must face a further consideration. What constitutes 'improvement'? Is lack of aggression an improvement over aggression, assuming that the initial aggression does not amount to self-destruction? Who decides, and what are the criteria?

If psychosurgery is developed far in this direction, its goal-in-view must be that of modifying individuals and ultimately of striving for the 'ideal' individual. If taken to this extreme, psychosurgery would be adopting a spiritual or, more correctly, pseudo-spiritual role. Could this happen? Could psychosurgery or allied techniques achieve a revolution in man's thinking and outlook? In other words, may technocracy achieve far more efficiently what religious and political systems have only partially succeeded in accomplishing?

Whatever our reaction to these questions, they suggest another approach to these issues. It may prove essential to distinguish between psychosurgery in its tasks of remedying medical defects and alleviating suffering on the one hand, and of attempting to improve an individual's capacity and potential on the other. As discussed in the section on the inviolable brain this distinction may not be as readily made as previously thought. Nevertheless it is a guiding principle. For the Christian the realization of an individual's full potential is a goal to be strived for, although all that is encompassed by the term 'full potential' is far from clear. Whether psychosurgery will ever have a part to play in this is probably a question for the future.

It may prove essential to distinguish between psychosurgery in its tasks of remedying medical defects and alleviating suffering on the one hand, and of attempting to improve an individual's capacity and potential on the other.

4. *Human responsibility.* Basic to a Christian attitude must be the concept of individual responsibility. Each individual, as a being of worth and value in the sight of God, is himself responsible to God for his actions and their consequences. The degree of freedom bestowed upon him by his Creator allows him to respond to his Creator and to develop into a mature, meaningful and worthwhile personality. This development shows itself in his relations with other human beings, and with the emerging niche he occupies in the matrix of the society around him. These, and very many other manifestations of individual human responsibility are true, whether or not the person concerned recognizes the origin of this responsibility in his creatorial dependence upon God.

General statements such as these are fine, but they fail to tackle the extent of this responsibility in individual people. Are we *always fully responsible* for *all* our actions? If we are, are there ever *any* exceptions? However sure we may be of our answers to these questions in the majority of instances, we must sooner-or-later be confronted by those with brain damage or genetic abnormality, which *on the surface would appear to diminish their degree of responsibility* as normally conceived.

My only point in mentioning these examples is to suggest that *in some individuals* at least there is a connection between the extent of their responsibility and the state of their brains. Such a statement as this needs to be thoroughly documented, and I hope to do this in another article. Suffice it to say here that 'full' responsibility is an arbitrary term and one which may not have a great deal of meaning.

If my suggestion is valid, psychosurgery would be expected to affect an individual's personality and also perhaps the degree of concern he is capable of displaying for his actions within society. If psychosurgery is contemplated to combat violence, it must first be determined to what extent the individual is *responsible* for this violence. If it appears that he is responsible for it, psychosurgery would be a gross infringement of his God-given rights, even if he is abusing these rights. Under these circumstances psychosurgery could not be justified on Christian premises. Alternatively, if there are clear indications that the violence is a direct result of some brain pathology, the treatment of this pathology is a means of rectifying something which itself is interfering with a God-ordained pattern, namely normality.

Unfortunately in practice the choice is not always this clear. Strictly speaking the treatment of a pathology removes it from the realm of 'psychosurgery'. More importantly, it may not be possible to decide whether the pathology is actually the *cause* of the violent behaviour. And herein lies a conundrum. Is the individual responsible or not for his violence? When the answer to this question is shrouded in the mist of ignorance, the responsibility of the doctor to his patient comes to the forefront—and this is no less a God-given responsibility.

It would be easy to dismiss psychosurgery out-of-hand. It is the tip of the iceberg of the *technocratic control* of the human brain. But is this sufficient ground for howling it out of court? If so, much else within our society should be similarly dealt with. In the hands of some it is an example of extreme *reductionism.* But this is not inevitable, as it may also be viewed as a necessary part of the treatment of the 'whole man' in a few exceptional cases. It raises the intriguing question of whether an individual can ever be made *whole* by *removing* a part of his brain. However appalled we may be at the thought of this, let us not forget that removal of the appendix, or of a lung, or of a breast, may achieve this *in some senses.* Is it not preferable that we should function at perhaps 90% efficiency with healthy organs than suffer with all of them intact?

What is human responsibility? How *free* are we to utilize our responsibility? What man can do to man by way of psychosurgery rightly alarms us, but parents cripple their children emotionally and spiritually every day in every street of our towns by neglect, selfishness and cruelty. Human sin restricts to a terrifying degree the full flowering of human responsibility, and thereby God is denigrated.

Psychosurgery needs to be seen in perspective. The issues it raises are ones of exceptional significance, taking us as they do deep into the realms of human responsibility and freedom. The time is ripe for a closer look at the respective contributions of biology and theology to this general area of debate.

The marriage estate is analogous to the divine-human relationship in many respects. Both involve covenant structures in which the mutual parties are bound to each other by commitment sealed with oaths. Both involve a possibility of knowing-in-intimacy. Both involve a "place" where man can be naked and unashamed. In the context of marriage, I enter into the most intimate of all human relationships. It is a relationship that involves a certain amount of risk. If the marriage is to work, it must involve not only the possibility of my nakedness, but the necessity of it. Within marriage I not only may *be naked, I must be. If I take the risk and expose myself and discover that my wife has seen my nakedness in all of its ramifications, and still loves me, then I experience at a human level something of what it means to be known of God.*

R. C. Sproul

The Psychology of Atheism, Bethany Fellowship, Inc. (1974), p. 133

Psychosurgery: A Technical and Ethical Controversy

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Michael Crichton's book, *Terminal Man*, has received a great deal of attention from many varied segments of our society, and it has served to heighten public interest in the subject of psychosurgery. As is typical of a subject about which little is understood, the opposing sides in the controversy over psychosurgery are extremely adamant in the support of their positions. I will attempt in this paper to shed some light on the issue by giving a brief history of the practice and use of psychosurgery, by outlining the opposing viewpoints, and by giving some personal feedback in reaction to these data.

Definition of Psychosurgery

Psychosurgery is also known as "psychiatric neurosurgery", "mental surgery", "functional neourosurgery", and "sedative surgery", but it must not be taken to mean all forms of neurosurgery. Psychosurgery is more specifically brain surgery to correct mental and behavioral disorders, i.e., brain surgery to alter emotional or behavioral patterns or personality characteristics. It does not include surgery for the purpose of treating such neurological conditions as tumors, strokes, or paralysis. Much of the controversy over psychosurgery revolves around the question of what conditions can indeed be effectively treated with psychosurgery. For that reason, an exact definition of the term cannot be made until there is some agreement about what can be done therapeutically with the operation. Finding an adequate definition of psychosurgery is the first of two major problems in dealing with this topic. The second problem is the relationship of psychosurgery to the broader field of psychotechnology, which includes electro-shock therapy, drug therapy, and behavior modification and conditioning techniques. The leaders of the opposition to psychosurgery in the contemporary controversy, particularly Thomas Szasz, R. D. Laing, and Seymour Halleck, have directed their attack against all of psychotechnology, indeed against the medical model of mental illness. Nevertheless, in this paper I will use the general definition, "brain surgery to correct behavioral disorders."

Historical Background

The problem of the relationship of the brain to the mind and to behavior is one that has been examined for centuries. In the 19th Century, the popular belief was that specific behavioral disorders were related to the malfunction of specific brain organs. However, there was very little precise knowledge of the anatomy of the brain so that studies of this relationship could not be done. In 1891, Gottlieb Burckhardt was the first to perform psychosurgery on psychotic patients in an insane asylum in Switzerland, of which he was the supervisor.[1] His theory was that excitement and impulsivity were results of excess neural activity in the cerebral cortex, and, therefore, removal of part of the cortex would correct the psychotic impulses. He met with very little success and with great opposition from his colleagues. It was several decades later before another report of psychosurgery was published.

In 1935, two American brain researchers, Carlyle Jacobsen and John Fulton, reported to the International Congress of Neurology on their findings in their work with monkeys and chimpanzees.[2] They had destroyed the prefrontal regions of the brain and had gotten dramatic behavioral changes, but these changes were almost entirely adverse to the well-being of the animals. However, Antonio Egas Moniz, a Portugese neurologist, was in attendance at this lecture, and he raised the question as to whether such an operation might relieve anxiety in human beings. Fulton was shocked at the suggestion, but Moniz was determined to find out for himself upon return to Portugal. During a 10-week period in late 1935, Moniz and his assistant performed twenty prefrontal leucotomies, or lobotomies as they came to be known.

Moniz claimed great success in treating agitation and depression by use of lobotomy, and this type of surgery soon became widely used in the United States. However, the side effects (blunted emotions and deteriorated intellect) were a rather high price to pay for this treatment. The advent of drugs such as Thorazine and Stelazine, which are as effective in treating agitated schizophrenia but without the serious

side effects, brought an end to radical frontal-lobe surgery in the U.S. by the end of the 1950's. Some estimates place the number of lobotomies performed in the U.S. and in Britain during the period of 1935 through the mid-50's around 70,000. The dean of American lobotomies, Walter Freeman, has reported to have personally performed more than 3,500 lobotomies.[3]

Modern Practice

In the present day, psychosurgery has become far more sophisticated. Recent research has given us a very detailed map of the brain as to what functions are performed in what regions. In general, the brain responds as a whole to any stimulus. However, it is possible to localize portions of the brain that control particular behaviors. Also, there has developed a method of surgery called "stereotaxic" brain surgery, by which a surgeon can locate an exact point in the brain in terms of three coordinates, using anatomical landmarks on the head's surface.[4] By use of this method, the surgeon can direct probes or electrodes toward the target point through a very small hole drilled in the skull.[5] This avoids the problem of possible mutilation of surrounding or overlying areas of the brain, including a complex system of cells, fibers, blood vessels, and neural networks. It also allows for the destruction of the minimum amount of brain tissue in the treatment of a specific behavioral problem.

Four different purposes may be served by the implantation of electrodes at specific points in the brain. The first is that a record may be made of the electrical impulses at the point of the electrode tips. Secondly, the tissue in the vicinity of the electrode tip may be stimulated with a small electric current, which may give a better account of what behavior is actually governed by this region of the brain. Thirdly, the tissue surrounding the electrode tip may be lesioned, or destroyed, by use of stronger electric current. It is also possible now, through the use of miniaturized, wireless telemetry systems, to transmit signals between a freely moving subject and a recording and/or stimulating device some distance away.[6]

The focus of modern psychosurgery has moved away from the frontal lobes of the cortex to the temporal lobes and the so-called "limbic brain", which governs such activity as emotional tone, appetite, sexuality, and so called "fight or flight" behaviors which are involved in one's self preservation. It is in this area where aggressive behaviors are initiated, and aggressive behavior is the focal point of the controversy over the use of psychosurgery. Much of the argument has to do with the question of whether abnormal aggression, resulting in hostility and violent rage, is in fact just too much of a good thing caused by reaction to unfavorable environmental factors; or if indeed it is the result of a disease of the limbic brain, most particularly that of focal epilepsy, which is completely independent of the environment. Proponents and practitioners of psychosurgery, most notably Vernon Mark and Frank Ervin, have given as evidence case studies in which they claim that their patients' aggressive behavioral problems were alleviated by limbic-system psycho-surgery.[7] After psychotherapy and drug therapy have failed to relieve the epileptic symptoms, surgical removal of the anterior portion of the temporal lobe including several parts of the limbic brain is performed; or these portions of the brain are lesioned by use of electrode implants. Mark and Ervin claim that psychosurgery may relieve up to seventy percent of otherwise untreatable epileptics of their seizures, abnormal aggressiveness, and other psychiatric symptoms.[8] They also contend that violent behavior may at times be related to tumors, excess spinal fluid accumulations, internal bleeding, and other disease conditions which can be corrected only with surgery. Their assertion is that a person whose brain is damaged or diseased, especially in the limbic brain, cannot respond appropriately to environmental stress as can a person whose brain is normal. Therefore, environmental factors cannot be adequate in the analysis of behavior without a consideration of organic factors.

The Case of Thomas R.

Eliot Valenstein warns against the danger of oversimplification in the emphasis on the relationship between epileptic seizures and violent behavior. He suggests that the belief that this relationship is higher than it truly is may stem from attention given to a few dramatic cases of violence committed during a psychomotor epileptic seizure.[9] The National Institute of Neurological Diseases and Stroke sponsored a recent review of the question of the relationship between epilepsy and aggressiveness, which concluded that "the best generalization is that violence and aggressive acts do occur in patients with temporal lobe epilepsy, but are rare, perhaps no higher than in the general population."[10] This would seem to be a strong argument against the need for the psychosurgery performed by Vernon Mark based on his presuppositions. But what about the cases in which the psychosurgery appeared to be successful? A rather strange case develops in the study of one of Mark's and Ervin's patients named "Thomas R." Thomas' case was written up by Mark and Ervin in a paper in 1968, to which case they referred in their book *Violence and the Brain*.[11] Thomas R. was a very intelligent and inventive engineer, who, while generally mild mannered, at times exhibited unpredictable and psychotic behavior, most often manifested in violent rage. This caused problems at his job and in his marriage, of course, such that he sought psychiatric help. After a long term of psycho-therapy proved fruitless, Thomas was referred to Mark and Ervin. After drug therapy and electrode stimulation, it was determined that Thomas' behavior was a result of focal epilepsy, and after "many weeks of patient explanation" Thomas accepted psychosurgically produced lesions. This case was evidenced as a great success, such that this quote appeared in *Violence and the Brain*: "Four years have passed since the operation, during which time Thomas has had not a single episode of rage."[12] Mark and Ervin made no comment as to Thomas' marital or employment status after the operation.

In 1973, Peter R. Breggin took it upon himself to make a follow-up study of Thomas R. What he found was hardly to be expected from Mark's and Ervin's account. In short, Breggin found out first that Thomas R.'s original psychiatrist had recalled that Thomas was depressed, but not paranoid, and had no incidence of violent rage (which recollection was supported by hospital reports which indicated that he had never been restrained or in any way treated as dangerous during

four diagnostic hospitalizations.) Thomas had never been in trouble at work because of violent behavior. However, since the operation Thomas' life has been most miserable. He was admitted into a Veterans Administration Hospital in a west coast city less than one year after his surgery in 1967. He was diagnosed a schizophrenic, paranoid type, and he expressed the concern that he was under constant manipulation through the electrodes in his brain. Shortly after his first discharge from the V.A. hospital, he was readmitted after his *first* officially recorded violence, having been arrested by the police for fighting. The V.A. declared him totally disabled. In December, 1973, Thomas R.'s mother, into whose care he was released, filed a two-million dollar law suit against Mark and Ervin.[13] (Valenstein makes several notable comments about Breggin and his motivation for such an investigation. He suggests that Breggin is not above distorting the facts and/or sensationalizing evidence in his attempts to discredit the practice of psychosurgery. One ought to consider Breggin's bias, as well as the evidence he presents.)[14]

This is not to say that all psychosurgery patients inevitably end up like Thomas R. But this was a case to which Mark and Ervin had pointed in pride, and it has clearly turned out a disaster. The conclusion to be drawn that is most fair to the proponents of psychsurgery is that such an operation is at best very unpredictable, and for that reason not to he used except as an extreme last resort. But do we have to be that fair? Is psychosurgery a procedure in which specific benefits for the patient reliably follow the production of brain lesions; or is it merely an experimental procedure with consequences that may be not only unpredictable but disastrous? Even proponents of psychosurgery admit that such an operation must not be used except when there is evidence that a specific disease or hrain abnormality exists which causes the undesirable behavior, and which could clearly be eliminated through the use of this operation. But, the opponents quickly point out that the complexity of the brain and its function make the localization required for successful psychosurgery without side effects almost impossible.

Use to Control Social or Political Deviance

One of the great fears underlying the stand taken by the opponents of psychosurgery is that it might be used to control or eliminate any and all forms of social or political deviance. There have been many documented cases of operations performed on sexual deviants and drug addicts. Operations have also been performed on hyperactive children.[15] Opponents of psychosurgery see most forms of deviance, particularly hyperactivity and aggression, as something other than merely individual infirmities, but rather as products of the system, whether political, social, or familial. Proponents say that the greater danger to a total view of behavior is not that social considerations will be slighted, but rather that neurological considerations will be ignored. The fight on the front lines of this controversy is so bitterly impassioned that it is difficult to arrive at an objective viewpoint. So far, the government has refused to take a stand. At this time, only one state, Oregon, regulates psychosurgery by law. The first court case in history to limit the practice of psychosurgery took place in 1974 in Michigan, and the result was a ruling that involuntarily confined patients are unable to give legally adequate consent to an experimental, high-risk operation like psychosurgery. However, the ruling does not apply to voluntarily confined patients.[16]

I would welcome an operation that increased one's ability to choose, but I would loathe a operation that decreased his freedom of choice.

A Christian's Response

Having been given diametrically opposed viewpoints on the subject, and no help from the government, how should a Christian react to the Psychosurgery controversy? First, let us make sure that our reaction is not a quick and easy one, i.e., "I don't understand it, so I'm against it." Let us neither react in fear. Psychosurgery must not be seen as an atheistic plot to subjugate the world to some tyrannical power. Let me say, however, that such a fear isn't completely groundless. Some very gruesome things happened in Germany under Adolf Hitler in the name of medical science, and it is important to remind ourselves that such an occurrence, while unlikely, is not impossible. However, even without psychosurgery, there are many ways and means by which a political tyrant could accomplish his ends, such that psychosurgery is not a necessary addition to his arsenal. It is the tyrant we must protect against, not his methods. Therefore let us not use fear of political oppression as our argument against psychosurgery.

If it is not a means to control the masses, could it be a means to control deviant individuals? And if it is, should we be for or against it on those grounds? As I have documented above, psychosurgery has been used to eliminate deviant behavior, even in young children. However, it is not clear in these cases whether the motivation for the operation was the good of society or the well-being of the individual toward a greater ability to function as a whole person. I'm not sure if one reason is any more a justification than the other, but I personally would be more concerned for the welfare of the individual. Nevertheless, it is most difficult to divorce the individual from society, in that society is so much better off when its individuals are mentally whole (and so much more so if its individuals are spiritually whole). In any case, psychosurgery to eliminate deviance can be justified if one accepts the premise that the individual is deviant because he has a disease which forces him to be deviant, and allows him no choice, nor indeed any ability, to freely react to environmental stresses. On the other hand, psychosurgery to eliminate deviance would be abhorrent if it were done to reduce the individual's freedom to choose right or wrong, for the purpose only of social control. I believe that any individual is less than fully human if he has lost his ability or right to choose. For that reason I would welcome an operation that increased one's ability to choose, but I would loathe an operation that decreased his freedom of choice. Proponents of psychosurgery would say that I should support them because

Just as it may be inhumane and un-Christian to alter one's brain so as to destroy his individuality, it is just as inhumane and un-Christian not to use the tools available to us to help make one whole.

the former is true, while opponents would call for my support on the basis that the latter is true. It just is not clear to me which is in fact the case.

I do not wish to side-step the issue by claiming ignorance of the final answer. I believe that as a Christian I have a responsibility to face an issue such as this that may so profoundly affect the lives of many in need of salvation. So, what do I do until all the facts are in? First, I must seek to be as informed on the issue as I can be. Secondly, I must do whatever I can to insure that all possible safeguards are taken in further use of, and research into, psychosurgery. I believe that because of the limited predictability of the effects of psychosurgery, it should be regulated by a responsible agency. It should be used only in such cases where the evidence proved that nothing reliable, short of psychosurgery, will effect a cure, and where the case is sufficiently severe that the well-being of the patient dictates a necessity for drastic action. No one person, nor small group of friends, no board of "yes-men" should take upon themselves such a large decision. I would encourage further research into the anatomy and physiology of the brain, toward a better understanding of the mind and of human behavior. Experiments should be performed on lower animals for this purpose. When surgery is to be performed on a human subject, it should be done only when a full disclosure of the procedure, the goals of physiological and behavioral change, and the possible side effects is made to a regulatory board, to the patient when he is able to comprehend and make a free choice, and to the patient's nearest relatives who might help him make a choice, or make the choice for him if he is incapable. All of these should give their approval before the operation is done. Mark and Ervin recognize the seriousness of a decision for psychosurgery, and they have proposed some guidelines similar to the above.[17]

I have no apprehension that we might be going where God never meant for us to go, nor that somehow out of this we might find a human independence from God. Rather, I feel excited that we might find out more about what it is to be human and how we can grow to be more like Jesus Christ. Our attitude toward psychosurgery ought to be the same as that toward all of psychotechnology, all of medicine, and all of science. It must be used as a tool in the service of mankind; and must never be used to hurt or destroy, only to save and to aid. All possible safeguards must be applied to insure that this is the case, but non-scientific evaluations should not alone be sufficient to stifle scientific progress. If psychosurgery can be shown clinically to be ineffective or harmful in the ultimate, it should be discontinued. But it must not be banned solely on the grounds of anti-scientific, anti-medical, or anti-psychiatric philosophy. As Christians, we must make responsible choices in such matters as this, based on evaluation of the situation on all levels of application. The goal of behavior change is inherent in Christianity, such that a sinful, rebellious child of God is brought back to a loving relationship of service to his Creator. On a spiritual level, this behavioral change is effected by the process of sanctification and commitment to living a life like that of Jesus Christ. Socially, it may be effected by changing one's environment, or by therapeutically increasing one's ability to react more normally to stress. On a neurological level, it may require psychosurgery to medically improve one's ability to react more normally to stress. Just as it may be inhumane and un-Christian to alter one's brain so as to destroy his individuality, it is just as inhumane and un-Christian not to use the tools available to us to help make one whole.

Conclusion

Psychosurgery will continue to be debated passionately, both within the field of psychiatry and neurology, and by laymen outside the field. Perhaps the controversy will never be completely solved, because even if the operation were to become completely predictable, it would still be possible for psychosurgery to be used for cruel or evil means by malevolent practitioners or agencies of social control. It is necessary for us as Christians to attempt to understand the controversy as best we can, and to make our decisions based on a love for God and humanity toward improvement of the human condition and a unity with Jesus Christ, our Lord and Savior. I pray that psychosurgery, and all forms of medical and psychological intervention, may increase our ability to know our God and respond to Him. May God bless us to that end.

NOTES

[1]Valenstein, Eliot S. *Brain Control: A Critical Examination of Brain Stimulation and Psychosurgery.* (New York: Wiley, 1973), p. 266.

[2]*Ibid.*, pp. 51-54.

[3]*Ibid.*, p. 55.

[4]*Ibid.*, p. 25.

[5]Mark, Vernon H. and Ervin, Frank R. *Violence and the Brain.* (New York: Harper & Row, 1970.), pp. 72-84. (including Figures No. 8-15.)

[6]Chorover, Stephen L. "Big Brother and Psychotechnology: The Pacification of the Brain." *Psychology Today.* May, 1974, p. 63.

[7]Mark and Ervin, *op. cit.*, p. 60.

[8]Mark, Vernon H. "A Psychosurgeon's Case of Psychosurgery." *Psychology Today.* July, 1974, p. 33.

[9]Valenstein, *op. cit.*, p. 262.

[10]Chorover, *op. cit.*, p. 64.

[11]Mark and Ervin, *op. cit.*, pp. 92-97

[12]*Ibid.*, p. 97.

[13]Chorover, *op. cit.*, p. 66.

[14]Valenstein, *op. cit.*, p. 237, p. 395.

[15]*Ibid.*, pp. 212-219.
also: Mark and Ervin, *op. cit.*, pp. 56-57.

[16]Offir, Carole Wade. "Psychosurgery and the Law: The Movement to Pull Out the Electrodes." *Psychology Today*, May, 1974, pp. 69-70.

[17]Mark and Ervin, *op. cit.*, p. 157.

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Human Engineering and the Church

The American Scientific Affiliation, together with the Center for the Study of the Future, the Christian Association for Psychological Studies, the Christian College Consortium, the Christian Legal Society, the Christian Medical Society, the Evangelical Theological Society, the Institute for Advanced Christian Studies and the Institute for Christian Studies (Toronto), cosponsored the International Conference on Human Engineering and the Future of Man, July 21-23, 1976 *at North Park College, Chicago, Illinois. Here, two distinguished participants in that conference give their response/report on the conference for* Journal ASA *readers.*

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The Conference brought for many of us not only the opportunity to think through more carefully the implications of human engineering, but also the prospect of achieving a distinctly Christian and biblical strategy. We live in a groping, foundering society, a "land of broken symbols," as Harvey Cox expresses it. And the inequities and uncertainties of modern culture are nowhere more obvious than in the application of scientific and technical developments to human health.

We were reminded that the biblical view presents man as made in God's image, to rule the earth as servant-son of his heavenly Father. But man is also a fallen creature, sinful and rebellious, inherently self-centered. The original aim, to glorify God in his personal life and in his family and corporate relationships, is easily forgotten. And, too, man is finite, which condition prescribes that, even without sin, the task to subdue the incredibly complicated earth would be a prodigious one.

Yet our deliberations have led us to just this conclusion: there is no shrinking from our obligation to do good—to rule benevolently, in spite of the obvious harm that can come if our good intentions go awry. We must also be aware that our good intentions may be tinged with human greed and personal ambition. As recently pointed out by the Science For the People group in Boston, "in the name of improving human health, newer and more potent threats to health are being developed. It is unclear to us that the development of these genetic technologies is really in response to national health needs, and not simply in the interests of us professional scientists who make our living from such technological developments."[1]

Senator Hatfield reminds us too, in sobering reference to the misuse of science under dictatorship in Nazi Germany, that scientists can quickly fall under the spell of an ideology and play into the hands of a far from benevolent dictator, if indeed they are not already bent for their own prejudiced reasons upon destructive methods in dealing with the chronically ill and unwanted of society.

In light of these recollections, our desire to engineer for better human health must be conceived humbly and cautiously. It must be done (a) with a view to the need to educate the scientist and to understand his thinking and his needs, (b) with an understanding of the way the public perceives science and technology and (c) for the Christian, with an imaginative and

believing faith that the Church of Jesus Christ can be a truly redemptive community to encourage the good and to critically evaluate the suspect in the human engineering enterprise.

Educating the Scientist

To understand the scientist, it might be well to consider the character analysis by Gerald Holton[2] at a recent conference on science and ethics. He points out that scientists possess an almost irrepressible optimism about the future, a simplified and lucid image of the world. They are generally a little impersonal, tend to be logical rather than emotional, aspire to simple answers and an economy of thought, display an intense curiosity, and psychologically lean toward the obsessive-compulsive. All this, it is pointed out, makes it quite difficult for the scientist to think seriously about social and ethical problems. The few exceptions are often those who have attained world-wide recognition, and then it might be suggested that they are different only in that they have found a "Nobel mountain" to hide behind. Dr. Robert Sinsheimer too, was lamenting the fact that so very few scientists at Cal Tech are interested in ethics. In fact, Holton points out, fewer than 1% of scientists indicate any interest in ethics.

Given this strange category of *homo sapiens,* what can we recommend for his sensitization for ethical concerns? In the short term, conferences like that sponsored by the New York Academy of Sciences on Ethical and Scientific Issues Posed by Human Uses of Molecular Genetics can be a mechanism for the education of the scientist to social concerns. In addition, the various research-supporting agencies should expand their support of studies which address themselves to the effect of human technologies on model systems which approximate the patient. The Asilomar Conference of February 1975 on molecular recombination technology[3] addressed itself primarily to the containment of public health hazards associated with the production of new microorganisms which might inadvertently carry tumor virus or antibiotic resistance genes into the human population. The ethical implications of future gene therapy for the genetically diseased were not considered, probably because the working scientist would view such considerations as premature, given the primitive state of the art in the use of bacterial and viral agents to carry human genes into the cells of higher organisms. It would seem to me that a logical next step would be to study the effects of such agents in human organ and cell culture systems, examining a variety of physiological parameters in order to assess not only the success of genetic transformation, but also the possible *deleterious effects* of such treatment. In addition to the possible production of tumor viruses and the development of resistance to various antibiotics, studies should also be carried out of possible altered mutation rates and the cells should be examined for histological and ultrastructural aberrations. The support of research along these lines would have a two-fold benefit; it would provide a measure of the hazards which might be expected in human gene therapy, thereby sensitizing the scientist to the ethical implications of his work, while at the same time providing valuable data on the metabolic fate of extracellular genetic material. The fundamental assumption of this proposal is that molecular biologists are not naturally inclined to concern themselves with what appear to be future ethical and moral issues, and therefore research support has to be redirected to move the scientist in his thinking and his research in this direction. The same should be true for behavioral scientists and those interested in surgical intervention in brain disorders, though the gap to be bridged might not be so great in these cases.

There is no shrinking from our obligation to do good—to rule benevolently, in spite of the obvious harm that can come if our good intentions go awry.

To further meet the needs of the scientist for training in social and ethical concerns it would seem appropriate to extend these ideas beyond the confines of the conference format to the printed page, especially to those technical journals whose present editorial policies exclude all but the most rigorously precise and succinct technical papers. The number of scientists who read such journals almost exclusively is probably a considerable fraction of the total, and in many cases these individuals represent the keenest minds in their fields. The editors of these journals would appear to be an important group to influence. Federally-funded conferences with ethicists, and efforts on the part of the scientific societies which publish these journals to influence editorial policy would doubtless be rewarding.

Beyond this, ethicists are quick to point out that the rewards which are offered to the scientist are invariably directed toward greater focus in his own discipline, whereby he maintains a circle of close colleagues who often cooperate in research and by whom he is judged for the awarding of research funds. Promotion is also still measured largely by the output of publications in prestigious and strictly technical journals. Sabbatical study is directed toward the narrow discipline. Fellowships for faculty members who wish to work on the social and ethical implications of their work are at present available from only one agency, the National Science Foundation, and these are not available to the clinical researcher. The National Institutes of Health should hasten to establish a similar program for medical scientists, and both programs should receive strong funding and be widely advertised.

In making these various recommendations, the goal has been to help the scientist to move into the realm of social and ethical concerns without intimidation and at the maintenance of good science. The alternatives of government moratoria and especially what has been referred to as "adversary proceedings in the media"[4] should be avoided. The Christian should be critical of the critics who foment anxiety and damage reputations without clear cause.

On the other hand, we recall that scientists tend to be optimistic and enthusiastic about the future, and so might be an easy mark for a controlling power which was bent upon evil. One must also take seriously the view of scientists like Jonathan Beckwith[5] that the

scientific community has been subverted by the power structure of our nation for purposes of maintaining both theirs and the latter's wealth and position, and that human engineering will surely be misused to further subjugate the poor and silence the political dissident. Indeed, we all would profit from a serious examination of the Post-American view which "holds little confidence in the American political system" and suspects that "change comes more through the witness of creative and prophetic minorities who refuse to meet the system *on its own terms*, but rather act out of an alternative social vision upon which they have based their lives."[6]

Educating the Public

Engineering for better human health can be done ethically only if it also is understood by an alert and educated public, the recipients. It is therefore recommended that ethicists, and scientists with ethical training prepare suitable articles for publication in the popular magazines, in Sunday newspaper supplements, and in business and trade journals. These articles should address themselves to the kinds of people who do science and how they are trained, to the nature of scientific inquiry and to the importance of freedom and integrity in scientific pursuits. As emphasized throughout this conference, we regard the practice of science as an appropriate and redeeming activity for one who seeks to glorify God. The notion that science, because it describes phenomena in terms of mechanisms, must inherently dehumanize and depersonalize, is mistaken. Several times in this conference reference has been made to the godly men who were in the forefront of science at its beginnings and who were noted for their deep respect for man's wholeness and personhood. Scientific study, seen as uncovering the greatness of the universe and the remarkable order of its parts, is a deeply spiritual experience. The alternative of reducing *man* to a mere mechanism has been the lamentable choice of those who wrongly ascribe to science exclusive hold on *all truth*, an error which Dr. MacKay has appropriately labeled "nothing buttery."[7]

Mobilizing the Church

Finally, in responding to the challenge of human technologies, we come to the Church. "To whom much is given, much shall be required."[8] The Church, the Body of Christ, stands in a position of great privilege and blessing; in the Scriptures we have the revelation of all that was, and is, in God's heart for man, and the Church looms large in those thoughts. It is also the Church's responsibility to express the heart of God, the love of God to brother and neighbor[9] working as a redemptive community.

The Christian Church has the responsibility to train its seminarians and Bible school students in the crucial areas of medical ethics and philosophy of science.

When we come to human engineering, I believe the Church can perform a tremendously important function in at least two respects. In the first, we must make a serious commitment to social action, with special reference to those who choose through reasons of conscience to reject human technologies. It is quite likely that the future will see pressures brought to bear on our society to decrease the health care burden by altering the genotype of the genetically diseased and the behavior of the mentally impaired. Those who refuse these procedures may be called upon to bear the burden of care for the afflicted rather than have that expense fall upon society as a whole. If an individual believes, after fully examining the situation, that it is God's will that they accept the responsibility to care for their own or another *in lieu* of technological intervention, then we in the Church should make every effort to insure that choice—to make the Church a haven for responsible freedom. Dr. David Moberg, in his book *Inasmuch*[10] has pointed out a number of volunteer services which have proved of great benefit and has urged the evangelical church to move into these areas of social concern. High on the list of priorities for the genetically and mentally impaired would be day care centers for mothers with mentally retarded children and homemaker services for the handicapped. These services often require specialized skills and the Church should seriously consider the increased support of college programs for the training of such workers. Indeed, we may eventually find ourselves goaded into social action, just by the fact that everyone else in the community is doing it. In Massachusetts, recent state law prescribes that the mentally retarded are to be taught, insofar as is possible, within their home school systems. Other state and federal programs are also moving to the local level, in what appears to be a long-term trend in the direction of greater community responsibility in the social sphere. Let us be in the vanguard of this movement, and not grudgingly bringing up the rear!

The second function for the Church relates to the need for good science and technology performed sensitively and faithfully. As we contemplate engineering our own genetic and mental health, we desperately need men and women of compassion to staff our research laboratories and health care centers. Considering the characteristics of people who do science, it would seem that their education should be shifted strongly toward the humanities, long before they propose their thesis problem or write their first research grant application. I can think of no better starting point for a scientist than a Christian liberal arts college with a strong science program. Here, a solid moral and ethical basis for scholarship can be presented side-by-side with competent yet sensitive academic preparation for future graduate and professional studies. Sadly, the number of Christian colleges which I can speak for to the rest of my Admissions Committee in considering medical school applicants in miniscule. Perhaps the present Conference with its concern for good science as the handmaiden of good theology, will provide an impetus for Boards of Trustees of Christian colleges to re-direct their efforts toward the development of academic programs in which the natural and social sciences are given the same level of support enjoyed by biblical studies (and athletic programs). Parenthetically, this might also lead to a significant increase in enrollment as parents realize that their children will have many

additional options for future graduate or professional study.

Finally, I believe the Christian Church has the responsibility to train its seminarians and Bible school students in the crucial areas of medical ethics and philosophy of science. (In fact, a program of this type was begun a year ago at Gordon-Conwell Seminary in S. Hamilton, Massachusetts). Leaders in the local churches should in turn be involved in developing courses and seminars which bring ethicists, scientists and physicians before their congregations to discuss these crucial issues. An important benefit of this program would be the production of individuals within the local church whose Christian perspective and sophistication in social and ethical problems would make them invaluable as members of the numerous interdisciplinary advisory panels which will doubtless be established as decision-making in human engineering becomes increasingly complex. My own experience, as a member of the Psychosurgery Committee of the Boston City Hospital, which seeks to advise patients who appear to suffer with temporal lobe epilepsy, has been most rewarding. The Committee is chaired by psychiatrist Dr. David Allen and consists of a psychologist, a sociologist, a lawyer, an evangelical minister, a medical student, a philosopher of science and a medical school biochemist. Our usual procedure is to meet with the neurosurgeon and his psychiatrist colleague first to discuss the case, then to see the patient and then the family, and finally to meet separately to discuss the merits of surgery and to form an advisory opinion for the patient. One reward of such endeavors comes from the opportunity to bring a Christian perspective to a very difficult decision-making process. I would strongly encourage other technically—and theologically—trained Christians to develop a background in ethical and moral decision-making in order to be available as the future presents opportunity to bring Christ's compassion into the human engineering arena. A second reward comes from the chance to meet and learn from others of different religious or philosophical persuasion who are likewise concerned with what Albert Jonsen of the President's Commission for the Protection of Human Subjects of Biomedical and Behavioral Research has called "a refined concentration on what is human and appropriate to human dignity."[11]

FOOTNOTES

[1]Proposals on Research Involving Gene Manipulation—Genetics Study Group, Science for the People, Boston, Mass.
[2]Holton, G. Conference on Ethical and Scientific Issues Posed by Human Uses of Molecular Genetics, New York Academy of Science, May 1975.
[3]cf. Berg et al, Science 188:991, 1975.
[4]Hecht, F., Biomedical Res.: Ethics and Rights, Letters, Science 188:502, 1975.
[5]Beckwith, J. in "Ethical and Scientific Issues Posed by Human Uses of Molecular Genetics" (M. Lappé and R. S. Morison, editors) Annals of the New York Academy of Science 265, 46 (1976).
[6]Editorial, Post American, August-September, 1975.
[7]*The Clock Work Image*, InterVarsity Press, Illinois, 1974.
[8]Luke 12:48b
[9]Galatians 5:13-15.
[10]*Inasmuch*, Erdmans, Grand Rapids, 1965.
[11]Letters, Science 188, 175.

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How should Christians view human engineering? Seeking the way of humility, our first reaction might be strongly negative. "I'm content with what God gives me; I don't want to interfere." This reaction may be reinforced by sheer inertia. "It's dangerous. We don't know enough. Where will it all lead? Best keep out . . . let the world get on with it if they will."

But will this do? "He knoweth to do good and doeth it not, to him it is sin." It appears from these new developments that the sum of misery in the world is reducible. God is the *Giver* of the new knowledge. It is He who will one day ask: "What *good* did you do with it?"

At the outset, Dr. Callahan raised the key question: "Do we have a positive *obligation* to do good, or is our obligation only to avoid doing harm?" In response it was generally agreed that the Christian cannot stop at avoiding harm. We do have an obligation to do good, if the good is well identified and in our power.

The first thing we are faced with, however, is the ever-present risk of *superbia, hubris,* human pride. Even if Christianity rejects in principle all pagan and superstitiously fearful attitudes towards the natural world and natural laws, self-glorification is a constant temptation. Dr. Spencer reminded us that neither self-glorification on the one hand nor terror on the other are appropriate responses to the Biblical perspective on our human situation.

Secondly, Dr. Callahan reminded us that our power is *bounded,* limited power. It is an illusion to think that we can proceed without limit in any of these directions, because sooner or later costs catch up with us. It is therefore essential that we go slowly and if possible reversibly, remembering incidentally that we are not only finite, limited in our wisdom, but also sinful, therefore warped in our motives.

Thirdly, even good aims can conflict, especially between the different levels, individual, family, and

corporate, at which human fulfillment is to be sought. For example, reduction of infant mortality, which is surely an individual and family good, conflicts with the aim of preventing mass starvation, unless we can find a humane and acceptable way of avoiding exponential population growth. There are many examples where it is not a simple matter of choosing whether or not to do good, but rather one of wondering whether we could ever see clearly enough to add up the sum of good and evil, and work anything out as a clear and final answer. We are continually fumbling for an understanding of the controls of an exquisitely complex mechanism, which we can all too easily wreck. We shall need all the wisdom that its Creator can give us if we are not to do more harm than good by our intervention.

Fourthly, the achievement of material goals and improvements can all too readily swamp the spiritual point and purpose of our human existence. We remember the rich man in Christ's parable: "Soul, thou hast much goods laid up for many years; take thine ease, eat, drink, and be merry." And the answer of God, "Thou fool, this night thy soul shall be required of thee." The question with top priority is always: "How will it all end? To what end is it all being directed?" These things can conflict miserably.

Fifthly, the manipulative approach, even when well intentioned, can degrade human subjects. The sweeping generalization that medical science converts people into things we must reject as typical of the sort of extremist propaganda which brings discredit upon arguments that might otherwise deserve respect. But the danger is not to be ignored.

Sixthly, there are no human engineering substitutes for personal salvation, even if some feel that some of the virtues listed as "fruits of the Spirit" can be assisted by the kind of reinforcement (or perhaps encouragement is the ordinary word for it) that behavioral psychology is beginning to understand.

Principles and Situations

Where do we turn for guidance in such a maze? Will the old Judaeo-Christian values still serve? An immediate answer is that values or moral criteria don't *serve* us at all. They *judge* us. But it is a good question whether the old *slogans* will still serve to articulate the relevant Biblical criteria as applied to these new situations. Take, for example, the slogan of "the sanctity of life." This can be confusing if we take "life" in too strictly a biological sense. We have responsibilities to God as *procreators* to do the best we can with the data He gives us to bring God-glorying lives into being. To use only the slogan "the sanctity of life" to determine whether a fetus should survive for example, seems to many inadequate and simplistic. Again, the slogan of the sacredness (or the rights, or the worth) of the individual is admirable, and thoroughly Biblical as applied to the normal grown human being. But in borderline cases we may have to ask whether we in fact have an individual *person* here to whom it is meaningful to attribute rights. We sense here the difficulty of the duty to tread the middle way of Biblical realism between, on the one hand, an arrogant lack of respect for the fullest potentialities of the biological situation that exists before a conscious child comes into being, and on the other hand, superstitious and meaningless talk of "responsibilities" to *non-persons*. We have to recognize that the fetal situation at an early enough stage is essentially a physical and biological, not a personal one, whatever the potentiality may be. In all this the Creator is beside us, knowing the facts better than we, and affronted if we underestimate through carelessness or any other unworthy motive the personal capacities of that biological situation. By the same token, we must remember that if in God's sight, in a particular abnormal case, there is not anyone there with a claim on us, then we will do Him no service by going through pious or superstitious contortions as if there were. Nobody would wish to minimize the difficulties in *practice* in determining what is in fact the case; but at least it should help if we can get straight the questions for which we need answers.

In this connection it is important to beware of an illicit and confusing form of argument that I might term "Thin-end-of-the-wedgery". This (a twin brother of "Nothing-buttery") often crops up when people ask "At precisely what point in time do we have a fully human individual with rights?" This sounds a sensible and even an urgent question; if we cannot justify a precise answer the "thin-end-of-the-wedger" is liable to argue that there is then "no real difference" between a conscious human infant and a fertilized egg, or between a responsible human agent and a brain-damaged 'human vegetable'.

The logical fallacy is exposed if we consider a parallel case. Nobody can rationally establish an exact number of hairs, N, such that anyone with N hairs on his chin is bearded and anyone with N-1 is not. But this in no way proves that there is no real difference between being bearded and being beardless. In all such cases we recognize the difference by looking for contrasts between the *ends* of the continuous spectrum, and not by discovering a precise dividing line.

So it is, I think, with the way we should think of the development of the embryo. The search for a precise point at which we can prove that we have a "living soul" may be vain; but this in no way tends to debunk or reduce the real distinction between an object that is the body of a living human person, and an object that is too immature or too deformed to be so.

The same point arises when we ask under what circumstances it is meaningful to seek the "informed consent" of a mentally defective patient before operating. The suggestion was made that when either immaturity or infirmity made true dialogue impossible, the ethics of proposed treatment might still be checked by considering what answer one would make to an imaginary "advocate". For the Christian, Christ Himself is always a real "advocate" in that capacity, to whom we must answer in sober truth at the bar of judgment. When the fullest attention to the available facts, including the data of Scripture, leaves us perplexed, it is in dialogue with Him, asking His Spirit to illuminate for us the relevance of His revealed will and the other data we have, that the Christian has his most realistic resource for the good of his patient and those he seeks to serve. No casuistic book of rules, however expedient it may be in our sinful world, offers an adequate substitute for this experimental test that the Christian servant can and must make.

It is important however, that we should distinguish between this insistence on the need for direct reference to Christ for the wisdom of His Spirit, and what is

popularly called "situation ethics". The point is not that in these cases a single clear Biblical law applies. The point is that we are confronting situations where several Biblical principles (respect for human life; compassion for other people including relatives; desire that God may be glorified by the fulfillment of human possibilities, and so forth) seem to tug us in different directions. This is the sort of situation where I believe reliance on the Holy Spirit, not apart from Scripture but showing us the relevance of Scripture and illuminating our minds to see the relevance of other things, is meant to be a reality for us, something very different from thumbing through a rule book. In the same way we must be careful to distinguish between what one speaker referred to as the "continual transformation of the Christian mind", which we recognized as a Christian duty, and what is popularly advocated as "the revision of our values in the light of new knowledge". Someone quoted C. S. Lewis as remarking that you could no more expect to discover new values than to discover new primary colours. The kind of "openness" that we recognized as a Christian duty can never be expressed by way of blindness or disobedience to revealed truth.

So far I have been summarizing points of caution; but the Bible has much to say also on the positive side. Not surprisingly, very little of this is in the way of direct commandment. Encouragement comes more indirectly from the Biblical perspective and Biblical priorities.

(a) First among these, for the scientist and the human engineer himself, is the most general principle of all: "Seek ye first the kingdom of God and his righteousness." This we found to be a very thoroughgoing one, especially bearing in mind all the risks of counter-attractions.

(b) Secondly, for the people we are seeking to serve, God's first priority is that they should be enabled to glorify and enjoy him for ever.

(c) To that end, the Bible urges upon us the creation ordinances of marriage and family life, and the moral ordinances of the law. Particularly relevant are the values of fidelity, integrity, loyalty, obedience in the family and in corporate relationships agreeable to the law of God.

Are these truisms? They are certainly familiar enough; but as I have already suggested, to work through what these things should mean in particular cases may be the best and most realistic way to get our eyes open to God's will in each case. What does it mean in this context for example, that man is made in the image of God? Primarily, no doubt, it means that he is answerable to God: he can be 'Thou' to God, and knows what it means to be challenged by God. It also means that we are meant to be like God. In particular, God is *dead straight*, so our being in the image of God means that we are to be dead straight. I feel this is a major key to our problem. Almost every procedure we have considered is one whose merits have depended on whether and to what extent we envisaged the people concerned as *trustworthy* as well as adequately informed. You could make any of them sound sinister by imagining a case where the motives of the scientist were unworthy. Conversely, almost any can be envisaged as a duty of compassion in certain defined circumstances. This said, however, we find ourselves forced to recognize, sadly, that in a fallen world legislation may have to be framed for, if not the worst case, then at least a far less ideal case, than if everyone were guaranteed to have only the most transparent intentions and the best of motives. In all our discussing and thinking we must be careful to distinguish between what might be *legitimate* in God's sight—perhaps, in particular cases, obligatory in God's sight—and what ought to be made *legal*.

We are confronting situations where several Biblical principles—respect for human life, compassion for other people, desire that God may be glorified—seem to tug us in different directions.

The Christian Church

What then should the Christian church be doing? First, the church might redeem its past by becoming the champion of science in areas where fearful and less informed people might perhaps oppose scientific research. It is essential, however, for the church to be a critical champion: criticizing in love, and being merciless if there are any signs of unbiblical tendencies. The implication would be that the church should oppose research only if it infringes Biblical principles, or if the research would take the place of and prevent our doing something still better, something more glorifying to God. This last point may be important. There are always going to be enthusiastic people who are bitten with an idea and want to sell it. To argue that "there is nothing in the Bible against it" is not good enough. Part of our responsibility as Christians, as indeed of anyone else in an effective community, is to consider whether there isn't something still better, or more urgent, that needs doing. We have to do our homework before we can be clear that it would be still better—more glorifying to God, but it is certainly part of our obligation to ask.

Secondly, a major responsibility of the church is to clarify some key concepts in the debate. By "the church" here, of course I mean Christian people; I don't necessarily mean parsons, let alone general assemblies. But qualified Christians ought to be busy, for example, working in what is at the moment a live area in philosophy, seeking to clarify such concepts of human nature, the person, human rights, consciousness, death. What "rights" can meaningfully be assigned to a fetus? Must a body which shows no signs of a continuing conscious personality be preserved because it is biologically alive? There is a huge package of concepts that need clarifying.

In another context there is a continuing need to clarify the concept of "chance", distinguishing its innocent technical use in science from that of its pagan metaphysical namesake. To speak of the "Rule of Chance," for instance, as if "Chance" were an alternative agent to God, can be grossly misleading as well as scientifically unjustified. What the scientist means by "chance" is simply that which could not have been predicted on the basis of prior data. So when geneticists

speak of "taking a hand from the genetic deck of cards," they must not be taken to be advocating a pagan theology. The metaphysical overtones have no basis in their *physical* image of the process. Moreover as far as the Bible is concerned, when 'the lot is cast into the lap," "the whole disposing thereof is of the Lord". In that sense, "chance" is a biblical concept without any pagan overtones.

Then take the concept of *"liberty"*. Several papers brought out the need for deeper analysis of this notion in the present context. For the Christian, liberty does not mean just "doing one's own thing;" it also means "being subject to one another, for the sake of Christ". This is a humbling yet richly rewarding concept of liberty. Where the world in general thinks in terms only of absence of restrictions, the church should have much to contribute by way of a corrective emphasis. By the same token, current uses of the concept of "equality", penetratingly explored by Dr. Sinsheimer, need evaluation and illumination in biblical terms.

Another task for Christians could be to promote and spell out in detail the implications of what Dr. David Allen called the "principle of reciprocity". "Would I want the same done to me?" he asked us. In sufficiently clear-cut cases that is a good test. But of course there are awkward cases. If we are considering whether a fetus with Down's syndrome should be allowed to develop into a mongol child, there is little help in asking "Would I like it done to me?" I can never know what it would be like to be a fetus or a mongol. There are many borderline and gray areas where the outworking of the principle of reciprocity is far from clear.

Again, we were reminded by Dr. William Wilson that protecting the *right to treatment* might be as important as protecting the right to refuse treatment. Since the latter finds more advocates at present, Christians might well be on the alert to safeguard people's rights to the treatment that could help them.

Dr. Perry London gave us a text on which perhaps the church might well preach from time to time. "Only the *responsibility* for the future of man rests with man: not the *future* of man." We are responsible for what we can do to shape our future; we are not responsible for the real future. Responsibility for our future rests with God. This might be an interesting sermon to preach, because the distinction is not often observed in either utopian or anti-utopian literature.

Qualified Christians ought to be busy working in what is at the moment a live area in philosophy, seeking to clarify such concepts of human nature, the person, human rights, consciousness, death.

Finally, Dr. Carl Henry suggested that one of our prime functions as Christians is to seek to "sensitize the conscience of the nation". No evangelical with a sense of history could dissent from this. At the same time we would do well to be wary here of the subtle and seductive temptations of *scaremongering*. There are many in our day who make a reputation out of being scaremongers: whose books sold because of the shivers they send down people's spines. Works of this kind, when they obscure the factual issues in clouds of emotional fog, bring despair to those fighting for proper and intelligent safeguards against the abuse of science. Christians must beware of jumping on the bandwagon of the scaremongers. It is a temptation, perhaps especially to evangelicals who have awakened suddenly to their social responsibilities, to be mere echoes of contemporary "doomsmen," rather than critics of the critics. Most critics today use essentially pagan criteria. Christians do not help by uncritically echoing them.

In this respect the church has surely its part to play in the most difficult part of this whole enterprise for our society, namely *learning what to want*. The theory of behavioral manipulation makes it clear that the greatest power lies in the hands of the man who can determine what we want, so that this is a sensitive and fateful area of the discussion on human engineering. What ought we to want? It is important for the Christian not to take the stance of the man who knows what he wants, and other people have just to listen. We will have to be ready to listen just as much as the non-Christian, even though our ear is bent primarily in the direction of God's word.

One more note of warning. The church needs to be wary of affiliating with groups who do not respect God's priorities and pursue them with all their hearts, because we can quickly find ourselves trapped in unrealistic compromise. We may then be rightly stigmatized as "letting the group down" if at some later point it becomes clear that it does make a difference whether or not you believe that man's chief end is to glorify God and to enjoy Him forever. Equally, we must pay specially loving attention to any misgivings expressed by those in the church who are not equally informed, and may be more hesitant and fearful than we. The function of the church as salt in the earth is a corporate one. Our thinking in this area must be a fully corporate enterprise if it is to be fully open to such guidance as the Spirit of God can give his church. The more conservative and fearful are equally members of His body. Whatever their difficulty in becoming articulate in our terms, we have no right to expect that His Spirit is going to be given more to us than to them in seeking the path of wisdom for His church.

I have tried in these reflections to indicate how the balance has swung, first one way and then the other, during our deliberations. Above all, what I heard us say to one another was: Let us be positive. This I think is not trivial. It was not at all to have been assumed in advance that a gathering of evangelical Christians should have consistently sought for positive good to come out of these new developments, one after another, and to have acknowledged by implication our obligation to further this positive good as God would enable us. It is remarkable, I think, that we had so much agreement. I trust and pray that it augurs well for evangelical involvement, with all the fear and trembling that Paul commands, and no self-confident strutting or arrogant postures, in the development of legitimate human engineering for the good of man and the glory of God.

Should Lawbreakers Be Treated or Punished?

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In recent years, the philosophy behind our penal system has shifted from an emphasis on punishment to a primary concern for rehabilitation. At a surface level, the shift appears to be both humanitarian and Christian. In this paper, I attempt to demonstrate that holding rehabilitation as the primary purpose of prison can undermine the entire concept of justice. Much of present day thinking rests on one of several presuppositionary bases assumed in psychological theory. After tracing the background for the current focus on rehabilitation, I then suggest certain difficulties with the rehabilitation model from a Biblical perspective.

C. S. Lewis once wrote that Christians must oppose the humanitarian theory of punishment, root and branch, wherever they encounter it. The view which Lewis so strongly rejected does away with the idea of punishing moral wrong and replaces it with the more "humanitarian" purpose of rehabilitating social deviants by psychological treatment. A recent issue of the American Psychological Association Monitor (May, 1975) told the story of Patuxent Institution in Maryland, a "therapeutic" prison which for the last twenty years has implemented the theory to the hilt. Although it has all the trappings of a normal prison (high fences topped with barbed wire, steel gates, etc.), Patuxent claims to provide a therapeutic milieu compatible with its orientation towards treatment rather than punishment. Instead of a warden, the director of the institution is a psychiatrist. Personnel includes a staff of sixty-seven therapy-type professionals. People committed to the prison are regarded not as criminals deserving societal retribution or chastisement for misdeeds but rather as sick people, undersocialized or in some other way maldeveloped, in need of therapeutic intervention.

Consistent with their philosophy, they regard any opposition to their helping efforts as evidence of serious problems. As the Moniter reporter put it, ". . . to assert one's rights or one's dignity against an institution that is by definition benign, is automatically to be branded recalcitrant, or simply sick." Without the concepts of justice or fair desert, there are no grounds for determining length of sentence. Murder and petty shoplifting do not represent different levels of moral offense which justify greater or lesser punishment; they are both taken as evidence of mental sickness which require treatment. Duration of treatment is of course something which the professional must determine, since only he in his role of expert is qualified to pronounce a patient cured. It is consistent therefore that everyone's sentence at Patuxent is indeterminant: "When we decide you are better, we will release you." The medical model of not discharging a physically ill patient from the hospital until his temperature is normal is closely paralleled at Patuxent. (Considering the confusion in the field of psychodiagnostics, one immediate problem with Patuxent's procedure is the absence of a reliable thermometer of mental health.) In theory, a murderer who conned his therapist into believing he had clearly seen the error of his ways and wanted to live right could be pronounced cured and released in a week, while a one time petty shoplifter who refused on grounds of personal integrity to submit to forced therapy could remain imprisoned for twenty years.

Let me be clear that I am not taking issue with concern for restoring lawbreakers to a useful and constructive role in society. Such concern is right and Christian. Nor am I arguing that psychological tech-

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niques may not be useful in achieving that goal. Criminal behavior is often related to psychological disorder. Counseling procedures have a justified, legitimate place in rehabilitation efforts. The issue which concerns me is rather the repudiation of the concept of justice as a foundation for governmental handling of lawbreakers. In this article, I want first to trace and briefly critique the philosophical background of the humanitarian theory of treating criminals according to a psychological as opposed to a moral model and then to highlight a few major contradictions between this view and Biblical Christianity.

Individualism in Modern Psychology

Every system of psychological theory developed apart from reliance on Scripture is typically rooted in humanistic thinking. Man is regarded as supreme and central. One form of humanism running through the presuppositions of much American psychology is a point of view known as *individualism*. An emphasis on the uniqueness and worth of the individual developed as a reaction to the dehumanizing structure of Medieval society. In that stifling climate, a high view of the importance of every person was a welcome breath of fresh air. In recent years, the doctrine of individual worth and freedom has moved to an extreme form. One observer of the American scene has commented:

> Individualism has culminated in an ideology that equates liberty with the absence of all bonds, all commitments, all restraints upon social action." He goes on to say that "the ideology of individualism is so powerful that we look on bonds as restraints . . . The remaining structures of shared existence are assaulted as unjust obstacles in the way of liberty, as impediments to the free assertion of self. (Goodwin, 1974)

In a recent issue of the American Psychologist, Hogan (1975) has described four different strands of individualism identifiable in modern psychology: *romantic, egoistic, ideologic,* and *alienated.*

Romantic Individualism

Romantic individualism has historical roots in Rousseau's teaching that children should not be forced to perform academically. In a climate of minimal external influence and warm acceptance, healthy, appropriate development will flourish. Children will learn because they want to learn and will enjoy their educational experience. Carl Rogers most closely epitomizes this thinking in current psychological circles. If left alone, man will naturally tend towards constructive avenues of self-actualization. Rogers (1961) expressed himself clearly when he said, "I have little sympathy with the rather prevalent concept that man is basically irrational and that his impulses, if not controlled, will lead to the destruction of others and self." The only question which matters, says Rogers, ". . . is 'Am I living in a way which is deeply satisfying to me, and which totally expresses me'."

Other prominent psychologists like Piaget and Kohlberg assume a form of romantic individualism in their teaching that moral development is strictly an inside job: an internal pre-programmed sequence of developing structures will lead to a healthy moral sense unless blocked or diverted by efforts to imprint or force compliance to external standards. Someone who has broken the law is seen as someone whose natural developmental direction towards good has been thwarted by external pressure. Since the problem was caused by external pressure, it will certainly not be solved by more of the same. If moral wrong is the result of an oppressive environment, further moralistic or punitive measures will only compound the problem. Punishment is theoretically untenable. Better to bring the repressed, stifled individual (forcibly, if need be, for his own good) into an accepting atmosphere of therapy where his true self will emerge.

The issue is the repudiation of the concept of justice as a foundation for governmental handling of lawbreakers.

As with most ideas, one can only deal with the implications by clarifying the presuppositions. It will do no good to rant about the need for punishment without challenging the presuppositionary basis upon which romantic individualism rests. In simplest terms, the romantics assume that people are basically reasonable and good. If that is true, then appealing to their reason and providing an opportunity for self-expression is a logical method for handling law-breakers. But the Bible teaches that man, although possessing rational faculties, is thoroughly corrupt at the motivational core. We are self-seeking, we have all gone out of the right way, in our natural selves dwells no good thing. All of our behavior is stained with the motive of utter selfishness and rebellion against God. Nothing but divine intervention can rescue us from personal, social, and eternal destruction. If one accepts Biblical presuppositions, one must reject the romantic individualist's program of freeing law-breakers from the effects of social oppression on their personality. (It might be noted in passing that the opposite extreme of total control is also unacceptable. God always lays down a form, limits beyond which one must not go. Within that form, there is considerable room for freedom. Form without freedom produces robots. Freedom without form leads to utter godlessness.)

Egoistic Individualism

Hobbes and Nietzche operated on the assumption that man is basically selfish, base, and potentially cruel. Freud's observations that people are driven to gratify their own egocentric desires is quite in line with that assumption. Problems develop when a moralistic conscience forces these selfish motives underground. They then reappear in the form of neurotic symptoms. Cure depends upon the liberation of one's individualistic strivings within bounds not of morality but of social intelligence. In other words, Freudians believe that one must gratify his needs but that self-gratification should be done under the rational supervision of a controlling ego which will mediate between society's demands and a person's desires. As Rieff (1959) observed. "The aim of Freudian psychiatry is . . . the reconciliation of instinct and intelligence. The intellect (not the conscience: my note) is set to helping the instincts develop, tolerantly, like a prudent teacher." In this view, the conscience is stripped of any guiding function whatsoever. Morality is a hang-up to be overcome.

Egoistic individualists would suggest that criminals need insight into their own motives and rational education to help them gratify themselves in a more acceptable manner. Punishment for moral wrong would have the effect of strengthening the conscience, certainly a poor maneuver if an overactive conscience has been the culprit all along. Punishment is again seen to be antagonistic to the best interests of the lawbreaker. Reasonable discussion leading to an intelligent strategy for self-gratification is the preferred treatment. In such an amoral position, questions of justice and fair retribution are at best irrelevant and at worst harmful.

God's solution to the problem of dealing with selfish people is not to accept their selfishness but to inflict righteous judgment either directly on the offender or vicariously on His Son. Biblical solutions never overlook the issue of justice. Jesus died that God might be just in pardoning the sinner.

Ideologic Individualism

Ideologic individualism holds that there is to be no mediator between the individual and truth. Insisting on objective, propositional revelation as a source of truth before which one must bow is regarded as an impudent affront to the individual in his personal quest for truth. Kohlberg defines the ultimate in moral development as that stage in which one acts on the basis of personally derived, individual principles of conscience. Moral truth becomes whatever the individual perceives it to be. Although there may be a certain warrant for the form of ideological individualism known as academic freedom, the thinking behind this view effectively undermines all efforts at enforcing justice by not permitting anyone to challenge the morality of another person's behavior.

This form of individualism most clearly denies the existence of moral absolutes. God is reduced to a word with no character. In the absence of an ultimate and personal arbiter, there is no ground at all for deciding that someone's behavior is morally wrong and deserving of just consequences. The concept of punishment, which assumes that the punishing agent can make a moral judgment about another's activity, is left without rational foundation.

Alienated Individualism

Fritz Perls reflects another form of individualism in his forceful insistence that conformity to social roles is a denial of individual freedom. Many of the existentialists hold that self-authenticity requires a determined sense of alienation from society, a conscious effort to be uncontrolled by cultural expectation, and to be oneself regardless of how that might contradict local custom. Society, it is maintained, cripples freedom whenever it squeezes someone into its mold. One writer likened the process of socialization to a beggar maiming and mutilating his children to make them fit for their future role in life.

According to this view, Biblical roles for husbands, wives, children, parents, employees, employers, citizens, elders, deacons, etc. are stifling and should be disregarded in the interest of self-expression. Social expectations like speed limits may be in the common interest, but while appropriate should not be valued to the point of punishing offenders. Individualistic estrangement from society is seen to be healthy, never culpable.

Hogan (1975) observed that

> it seems clear that the dominant temper of American psychology . . . is wedded to an individualistic perspective; that is, most if not all of the better known theoretical perspectives on the problems of human social behavior can be identified readily as forms of individualism. To the degree that this is true, much American psychology can be plausibly described as theoretically egocentric.

There *is* a Christian form of individualism. Christ demonstrated a wonderfully high regard for each unique person when He died to redeem us. Individual worth is realized and recognized when one accepts Christ as Savior, yields himself as a slave to Christ, develops his God-given unique abilities under the Spirit's control, and enters into the fellowship of Christ's body.

Let me return to my present concern. Think for a moment about the general implications of this secular individualistic perspective for a penal system. No matter what someone does, we must be careful not to encroach upon his rights as an individual. Theoretically, every one should be allowed to do as he pleases. Laws become guidelines for sensible living which reasonable people of good faith will willingly follow. The problem with this idea is that it simply does not work. A recent syndicated column entitled "Myth of Human Kindness" illustrates the point. The article reads

> During Human Kindness Day in Washington recently, many hundreds of whites and blacks were robbed by gangs of young toughs. (People) . . . were systematically attacked—beaten or stabbed—in this great outpouring of human kindness. An assistant to Agriculture Secretary Carl Butz was crossing the monument grounds on his way home, as he does every day. He was assaulted and stabbed in the eye. (The doctors say he will lose it.) Blood streaming down his face, he called for help but the crowd turned its back on him. Emelda Sutherland, a black woman, had a camera snatched from her hand. She called out after the teen-age thief, 'Stop him, he's got my camera'—and got blank looks from human kindness celebrants who witnessed the crime.

No system of logic which begins with wrong presuppositions about human nature can possibly stand the test of reality. People cannot be counted on to act on good faith. They willingly break laws which they rationally know are for the common good. The harsh truth is that we care about ourselves so much that we will sacrifice others for our own self-interest. Persuasion, more freedom, exhortations, and reasoning do not stem the tide of our destructive selfishness.

Rather than backing up and correcting their faulty presuppositions, individualists cling to their humanistic optimism about man's inherent goodness or his capacity for rational self-control and neatly deal with the embarrassing reality of criminal people by labelling them sick. Their thinking runs something like this: "If people are at root good or at least rational, then any bad or irrational behavior like killing or stealing is evidence not of culpable immorality springing from a sinful person but rather of personal maldevelopment. Somehow their capacity for reasoning has been blocked or their inherent goodness has been stifled. We will not regard them as criminals to be punished but as sick people who need help. Some have been so badly injured in their personal development by our oppressive society that they do not realize that something is wrong. In

our deep concern for their individual well being and self-expression, we will therefore benevolently coerce them into treatment. When with our gracious assistance they come to see the irrationality of their behavior or break through whatever blocks to self-expression which society has cruelly imposed, they will thank us for our help. Naturally, in the interests of their personal development, we must keep them under our care until we are able to cure their psychological disorder. Only we as helping professionals are in a position to determine when they are truly cured. Therefore each person's 'therapy sentence' will be indeterminate, subject to the evaluation of his therapist."

In practice, this line of thinking effectively strips people of all civil rights without appeal to due process, and puts them at the mercy of an uncertain science which at best presents a puzzling array of widely differing approaches to helping people, none of which can scientifically claim to be either true or uniformly effective. I personally would much rather be sentenced on grounds of justice to a legally determined punishment than to be forcibly subjected to the kind intentions of a psychotherapist who would impose his questionable "treatment" on me with a beneficent smile. In the former situation, if I felt my punishment were unreasonable (and one must admit that unreasonable punishments and unfair handling do certainly occur) I could appeal to a corporate sense of justice in my society with a far greater optimism for reasonable disposition than if my only court of appeal were a board of psychologists assigned to measure my mental adjustment.

I would much rather be sentenced on grounds of justice to a legally determined punishment than to be forcibly subjected to the kind intentions of a psychotherapist who would impose his questionable "treatment" on me with a beneficent smile.

Contradictions between the Bible and the Treatment Model

The most serious objection to the humanitarian theory of punishment is theological. Christians believe that there really is a personal God, with a definite and revealed character. Any system of thinking must be ultimately measured by whether it can be gracefully integrated with what the Bible says about the character of God. The really frightening danger is that some people think that the treatment model for prisons which utterly disregards questions of morality is wonderfully consistent with Jesus' emphasis on peace, love, acceptance, forgiveness, and restoration. One seldom hears great terms like truth, righteousness, holiness, and justice. And yet Jesus' primary purpose in coming to earth was to satisfy the claims of a holy and just God against our unrighteousness. An approach to discipline (whether in society or in the home) which teaches that we must appeal only to the good in people, show them their wrong, set a good example, and positively reward desired behavior assumes that if God is there at all, He is not offended by moral wrong but is patiently indulgent in a grandfatherly sort of way.

Skinner teaches that you should not punish, only reinforce. Adlerians tell us that punishment is never appropriate. Deal with misbehavior by letting the offender experience the consequences of his own behavior. When he sees the rationality behind right living, he will evidence his inner goodness and intelligence by shaping up. The problem with such thinking is that it consistently misses the entire Biblical teaching about sin. Menninger's book *Whatever Became of Sin* hints in the right direction but falls woefully short of providing a substantive definition of sin based on an understanding of God's character. For Menninger, sin is social offence. For the Christian, sin is a culpable, punishable, heinous offense against a holy God. Man is not good, he is bad. While he may be able to see rational reasons for limiting self-indulgence, he basically does not want to change and is truly incapable of really changing. If the Bible is correct in its presuppositions about people, dealing with lawbreakers by building up their individualistic self-expression and letting loose an assumed positive nature will not really work in the long run, nor is it doing the criminal any favor. This last point needs to be underlined. A truly humanitarian approach to dealing with lawbreakers is to fairly punish them. They need to experience the sternness of the law. Paul says that God's inflexible commandments are intended to function like a schoolmaster to bring us to Christ by pointing up our helpless inability to ever satisfy a holy God. The treatment model takes all the sting from the law and renders impotent a God-ordained instrument for driving people to Christ.

The treatment model for dealing with moral wrong implicitly denies the central act of all history, Christ's atonement for our sin. His death is reduced to merely a wonderful example of forgiving those who despitefully use you. According to this view, Jesus knew that those who killed him were misguided people who simply did not understand. His words of forgiveness are held up as a model for dealing with lawbreakers. The fact that Jesus could offer them forgiveness only because He was at that moment enduring the punishment from a righteously angry God which their sins (and my sins) deserved, is not recognized or believed.

The kind of individualism which encourages people to concern themselves with being true only to themselves not only goes against Biblical teaching like "esteem others greater than ourselves", "submit one to another," "bear each other's burdens", it also denies validity to any external authority before which one must bow. We need to return to the Biblical position that criminal, delinquent, and immoral behavior is the expression of man's sinful nature and is *not* to be taken merely as evidence of psychological maladjustment. It must therefore be firmly and primarily dealt with according to God's standards of holiness and justice and *not* according to man's psychological theories of treatment. Government is ordained of God to enforce the law responsibly in order to keep sinful man from totally destroying himself. Those who break the law have committed a real moral offense and deserve punishment. People are responsible and morally culpable for criminal behavior. Lawbreakers must not be regarded

primarily as non-responsible, emotionally disturbed people in need of therapeutic assistance. Efforts to rehabilitate through counseling are right and proper but must never replace righteous and just discipline. Counseling is helpful and appropriate when it fits within the concept of justice and moral responsibility and when it recognizes that the fundamental problem with people is spiritual. Only regeneration provides a real and lasting answer. Any other approach denies the character of God and must be ". . . opposed root and branch wherever we encounter it."

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Determinism vs Free Will

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The determinism-free will controversy is a pertinent one in theology, psychology and philosophy. It revolves around the question whether people are to be viewed as responsible choice-making individuals or as victims of deterministic forces. In this article definitions are given of each position along with their supporters. After identifying five distinct views about the controversy, support is given for each position. In a discussion section various illustrations are considered as attempts to resolve the controversy. In conclusion, it is suggested that the matter may never be settled in this life. The Christian may nevertheless aim to know and do God's good, acceptable and perfect will.

Introduction

Hugh T. Kerr tells the story of a young philosophy teacher who attended his first scholarly conference. The topic for discussion was free will and determinism. The young teacher, during a lapse in the program, wandered over to the determinist group. The leader said to him, "Who sent you over here?" He replied, "No one. I came of my own free will." Politely but firmly he was shoved in the direction of the free will group. The leader of this group asked him, "How did you decide to come over here?" He replied, "I didn't decide at all; I was sent over here against my will (Lapsley, 1967, p. 88)."

The young philosopher could just as easily have been a theologian or psychologist because the topic of free will and determinism is a pertinent one in theology, psychology, and philosophy. It has been written about to such an extent that anyone who sets for himself the task of reading it all will surely die before he completes the job. (A very helpful bibliography can be found in Barbour, 1966, pp. 273-316.)

The Problem

Since Lucretius (died 55 B.C.) every noteworthy philosopher, theologian, and psychologist has taken part in the perennial and perplexing dispute. It centers around this question: Is man "a puppet of necessity and a toy of circumstances, or the captain of his soul and, within limits, the master of his fate (Lamont, 1967, p. 15)?" Or to put it another way, "Is man treated as a responsible choice-making person or as a victim of deterministic forces (Dolby, 1968, p. 34)?"

Erasmus (1968) at the height of the Renaissance wrote: "Among the many difficulties encountered in Holy Scripture—and there are many of them—none presents a more perplexed labyrinth than the problem of the freedom of the will (pp. 3,4)." D. D. Whedon (1864) wrote that this is "the most difficult of all psy-

chological and moral problems . . . (p. 3)."

Definitions

Determinism synonyms include foreordination, predestination, necessitarian, and mechanism. Free will synonyms include chance, contingency, indeterminism, fortuity, tychism, voluntarism and libertarianism. Lamont (1967) prefers the term freedom of choice "because of the theological connotations and confessions associated with the term 'free will' and because there is nothing identifiable as the will which is responsible for a man's choice (pp. 9, 10)." The most frequently used terms, however, are determinism and free will.

What is the basic idea of free will? The following quotations are attempts to define the concept:

> . . . a man who consciously comes to a decision between two or more genuine alternatives is free to do so and is not completely determined by his heredity, education, economic circumstances and past history as an individual (Lamont, 1967, p. 17).
> (Man's) actions are not predetermined by external forces, nor are they undetermined in that they are due to motives formed in the past. They are determined from within, by choice, not by compulsion. His acts are those of a free being (Stevens, 1967, p. 140).
> (Free will is) the term for the concept that man is free to dispose of his own will; that he can choose between alternatives in such a manner that the choice is entirely uninfluenced by factors not consciously controlled by him (Hinsie and Campbell, 1970, p. 310).

What is the basic idea of determinism? The following quotations are attempts to define the concept:

> Modern determinism is based on the type of psychology which sees the individual as controlled entirely by his history (Bridgewater and Sherwood, 1950, p. 533).
> This is the assumption that the universe is an orderly place where all events occur in keeping with natural laws. Everything follows cause-and-effect relationships. In essence, the universe is a sort of giant machine which functions according to certain built-in principles (Coleman, 1969, p. 23).
> "Determinism" means that each event in the universe is completely given or defined by a finite number of other events in the universe. Therefore, if all these other events are known, the event under discussion can be completely deduced (Kaufmann, 1968, p. 23).

Preferences

Which view has biblical support, free will or determinism? Or does the Bible support both positions to some degree and in some sense? Thinkers do not agree in answering these questions. The controversy has elicited some classic disputes in the history of Christianity: Augustine vs. Pelagius in the early church; Martin Luther vs. Erasmus in the Reformation era; and Jonathan Edwards vs. the Arminians in the colonial days. Interestingly, as Hugh T. Kerr has observed, in each argument the determinists won out (Lapsley, 1964, p. 94).

Gerstner (1967) thinks that a fundamental objection to Christianity comes from determinism (p. 197). Hammes (1971) believes that determinism "makes of divine justice a mockery, and portrays God as fiendish rather than benevolent (p. 86)." Buswell (1962) writes that "the denial of free will seems to be purely arbitrary philosophical dogmatism, entirely contrary to reasonable evidence and to the biblical view (p. 267)." Another writer (*What then is man?*, 1958) thinks determinism both a scientific and moral stumbling block (p. 173).

On the other hand, Turner (1966) sees few instances where determinism clashes with religious faith (p. 960). Dolby (1968) lists five kinds of determinism and concludes that any of them could be held by a Christian (p. 35). Whedon (1864) writes that "freedom (is) wholly non-existent and even inconceivable (p. 14)."

Despite the opinion that there is a lack of final scientific evidence for either view, scientists commonly espouse the deterministic over the free will view. For instance, John Watson, a behavioral psychologist, believed that "if psychology is ever to become a science, it must . . . become . . . deterministic . . . (Heidbreder, 1933, p. 235)." B. F. Skinner, America's most influential and famous psychologist, believes that man's actions must be considered determined if the scientific method is to be used in the study of human behavior (1953). Finally, Carl A. Rogers, founder of client-centered therapy, believes that "In the minds of most behavioral scientists, man is not free, nor can he as a free man commit himself to some purpose, since he is controlled by factors outside of himself (1964, p. 1)."

Favoring determinism are Whedon (1864), Freud (Braceland and Stock, 1966), Skinner (1956), Menninger (1968), Democritus (Heidelbreder, 1933), Marcus Aurelius, John Calvin, Spinoza, Voltaire, Hegel and Bertrand Russell.

Psychoanalysis and behaviorism are deterministic (Coleman, 1972, p. 67). Deterministic views are presented in such books as *The Bridge of San Luis Rey* by Thornton Wilder, *War and Peace* by Leo Tolstoy, and *A Mummer's Tale* by Anatole France. The Greek tragedies of Aeschylus and Sophocles are pervaded by the belief that man is a pawn of fate. Oedipus unwittingly illustrated determinism by killing his father and marrying his mother, just as the oracle prophesied.

Perhaps the most famous philosopher who held to determinism was Benedict Spinoza (1632-1677). Frederick Mayer (1951) believes that the keynote of Spinoza's thinking was determinism (p. 140). Spinoza firmly rejected freedom of the will. He wrote: "In the mind there is no absolute or free will, but the mind is determined by another cause, and this last by another cause, and so on to infinity (Hinsie and Campbell, 1970, p. 209)."

Abraham Lincoln probably never heard of Spinoza but nevertheless came to the same conclusion. A. A. Brill (1938) illustrates Lincoln's view by the following story. Lincoln was discussing with his partner Herndon, as they were pulled along a muddy road in a carriage, whether there were such a thing as a disinterested, altruistic and undetermined act. Herndon said yes but Lincoln argued no. Just then they passed a pig caught in a crack of an old rail fence, squealing for his life. A little further down the road, Lincoln decided to go back and release the pig. After letting the pig go he climbed back into the buggy. His feet were muddy, his clothes wet, his hat dripping. "There," said Herndon, "in spite of your fine logic you have proved my point. Why did you get out in the mud and let that silly pig loose when he would have wriggled

out anyhow?" "It was a purely selfish act," said Lincoln. "If I hadn't, I wouldn't have slept a wink tonight; his squeal would have echoed in my dreams. He might have wriggled his way out, but I wouldn't have known it. I win the case (p. 615)."

The Calvinists have commonly been identified as holding to determinism while the Arminians hold a free will position. To illustrate this dichotomy, Corliss Lamont (1967) told the story of a Calvinist who met an Arminian on his way to church one Sunday morning and remarked, "You were foreordained to go to church today." The Arminian replied, "Is that so?" and turned around and went home (p. 21). This story perhaps draws the line a little too straight in identifying the Calvinists as determinists and the Arminians as free willers.

Most Christians believe in some type of free will. For instance, an Arminian (Pentecostal) theologian writes: "The Bible affirms the freedom of the human will (Shank, 1960, p. 344)." The Free Will Baptists hold that "God has endowed man with the power of free choice, and governs him by moral laws and motives; and this power of free choice is the exact measure of man's responsibility (*A Treatise of the Faith and Practice of the Original Free Will Baptists,* 1962, pp. 8, 9)." A Calvinistic (Presbyterian) statement on free will is in essence the same as the ones coming from Arminians: "God hath endued the will of man with the natural liberty, that it is neither forced, nor by an absolute necessity of nature determined to good or evil . . . (*The Confession of Faith of the Presbyterian Church in the United States,* 1956, p. 71)."

Corliss Lamont (1967) after forty years of reading, writing and debating, has come down strongly on the side of free will. So have Hammes (1971), Kant (Durant, 1953) and Attshuler (Brill, 1938). Humanism adheres to free will. Other indeterminists include Aristotle, Epicurus, William James, Henri Bergron and John Dewey.

Viewpoints

Five distinct views about the determinism and free will argument can be identified. One view holds that the two positions cannot be reconciled. As W. W. Stevens (1967), theology professor at Mississippi College, has written: "The sovereignty of God (determinism) and the freedom of man are two factors which simply cannot be reconciled in finite thought (p. 212)."

A second view states that there is in reality no controversy but only a semantical problem. John Stuart Mill, Mority Schlick and David Hume hold this position. Schlick called the argument a "pseudo-problem." John Stuart Mill believed that "the whole controversy has hitherto turned merely upon words (Hume, 1927, p. 161)."

Third, some writers have taken a pragmatic approach toward the determinism and free will controversy. In essence, this view states that both views are relevant at times. For instance, Barbour (1966) suggests that within science determinism is a useful postulate but in daily affairs a free will approach is more useful (p. 311).

Bube (1971) argues for a multilevel description of reality which would allow for both views (pp. 177, 178). William James (Durant, 1953) thought that in choosing between the two views "our vital and moral interests should make the choice (p. 516)." Donald Hebb observed that free will is the control of behavior by thinking. Thought is shaped by heredity and environment. "Hence, one can believe in free will and still be a determinist (Hebb, 1973)."

Fourth, some believe that the whole controversy is unimportant. Beach (1973) concluded after spending long hours with a beer in his hand and a pained look upon his face

> that the most valuable component of these sessions was the beer. This is because it has gradually dawned on me over the years that my own behavior, either as a psychologist or a private person, probably would not change very much no matter how I decided the issue. Now it seems to me that if the answer to a question is inconsequential, the question itself may be inconsequential (p. 9).

A fifth position holds that the whole controversy is a dead issue, at least in its older form. Hugh T. Kerr holds this view: "The classic dispute about free will and determinism . . . appears to belong to the past rather than to current discussions. . . . The older debate about free will and determinism has not been solved; it has been shelved (Lapsley, 1967, pp. 89, 90)."

Contrariwise, William James (1923), an exponent of free choice, believed that it was a mistake to consider the controversy a dead issue. He wrote in 1884: "A common opinion prevails that the juice has ages ago been pressed out of the free-will controversy, and that no new champion can do more than warm up stale arguments which every one has heard. This is a radical mistake (p. 145)."

William James believed that the problem of determinism and free will was outside the province of science. He was eager to show that free will was reputable, and that human life is not the "dull, rattling off of a chain (Heidbreder, 1933, p. 157)." However, he did not think that science could validate either position (Heidbreder, 1933, p. 197). R. S. Woodworth (Heidbreder, 1933) concurred with James. He wrote that free will and determinism 'is a metaphysical problem and is therefore quite outside the province of psychology or of any other natural science (p. 291)."

As Kaufman (1968) has pointed out, ultimately both determinism and free will are assumptions (p. 48). However, logic is brought forth in the presentation and defense of both positions. It seems that those who write on the subject are often more persuasive in criticising the opponents position than in lucidly presenting their own. In the following pages, however, the discussion will center on the arguments advanced in favor of each position.

Support for Free Will

Arguments assembled in favor of the free will position include the following:

(1) Without free will, man would not be responsible for his behavior. As Lamont (1967) has written; ". . . God is transformed into a devil incarnate, unless man has true freedom of choice and therefore moral responsibility for a large measure of the ills that plague

him (p. 22)." If man is not responsible for his behavior, then the concepts of heaven and hell, reward and punishment, have no basis. As Hammes (1971) has observed: "The concept of God as being essentially good and just and the concept of divine reward and punishment necessarily imply human freedom (p. 87)." Hodge (1952) says that determinism precludes the idea of responsibility (vol. 2, p. 281).

(2) Man has free will because of the subjective experience felt in deciding. As Kant viewed it:

> We cannot prove this freedom by theoretical reason; we prove it by feeling it directly in the crisis of moral choice. We feel this freedom as the very essence of our inner selves . . . we feel within ourselves the spontaneous activity of a mind moulding experience and choosing goals. . . . In a way which we feel but cannot prove, each of us is free (Durant, 1953, p. 277).

Hodge (1952) argues that every person is convinced from the very constitution of his nature that he is a free agent (vol. 2, p. 293). Shibutani writes: "Each person believes that he is able to exercise some measure of control over his destiny. . . . It is this widespread belief that provides the basis for the doctrine of free will . . . (Coleman, 1969, p. 23)."

(3) God has decreed that men have free will. L. S. Chafer (1947) quotes John Dick who says this: "God has decreed, not only that men should act, but that they should act freely, and agreeably to their rational nature . . . (vol. 1, pp. 242, 243)."

(4) The gospel appeal assumes that men have free will. Miller Burrows (1946) writes: "All the (N.T.) writers consistently assume freedom and responsibility. . . . The primary constant appeal to repentance and faith and the frequent reference to judgment presuppose freedom of choice and action (p. 231)." Bube (1971) has observed that if man does not have free will why invite him to accept Jesus Christ as Saviour? This would be to base reality on fantasy (p. 161).

A. H. Strong (1907) observed that "Jonathan Edwards, determinist as he was, in his sermon on pressing into the Kingdom of God . . . appeals to the sinner as if he had the power of choosing between the motives of self and of God. He was unconsciously making a powerful appeal to the will. . . . (p. 504)." Charles Hodge (1952) believes that free will is affirmed by the Bible (vol. 2, p. 293).

(5) Man conducts his affairs as though he believes in free will. Herbert J. Muller writes: "Whatever we believe in theory, we continue in practice to think and act as if we were not puppets (p. 42)." Strong writes (1907): "It is always a man's fault when he becomes a drunkard: drink never takes to a man; the man takes to drink. Men who deny demerit are ready enough to claim merit. They hold others responsible, if not themselves (p. 507)."

Lamont (1967) illustrates free choice in daily recision making:

> If we then flip a coin to decide the matter we are exercising freedom of choice by assigning responsibility for the decision to the caprice of chance. The very fact that in such a situation we decline to take direct responsibility points to the reality of free choice under ordinary circumstances (p. 34).

Bube (1971) says, "We do not believe that there should be freedom of choice for the light when we throw the switch, but we do believe that there should be freedom of choice on whether or not we turn it on (p. 160)."

Perhaps a more accurate view is to acknowledge the paradox involved in attesting both determinism and free will, even with the result of inevitably experiencing cognitive dissonance.

(6) Free will is the only rational position. "The Christian determinist is usually driven to an inscrutable paradox (Buswell, 1962, p. 267)." Determinism is fatalistic (Braceland and Stock, 1966, p. 262), extraordinary, troublesome, paradoxical, and extreme (Lamont, 1967, pp. 35, 36). Deterministic "views are more sinister perhaps than Calvinism, for at least in the theology of Calvanism there is some hope that some of us will be the selected ones, but in this deterministic philosophy, no one can be saved (Ira M. Altshuler in Brill, 1938, p. 618)." Finally, the determinist is irrational: "If the determinist will insist on speaking, we shall, I am afraid, have politely to disregard him until he returns to the canons of rationality, must we not (Gerstner, 1967, p. 205)?"

Support for Determinism

Arguments advanced in favor of the determinist position include the following:

(1) Determinism is more consistent with the nature of God. If God is omnipotent and omniscient, determinism naturally follows. Lamont (1967) says that those holding to free will have not "succeeded in making it consistent with the idea of an almighty and omniscient God (p. 21)," and "anyone who believes in human freedom of choice must, if he is consistent, reject credence in the omniscient, prescient gods of traditional supernaturalism (p. 91)." If God knows the future, it must be determined (Bridgman, 1959, p. 170).

(2) A scientific view must be deterministic. A. Rosanoff quoted in Braceland and Stock (1966) says that "the scientific point of view presupposes on irrevocable comittment to the concept of determinism in nature as an article of faith (pp. 263, 264)." B. F. Skinner (1956) says that "If we are to use the methods of science in the field of human affairs, we must assume that behavior is lawful and determined (p. 6)."

Psychoanalysis is strictly deterministic (Coleman and Broen, 1972, p. 56; Severin, 1965, p. 69; Braceland and Stock, 1966, pp. 82, 83; Menninger, 1968, p. 96). Psychology (Durant, 1953, p. 179), psychotherapy (Coleman, 1969, pp. 23, 24) and education (Durant, 1953, p. 185) are based on determinism.

Kaufmann (1968) argues that if the assumption that the world exists and is knowable is accepted, so is determinism (p. 42). Francis Bacon "demands a strict study of cause and effect on human action, and wishes to eliminate the word *chance* from the vocabulary of science. '*Chance* is the name of the thing that does not exist.' And 'what chance is in the universe, so will is in man' (Durant, 1953, p. 122)." Democritus

believed that "Man's thoughts and deeds, all the events of his life, are determined as rigidly as the courses of the stars (Heidbreder, 1933, p. 23)."

(3) Determinism is more humanistic than free will. Spinoza (Durant, 1953) says:

> . . . determinism makes for a better moral life: it teaches us not to despise or ridicule any one, or be angry with anyone, men are "not guilty"; and though we punish miscreants, it will be without hate; we forgive them because they know not what they do (pp. 185, 186). Nobody can be held responsible for his deeds; punishment and blame have no justification (Barbour, 1966, p. 306).

(4) The deterministic view accounts for unconscious motivation. Man has a sense of freedom because he "is not conscious of any necessity being imposed upon him (Chafer, 1947, vol. 1, p. 240)." However, Freud refers to this feeling of freedom from necessity as "an illusion of psychic freedom (Braceland and Stock, 1966, p. 263)." Immerglueck (1964) believes that the experience of freedom is a distorted percept and perhaps an inescapable illusion (pp. 270-281). Bube (1971) states that the determinist believes that "the appearance of choice is only an illusion; the decision is completely determined by a confirmation of . . . factors over which the individual has little or no control (p. 161)."

Spinoza compares the feeling of free will to a stone's thinking, as it travels through space, that it determines its own trajectory and selects the place and time of its fall (Durant, 1953, p. 179). E. J. Jones points out that a conviction or feeling that one is free is not incomparable with determinism (Hinsie and Campbell, 1970, p. 310).

(5) Determinism is more in harmony with God's election, sovereignty, foreordination and foreknowledge.

> Divine election is absolute. If this seems to be taking things out of the hands of men and committing them into the hands of God, it will at least be conceded that when thus committed to God, things are in better hands and this, after all, is God's own universe in which He has sovereign right to do after the dictates of His own will (Chafer, 1947, vol. 1, p. 242).

> Plainly it was God's *will* that sin should enter the world, otherwise it *would not* have entered, for nothing happens save as God has eternally decreed. Moreover, there was more than a bare *permission*, for God only permits that which He has purposed (Pink, 1965, p. 182).

> . . . God's purpose is always accomplished . . . God has chosen all those who are to be saved by grace . . . solely according to the pleasure of His will and the manifestation of His glory (Bube, 1955, pp. 200, 201).

(6) Determinism enables man to accept whatever happens as being in God's will and therefore ultimately good. Spinoza thinks that determinism "fortifies us to expect and to bear both faces of fortune with an equal mind; we remember that all things follow by the eternal decrees of God (Durant, 1953, p. 186)."

The arguments advanced for free will and determinism could be discussed in greater detail The above presentation is by no means exhaustive. The controversy is sometimes less clear than desirable because of the relationships of free will and determinism to such concepts as election, predestination, decree, foreknowledge, foreordination, and sovereignty.

Discussion

The main difficulty in the controversy is how God can be completely sovereign, decreeing all that comes to pass, and how man can be free to choose his destiny in a responsible way. The harmonizing of God's eternal decree and man's freedom is the gordian knot of theology. The difficulty may be dealt with by denying free will, denying God's decree or accepting both.

A. W. Tozer has given the following illustration which seeks to affirm God's sovereignty while at the same time doing justice to man's freedom.

> Perhaps a homely illustration might help us to understand. An ocean liner leaves New York bound for Liverpool. Its destination has been determined by proper authorities. Nothing can change it. This is at least a faint picture of sovereignty.
>
> On board the liner are several scores of passengers. These are not bound in chains, neither are their activities determined for them by decree.
>
> They are completely free to move as thy will. They eat, sleep, play, lounge about on the deck, read, talk, altogether as they please; but all the while the great liner is carrying them steadily onward toward a predetermined port.
>
> Both freedom and sovereignty are present here and they do not contradict each other (Tozer, 1961, p. 118).

The above illustration would not satisfy a "hard" determinist. Hard determinism assumes that all things are determined; freedom is the absence of determinism and therefore freedom is illusory. Soft determinism says that all events are determined, freedom is self-determination and compatible with determinism (Barbour, 1966, pp. 305, 307). The basic problem is that the decree which sends the ship inexorably on its course to Liverpool does not differ in kind from the decree which sends each of the ship's inhabitants about the ship on individual but nevertheless predetermined courses. The only difficulty in seeing this clearly is that man knows what determines the course of a ship. He does not know what determines the course of a person. A complete knowledge of the past experience of a person would result in an accurate prediction of what he will do on a ship or in any given situation. As A. W. Pink (1965) has written:

> On a certain Lord's day afternoon a friend of ours was suffering from a severe headache. He was anxious to visit the sick, but feared that if he did so his own condition would grow worse. . . . Two alternatives confronted him: to visit the sick that afternoon and risk being sick himself, or to take a rest that afternoon (and visit the sick the next day), and probably arise refreshed. . . . Now what was it that decided our friend in choosing between these two alternatives? The *will*? Not at all. True, that in the end, the will made a choice, but the will itself was moved to make the choice (pp. 162, 163).

The determinist holds that the will is moved, not by indeterminate, chaotic, or capricious forces, but by unique configurations, of memories, attitudes, and purposes. The mind is affected by various influences and motives many of which may be unconscious. Behavior is largely unpredictable because so many of the variables involved in decision making are obscure.

Gerstner (1967) protests "when someone says that by a knowledge of backgrounds we can completely explain how man acts as he does . . . (p. 198)" That is precisely what determinism claims. Even those who

are not deterministic but who believe that election is based on foreknowledge hold that complete knowledge of a person enables God to predict how that individual will respond. M. R. DeHaan (n.d., p. 17) illustrates this point by telling a story about inviting twenty boys for refreshments on a hot summer's day. When he returned from the store with the refreshments, he found that his wife had set twenty places. He informed her that eight of the boys would not accept the invitation. "How do you know only twelve will come?" said Mrs. DeHaan. "Because I happen to know every one of the boys. I know their thoughts, their sentiments, and their reactions," responded Mr. DeHaan.

The determinist believes that free will is merely a term used to cover man's ignorance of operative causes. Only when the causes of an act are unknown is it attributed through ignorance to free will. Man's volitions are invariably determined by pre-existing circumstances.

> Acts are determined by motives, and *motives are determined by earlier events.* . . . Could I have acted otherwise than I did in a particular situation? Yes, if I had had different motives. But from the motive I had, the action followed unalterably (Barbour, 1966, p. 307). Thus, I have "free choice," or an opportunity to commit murder, but being what I am, the product of my particular experiences (which may include not only high moral values, but the learned expectation that murderers often suffer painful consequences of their acts), I refrain from the crime (Kaufmann, 1968, p. 45).

"If we cannot show what is responsible for a man's behavior, we say that he himself is responsible for it," writes B. F. Skinner (1956, p. 283). If the psychologist knew all the laws governing human behavior, 100 percent accuracy in predicting human behavior would be possible.

Hammes (1971) argues that in spite of his culture, man intellectually chooses freely among offered alternative courses of action (p. 93). Of course, social scientists have linked man's behavioral preferences with his culture. Furthermore, determinism holds that man chooses among offered alternative courses of action. To say that man chooses freely means that there was no external compulsion or constraint, not that there were no motives. "Freedom is not the absence of causation, but the absence of any interference in carrying out one's intentions (Barbour, 1966, p. 307)."

John H. Gerstner (1967) writes that determinism argues that "truth is whatever one has been taught is the truth. It is as simple as that (p. 197)." However, truth is objective and not subject to change. Determinism teaches that what one believes to be true is subjective and is subject to change.

Hammes (1971) in espousing a free will position writes that "The experimental method . . . must remain silent concerning the relationship of the chooser to his decision (p. 87)." This statement is inaccurate and rather fantastic coming from a psychologist. Lee Roy Beach (1973) has written a general psychology textbook which takes a solid scientific approach. The entire book is built around the theme of decision-making and what psychological variables are important in choosing.

From the deterministic point of view, Adam and Eve did not have free will. Unless Adam and Eve were created with a propensity toward sin, there would have been no fall. Buswell (1962) writes that "If a perfect sphere rests on a perfect horizontal plane, it can never move except by some external force. Hence free will is inconceivable (p. 266)." As Nicolas Biel has observed in his poem entitled "Adam," God "could have made that woman so she wouldn't bite no apple (Osborne, 1973, p. 20)."

Buswell continues that whatever happens is in God's eternal decree, but that sin must be in the decree in a sense in which God is not the author of it (p. 267). To have created a sinful man would have made God the author of sin, an intolerable thought (Bancroft quoting Keyser, 1960, p. 179). L. Berkhof (1959) writes that "God's relation to sin remains a mystery for us, which we are not able to solve (p. 108)."

However, if election is due "merely and entirely, to the sovereign will and determining pleasure of God (Zanchius, 1970, p. 75)" then the Fall may be accounted for in the same way. Why God should receive pleasure from man's fall remains a mystery, however.

Thus, determinism holds that God accomplishes His purpose by using man's will as an instrument. God is then the originator of all circumstances, controlling every thought and emotion and consequently every act. The parsimony of the deterministic view makes it more appealing from a scientific standpoint. Free will tends to be an "add-on" and contaminates the purity of God's decree.

God has decreed all things and man is not a free agent. Responsibility merely means that the consequences of man's acts accrue to himself.

> Responsibility for one's action, far from implying that they are undetermined, requires that actions be determined by one's own motives. To say of an act, "I did it freely," means that there was no external compulsion or constraint—not that there were no motives for doing it. Freedom is not the absence of causation, but the absence of any interference in carrying out one's intention. . . . (Barbour, 1966, p. 307).

Conclusion

Charles Haddon Spurgeon suggested that one way to handle the free will-determinism controversy was to deny one view and affirm the other. This would allow for cognitive consonance. But to do this, suggested Spurgeon, was something like putting out one eye in order to see more clearly with the other. Perhaps after all a more accurate view is to acknowledge the paradox involved in attesting both views, even with the result of inevitably experiencing cognitive dissonance.

If the matter cannot be settled by appeal to the Bible or personal experience and intuition, perhaps it can never be resolved in this life. It may be one of those many questions in life that does not have to be answered in order to be "filled with the knowledge of his will in all wisdom and spiritual understanding. (Colossians 1:9)."

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Much hot air has been emitted in various controversies about the alleged free will of man, but very often the biblical perspective has been eclipsed by non-Christian thinking. The non-Christian tends to polarize 'freedom' and 'compulsion' or 'determinism.' Valuing the notion of freedom, he seeks 'freedom of speech' or of conscience. In other words, he seeks an end to compulsion. Biblical thought, however, posits 'freedom' as the state the Christian finds himself in when the Truth has set him free. (John 8:32)

The Bible freely acknowledges that man performs self-willed, spontaneous acts, but asserts that nevertheless he is enslaved to sin. He is not, therefore, a tabula rasa *before continually new possibilities of right or wrong. Man is responsible for his actions and words, but his capacity for making decisions cannot be called freedom, because he is under the dominion of sin. Christian freedom is not something formal like 'academic freedom,' that is, simply a 'being free'* from *something. In general, freedom from a particular rule or pressure is merely* outward, *and therefore peripheral; Christian freedom, however, is a dynamic* inner *quality: the very essence of the life of a person who is 'in Christ,' free to do right and to please God.*

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Christians and Sociology, InterVarsity Press, Downers Grove, Illinois (1975), p. 64.

Could There Be A Humanistic Science of Man?

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To decree dogmatic prohibitions of certain linguistic forms, instead of testing them by their success or failure in practical use, is worse than futile; it is positively harmful because it may obstruct scientific progress . . . *let us be cautious in making assertions and critical in examining them, but tolerant in permitting linguistic forms.*

Rudolf Carnap[1]

The Unity of Science Movement

Earlier this century, under the leadership of such men as Otto Neurath and Rudolf Carnap, there was founded in this country what was called the Unity of Science Movement. As an organized effort this movement has virtually dissolved. Very few thinkers in the human sciences were ever explicitly influenced by the philosophically sophisticated efforts of the movement. Nevertheless, something of the vision of the group did rub off onto American social and behavioral science in the form of an ideal. The ideal held by the Unity of Science Movement was the modelling of all of the sciences, including those dealing with man, on the methods and language of the natural sciences. There was considerable discussion within the group as to how this ideal should be articulated, but this was unimportant to the impression conveyed to the unphilosophical spectators in the sciences.

Thus a mood was created which reached into the remotest corners of research, theory and professional education of American social scientists—a mood moreover which was the more influential and the less tangible (thus less available for criticism) because many were unaware of its source, and even those who were largely unacquainted with the details of the reasoning that had undergirded the ideal.

Rudolph Carnap

Rudolf Carnap undoubtedly did more than any other member of the movement to address the question of how the sciences of man were to be "unified" with the natural sciences. To get the flavor of his reasoning, it is necessary to say something briefly about his intellectual development.[2]

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Carnap's early training was in the physical sciences as well as in philosophy, yet he always remained interested in discussing matters of common interest with colleagues in the humanities and human sciences as well. It was as a member of the famous Vienna Circle of logical positivists that Carnap published his book, *The Logical Construction of Reality.*[3] Like the other positivists, Carnap held that all factual knowledge was gained by experience, *i.e.,* he was an empiricist. His book can be read as an extremely sophisticated version of the same sort of thing attempted by the earlier British empiricists, such as David Hume. In it he attempts to show the way in which the basic units of lived experience (no atomistic sense data, unlike Hume) are orgainzed into useful constructs such as physical objects, other persons, and cultural reality, in increasing degrees of complexity. For this early Carnap, physical things are constructs out of primary conscious experience. This view may be called mentalistic or phenomenalistic.

It soon became apparent that such a position would not do. Under the criticism of his colleagues, especially Neurath, Carnap came to see that if the physical world upon which science operates is a private mental construct, then the so-called "public" nature of science is lost. If all experience is accessible only to the individual who has it, then each man lives in his own world with no notion of what others mean when they speak of the observations, or even that there are others, since all I experience is a construct out of my own experience. No "intersubjective check" is conceivable under this view.

The public reformulation of Carnap's view came in 1934 with the publication of his book, *The Logical Syntax of Language.*[4] The thesis of the book (much simplified) is that language is a convention wherein we lay down rules for forming our terms, rules for forming definitions and propositions, rules for moving

from one proposition to another as in arguing or reasoning. The job of philosophy is to render these rules explicit for any given language, and to explore the possible advantages of alternative languages for given tasks. The nature of any language depends upon agreement within the community where it is used, rather than upon some extra-linguistic "reality." Once, however, one commits himself to a particular linguistic scheme or convention, the syntactical rules for that language are prescriptive and binding. They include some expressions and modes of reasoning and exclude others. Their prescriptive character extends only to those who agree to talk this way, however, and are in no sense universally binding. We are now in a position to explore the consequences of the various ways of talking in which scientists engage, but always mindful of what Carnap calls "the principle of tolerance." The job of the philosopher, according to this principle, is to help in arriving at clarity concerning our linguistic conventions, not in setting up prohibitions against talking in certain ways.

In his first book Carnap spoke of "the things themselves," namely what was really given in experience. In his second book the focus is taken off of the "realities" which are talked about, and placed upon language in which any "reality" is described.

According to this view, there are a variety of languages possible (mentalistic, dualistic, physicalistic, etc.), but only the physicalistic language is suited for framing scientific theories. (The other languages may, however, be useful for purposes other than scientific). In clarifying his willingness to use language which talks about one kind of entity and excludes others, Carnap makes a distinction between "internal questions" and "external questions." An "internal question" concerns the existence of entities assuming a certain linguistic framework. Thus within a dualistic framework it would make sense to talk about introspecting private mental states, while for someone assuming a physicalistic framework such states would not exist. Within a physicalistic framework the observation of real physical objects that exist independent of the observer may be articulated, but for someone assuming a purely mentalistic (solipsistic) framework, no such entities exist. The particular employment of entity-talk *within* a given framework allows legitimate questions to be raised. ("Are there eight or nine planets?" "Was that red sense datum simultaneous with that pain sense datum?"). Such questions may be answered by someone from within an appropriate framework by an appeal to experience.

However, one might be tempted to ask "Are there *really* physical objects, or are there nothing but sense data?" "Are there *really* private mental states, or are there nothing but physical events?" To ask these are to raise what Carnap calls "external questions." They are questions about the status of entity systems (or linguistic frameworks) from the outside. Because such questions call for a comparison of a system of talking with "reality," and since "reality" is defined by the linguistic system one is using, such questions are in principle unanswerable. Acceptance of an ontological framework implies no answer to any "external question."

Note carefully that the issue is an issue about the choice of which language to use (*i.e.*, it is a meta-linguistic issue). It is *not* an empirical scientific issue (*i.e.*, not an object language issue). This means that physicalism (and its derivative, behaviorism) is a choice about how to talk, about what sort of things we agree to talk about in scientific language. Note also that Carnap never construed physicalism as a metaphysical position. It tells us nothing about the "nature of man." It does not claim that man is only a material being, or anything of the sort. To pursue these questions is to run the danger of asking "external questions."[5]

Now we come to the sixty-four dollar question. During my doctoral orals, a psychologist who was on the examining committee asked me why Carnap changed from his original phenomenalistic position to physicalism. Fortunately he was merely trying to obtain some information for himself, and did not consider the matter crucial to my passing. And well he might have been interested, for the reason for the change supplies the rational grounds for the dominant mood in American psychology for several decades. While I had to admit my ignorance to the examiner, I think that the reasons can be found rather easily in Carnap. The principal reason for choosing physical language over any language which includes private mental terms is that *in physicalistic language the talk exclusively concerns publically observable things.* Scientific observations, being open to check by other scientists, must be framed in a language which is public. That is, in Carnap's view, they must be framed in a physicalistic language.[6]

Choosing a Language

But must they? Recent considerations of the nature of observation language suggests that Carnap was wrong at this point. If the issue of which language to use is to be decided on the basis of its usefulness to science, and if we are to be tolerant in permitting linguistic conventions, then the question of whether or not it is possible to use a given language for public purposes must not be decided in advance.

A large number of recent thinkers believe that observation is always contaminated by the frame of reference from which the observer speaks. Thus the observation statements that he makes are only "public" for one who shares his frame of reference. Thomas Kuhn writes:

> Looking at a contour map, the student sees lines on paper, the cartographer a picture of a terrain. Looking at a bubble-chamber photograph, the student sees confused and broken lines, the physicist a record of familiar subnuclear events.[7]

Both Kuhn and N. R. Hanson[8] argue that all seeing is a "seeing something as something," that is, every perception is already an interpretation. Merle B. Turner, after surveying the implications of this view for psychology in a discussion of factual language in psychology, states,

> Historians and philosophers of science . . ., students of language and knowledge . . ., as well as students of perception agree that factual statements are conceptually contaminated. . . . How a scientist sees the world is no more a matter of veridical observation, *in any absolute sense*, than is the way a culture-bound person sees the world that is unique to his frame of reference. The

> welter of pre-perceived events may be factually and theoretically neutral, but just how our events-as-experienced are precipitated from this neutral stuff is a complicated matter involving sensitivity, selectivity, and the entire epistemic apparatus of structuring which is prior to the experience itself.[9]

Clearly, if one is to take Carnap seriously, a very large part of the "sensitivity, selectivity, and the entire epistemic apparatus of structuring which is prior to experience" is the choice of language convention, of how we agree to talk about what we see. To choose a language is tantamount to choosing the categories through which one will view the world.

Now the behaviorist follows Carnap in choosing the physicalistic language in which to formulate his science. As a choice of scientific convention, so far so good. Yet what is to keep social scientists of non-behavioristic inclinations from agreeing on a quite different language, *provided that their linguistic convention consisted of talk about public events?* It would, of course, be the case that those who failed to share their categories for viewing the subject matter would not "see" the "same thing" as they did. But this is true of all would-be public observations: public access depends on a shared frame of reference.

Suppose, moreover, that these (non-behaviorist) psychologists adopted a language in which personalistic terms were employed instead of physical objects or physical organism terms. Suppose, further, that in their use of these terms these (let us call them "humanistic") social scientists achieved remarkable agreement on the observation statements formulated in this language. We would have on our hands, I suggest, a language which meets Carnap's test of publicness, and which is physicalistic in no recognizable way. There would exist a way of seeing man through categories, rather than as an organism undergoing changes of anatomical position or modifications of the superficial musculature.

So much for the flight of conceptual and linguistic fantasy in which we supposed all of these mere possibities. *Can* such a language be constructed? At this point it ought to be made plain that the possibility of a humanistic alternative to behaviorism or near behaviorism in social science is at stake. If a "yes" answer to this question can be made plausible, then a humanistic science of man must not be regarded as a playground for the tender minded, but as an alternative hard-headed scientific language.

To render plausible the view that there is possible a public-event language using personalistic categories through which the environment is seen as populated by "others" is not so difficult as might be supposed. We use it naturally and almost constantly! While this may come as a shock to many positivistic, physicalistic, and behavioristic social scientists, the main message of the phenomenologists has not been that we need to reintroduce introspection into social science,[10] but that our everyday way of seeing and talking about others provides a model of public knowledge of persons.[11] (Much the same point has been made from another vantage point by analytic philosophers following the later work of Ludwig Wittgenstein.)[12] Take the following quotation from the writings of the phenomenologist Alfred Schutz:

> The social world is experienced from the outset as a meaningful one. The Other's body is not experienced as an organism but as a fellow-man, its overt behavior not as an occurence in the space-time of the outer world, but as our fellow-man's action. We normally "know" what the Other does, for what reason he does it, why he does it at this particular time and in these particular circumstances. That means that we experience our fellowman's action in terms of his motives and goals. And in the same way, we experience cultural objects in terms of the human action of which they are the result. A tool, for example, is not experienced as a thing in the outer world (which of course it is also) but in terms of the purpose for which it was designed by more or less anonymous fellow-men and its possible use by others.[13]

What is to keep social scientists of non-behavioristic inclinations from agreeing on a quite different language than the physicalistic language, provided that their linguistic convention consisted of talk about public events?

Schutz maintains that observation reveals, not simply a world of behaving things, but of fellow actors and a host of social features. This experience of others and the meanings of their actions is not an inference from originally given information about physical objects. For Schutz the Other, his typical motives, and his typical actions are part of what is originally given in experience in the everyday social world.

> Since human beings are born of mothers and not concocted in retorts, the experience of the existence of other human beings and of the meaning of their actions is certainly the first and most original empirical observation man makes.[14]

Therefore,

> The student of the social sciences does not find himself placed before the inexorable alternatives either of accepting the strictest subjective point of view, and therefore of studying the motives and thoughts in the mind of the actor; or of restricting himself to the description of the overt behavior and of admitting the behavioristic tenet of the inaccessibility of the Other's mind and even of the unverifiability of the Other's intelligence. There is a basic attitude conceivable . . . which accepts naively the social world with all the alter egos and institutions in it as a meaningful universe, meaningful namely for the observer whose only scientific task consists in describing and explaining his and his co-observers' experiences of it.[15]

Crucial to this way of seeing and talking about man is how we are to regard language. The humanistic social scientist and the everyday observer regard it as action by which the actor says something meaningful, not just as "verbal behavior" (uttering varying pitches at various volumes from which we might make casual inferences about past, present, or future events).[16]

> We regard a person who is talking, not as making sounds from which, knowing the circumstances in which such sounds have been uttered in the past, we can make certain inductive inferences, but as *saying something*. We regard what he says as *having meaning*, not simply in the sense in which a barometer reading has meaning. i.e., as indicating that something has happened, is happening, or is about to happen, but as expressing what *he* means. It would be misleading to describe this as a *belief* on our part, the belief that people who use the words we use generally mean by them what we mean

> by them. It is rather a matter of attitude, of the way in which we respond to a person who is talking. . . . If this attitude were one of belief, we could inquire into the grounds of the belief. But this is just what we do not do. It is part of the expression of this attitude that the question of what justifies us in regarding what others say as testimony does not arise. We say "I heard him say that he will come," not "I heard him utter the sounds, 'I will come,' and gathered from this that he was saying that he would come."[17]

Granted that there is a language which embodies the categories for such a way of seeing, yet what about the evidence that such a language is a public-event language, that it can be used for framing publically checkable observation statements? The proof of the pudding here is society itself. The ability of men operating with the everyday concepts of the co-actors succeed remarkably well in coordinating activities in the mind-boggling complexity that we call the social world. Men succeed in understanding each other and interacting using the categories of personal action. They do not await the reduction of all personal terms to behavioral equivalents (if that were possible) or begin with the responses of organisms, and then make inferences about expected behavior. They successfully use a totally different language from the physicalist. A humanistic science of man may take over this language and refine the observations over the loose approximations of ordinary living, perhaps even having radically different goals than the everyday actor. Nevertheless the fundamental categories of the language might remain the same.

To summarize: Carnap's claim that a science of man *must* be physicalistic fails if a language of personal agency can be developed in which the observation statements are open to intersubjective check. We do seem to have such a language in ordinary language about the everyday social world. This language forms the conventional framework of a humanistic science of man, just as physicalistic language forms the conventional framework of behaviorism.[18]

Two Sciences of Man

We have then two possible sciences of man. Each operates under the auspices of its own chosen convention with its own brand of progress and satisfaction with its own success. Because of their radically different choices of linguistic frameworks the two sciences remain incommensurable. Given this situation, are there any considerations which might incline the scientist to one of these two alternatives rather than the other? I am not a scientist, but let me suggest two considerations that might influence me if I were to be in the position of a social scientist (or student of social science) who was about to make this fundamental methodological decision.

1. The physicalist language eliminates an enormous number of questions which seem to have high priority in a study of man. This makes a neater science, but it achieves neatness by a loss of profundity in addressing the human condition. It presents man with a picture of himself which, though precise, lacks the features by which he might recognize himself. It cannot be a mirror for man.[19]

This departure of behaviorism from the language of the everyday social world is belied by an embarrassing compromise. For in communicating the results of research and in seeking intersubjective check on their results, the behaviorists always revert to the language of the everyday social world.

> All forms of naturalism and logical empiricism simply take for granted this social reality, which is the proper object of the social sciences. Intersubjectivity, interaction, intercommunication, and language are simply presupposed as the unclarified foundation of these theories.[20]

In the following quotation substitute "conscious" for "intelligent", etc., to get the sense of Schutz's point.

> It is not . . . quite understandable why an intelligent individual should write books for others or even meet others in congresses where it is reciprocally proved that the intelligence of the Other is a questionable fact. It is even less understandable that the same authors who are convinced that no verification is possible for the intelligence of other human beings have such confidence in the principle of verifiability itself, which can be realized only through cooperation with others by mutual control. Furthermore they feel no inhibition about starting all their deliberations with the dogma that language exists, that speech reactions and verbal reports are legitimate methods of behavioristic psychology, that propositions in a given language are able to make sense, without considering that language, speech, verbal report, proposition, and sense already presuppose intelligent alter egos, capable of understanding the language, of interpreting the proposition, and of verifying the sense.[21]

This does not prove that a behavioristic theory of communication could not be developed. (None has been shown to be adequate, and I am inclined to doubt that one could, but this is beyond the scope of the present paper.) It does betray a double-mindedness on the part of the behaviorist, since he makes use of the everyday social world to do his science, but refuses to take scientific cognizance of it. The fully-human man creates a less-than-fully-human science of himself.

2. A humanistic science of man is capable of handling the enormous complexity of observations involving man with greater simplicity than a behavioristic science. The neatness of behaviorism is initially misleading. It results from not attempting to deal with the complexities of actual human activity.

To see how a humanistic approach is simpler, take the following example.[22] Suppose we try to imagine what is involved in seeing the world, not as physical objects, but as colored surfaces. A person who saw the world in this way might be able to describe a room. He might even be able to infer that it was appropriate to refer to physical objects (though he never saw the colored surfaces as physical objects.) He might even be able to infer that the inferred physical objects were causally interacting in various ways, even though he did not see them as interacting. But is it not clear that such a person would need an enormously large number of complex steps to infer that it was the case that "the cat knocked over the lamp"? It is much simpler to see the cat knock over the lamp than to infer it in a series of steps from the movements of colored surfaces.

The behaviorist who insists on seeing man as only a complex physical system is handicapped in precisely the same way that the man who sees only colored surfaces is. He must make a large number of com-

plex inferences in order to arrive at information that we see (noninferentially) in the everyday social world.

I arrive home and see welcome affection in my wife's face and manner. I anticipate that my coming-home kiss will be warmly returned. I turn to my research assistant and ask him to corroborate my findings in a given experiment. He returns later and says, "My findings duplicate yours exactly." I take it that I may safely write a preliminary report of the experiment. I could describe all of the movements of the superficial musculature together with geometric patterns and their proportions on the surface of the front of my wife's head and then infer from these combinations what the muscles around her mouth will do if I perform certain behaviors. Likewise, I could regard the words of my associate as a complexity of noise which I must relate causally to a case of similar patterning in the past in the presence of certain experimental results. Such descriptions and inferences would be exceedingly complex and awkward.

The latter, physicalistic way of seeing my wife and associate suggest that the behaviorist's approach to man is analogous to the case of the man who sees only colored planes. Given enough knowledge, it is possible to construct correlations and form inferences. But I believe that the knowledge necessary would far exceed what is necessary to come to the same conclusion based on our ordinary way of seeing the world, or in the case of psychology, of the humanistic way (which is also our ordinary way) of seeing man.

I do not believe that these two considerations in any way "disprove" behaviorism (whatever that might mean). Behaviorism is a possible science. I do believe that these considerations suggest that a humanistic science of man promises to be a richer, more concrete undertaking. Beyond that there is no philosophical magic. One might raise value considerations about the appropriateness of controlling human behavior, but I will not pursue that path here.[32]

What Is Man?

There remain some considerations which, while of little interest from a strictly scientific point of view, are of considerable interest to psychologists who are also Christians.

Neither a behavioristic nor humanistic science of man claims to be an exhaustive account of man, that is, they do not claim (in their clearer moments) metaphysical validity for their linguistic conventions. Yet both enjoy considerable success in talking about man within their frameworks. I suggest that the metaphysical problem ought to be posed in the following terms: "What is man, that all of these scientific conventions can be successfully mindful of him?" And the inquiry is further sharpened when the neurosciences are included among the scientific conventions so considered.

Yet for now humanistic social science is clearly the science that deals with man in terms that are closest to his own self-understanding. To the Christian who is looking for some point of contact between the personal-agency view of man found in the Bible and what science says about him, a humanistic science of man appears to be the most fruitful present version with which to seek dialogue. To all appearances the prospects of Christian integration with behaviorism look bleak, for the Bible and behaviorism speak different languages. In view of this it is tempting to suggest that all Christian social scientists, even if their training does not permit them to become humanists professionally, ought at least to acquaint themselves thoroughly with the world of humanistic social science.[24]

A humanistic science of man is capable of handling the enormous complexity of observations involving man with greater simplicity than a behavioristic science.

As for the humanistic social scientist, the methodological groundwork is there for developing a rigorous and hard-nosed science of man as man. Perhaps along this direction lies the proper way to fill out the notion of a "Christian psychologist" as something other than a technician who happens also to be a Christian. I suppose that now the really interesting question becomes "are the empirical results of a humanistic science of man compatible with Christianity?" I think the answer is positive, but perhaps it is too soon to say. In any case, that is the topic for another paper.

FOOTNOTES

[1]"Empiricism, Semantics and Ontology," in Rudolf Carnap, *Meaning and Necessity* (2nd ed.; Chicago: The University of Chicago Press, 1958), p. 221. (Carnap's italics)

[2]See Carnap's autobiographical statement in *The Philosophy of Rudolf Carnap*, Vol. XI of the *Library of Living Philosophers*, ed. by P. A. Schillp (La Salle, Ill.: The Open Court Publishing Co., 1963).

[3]Rudolf Carnap, *The Logical Structure of the World*, trans. by Rolf A George (Berkeley: University of California Press, 1967).

[4]Rudlof Carnap, *The Logical Syntax of Language*, trans. by Amethe Smeaton (London: Kegan Paul, Trench, Trubner & Co., 1937).

[5]See "Empiricism, Semantics and Ontology," and Carnap's replies to his critics in Schilpp, *op. cit.*

[6]See the autobiographical essay in Schilpp, *op. cit.*

[7]Thomas S. Kuhn, *The Structure of Scientific Revolutions* (2nd ed.; Chicago: The University of Chicago Press, 1970), p. 111.

[8]Norwood Russell Hanson, *Patterns of Discovery* (Cambridge: Cambridge University Press, 1965), chapter 1, "Observation."

[9]Merle B. Turner, *Philosophy and the Science of Behavior* (New York: Appleton-Century-Crofts, 1967), pp. 191-2.

[10]A typical misunderstanding is evidenced by Gary R. Collins in "Nothing Really New," *Journal of the American Scientific Affiliation*, 22 (1971), 43-45. Of course there *are* epistemologically irresponsible humanists, just as there are epistemologically irresponsible behaviorists.

[11]Important here are the first two volumes of Alfred Schutz's *Collected Papers* (The Hague: Martinus Nijhoff, 1962 and 1964) and *The Phenomenology of the Social World*, trans G. Walsh and F. Lehnert (Evanston, Ill.: Northwestern University Press, 1967). See also Maurice Merleau-Ponty, *The Structure of Behavior*, trans. A. L. Fisher (Boston: Beacon Press, 1963); Adrian van Kaam, *Existential Foundations of Psychology* (Pittsburgh: Duquesne University Press, 1966) and Stephent Strasser. *Phenomenology and the Human Sciences* (Pittsburgh: Duquesne University Press, 1964).

[12]See Ludwig Wittgenstein, *Pholosophical Investigations* (3rd ed.; New York: The Macmillan Company, 1958). Helpful in getting into Wittgenstein's writings is Norman Malcolm, "Wittgenstein on the Nature of Mind," *American Philosophical Quarterly, Monograph* No. 4, 1970.

[13]Alfred Schutz, "Concept and Theory Formation in the Social Sciences" in *The Problem of Social Reality, Collected Papers*, Vol. I, ed. by Maurice Natanson (The Hague: Martinus Nijhoff, 1962), pp. 55-56.

[14]*Ibid.*, p. 57.

[15]Alfred Schutz, "The Social World and the Theory of Social Action," in *Studies in Social Theory, Collected Papers*, Vol. II, ed. by Arvid Brodersen (The Hague: Martinus Nijhoff, 1964)m p. 5.

[16]Cf. Carnap's remark that "the statements of an experimental subject are not, in principle, to be interpreted differently from his other voluntary or involuntary movements. . . . The movements of the speech organs . . . are not, in principle, to be interpreted differently from the movements of any other animal. . . . The movements of an animal are not . . . to be interpreted any differently from those of a volt-meter. . . . Finally, the movements of a volt-meter are not, in principle, to be interpreted differently from the movements of a raindrop. . . ." "Psychology in Physical Language," in *Logical Positivism*, ed. A. J. Ayer (Glencoe, Ill.: The Free Press, 1959), p. 195. Cf. B. F. Skinner, *Verbal Behavior* (New York: Appleton-Century-Crofts, 1957).

[17]Sydney Shoemaker, Self-Knowledge and Self-Identity (Ithaca, N.Y.: Cornell University Press, 1963).

[18]David Braybrooke states in his "Introduction" to *Philosophical Problems of the Social Sciences* (New York: The Macmillan Company, 1965), p. 9, "It is important to notice that . . . [both behavioristic and humanistic investigations] are capable of being equally empirical. The intuitive assessment of inner life which Skinner, on the one side, would dispense with can be dispensed on the other side too. Inded in the end they would have to be dispensed with. If an action investigator had a hunch that a certain action . . . [had a specific meaning], could he offer the hunch in evidence? His colleagues would surely wonder why the hunch had not been tested by ferther observations. Intuition is not an optional way of establishing the significance of actions or the content of concepts and norms any more than it is an optional way of establishing the effects of various reinforcements. It is no way at all: at most it is a way of initiating investigations, which have to be brought to an end by public observation and public reasoning."

[19]Cf. Schutz's remark that "an ideally refined and fully developed behavioristic system . . . would lead far away from the constructs in terms of which men in the reality of daily life experience their own and their fellow-men's behavior." "Common-Sense and Scientific Intepretation of Human Action," in *Collected Papers*, Vol. I, p. 5.

[20]Schutz, "Concept and Theory Formation in the Social Sciences," p. 53.

[21]Schutz, "The Social World and the Theory of Social Action," p. 4.

[22]This illustration was suggested by the ideas of Norman Malcolm in *Problems of Mind: Descartes to Wittgenstein* (New York: Harper and Row, 1971), pp. 91-102.

[23]For an insightful contribution to this "path-not-taken-here" see Hans Jonas, "The Practical Uses of Theory" in *Philosophy of the Social Sciences*, ed. by M. Natanson (New York: Random House, 1963), pp. 119-157.

[24]For fruitful places to start consider the following: Anthony J. Sutich and Miles A. Vich, eds., *Readings in Humanistic Psychology* (New York: The Free Press, 1969); Peter L. Berger, *Invitation to Sociology: A Humanistic Perspective* (New York: Doubleday & Company, 1963) and his other books, especially *The Social Construction of Reality* (New York: Doubleday & Company, 1967), in collaboration with Thomas Luckmann. These books contain bibliographic references which provide a wedge into the literature. For those concerned about the relation of mathematics to a humanistic science of man, see Herbert A. Simon, "Mathematical Constructions in Social Science" in *Philosophical Problems of the Social Sciences*, ed. by David Braybrooke (New York: The Macmillan Co., 1965), pp. 83-98. Finally, for a moving example of atheoretical humanistic sociology, see James Agee and Walker Evans, *Let Us Now Praise Famous Men* (2nd ed.; Boston: Houghton Mifflin Co., 1960).

Notes on "Science and the Whole Person" —
A Personal Integration of Scientific and Biblical Perspectives

Part 2

Science Isn't Nothing

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If the contention that science is everything is one extreme, the other extreme is that science is nothing. The reaction to the exclusive claims of science has been dramatic. If the rational, materialistic, objective, reductionistic view characteristic of science makes it impossible for man to be truly human, then the whole package must be rejected so that man can be honest to the experiences and knowledge that he has of himself as a living and experiencing human being. Repelled by the emphasis on the impersonal, the mechanistic and the intellectual, the pendulum swings without stopping to embrace the subjective, relativistic, and anti-intellectual. All objective reality is lost. All absolutes cease to exist. Man may not be reduced to a machine, but he ends up being little more than an animal, reacting to the claims of his viscera.

Similar reactions are common to both science and religion. Reaction against rationalism quickly becomes reaction against the traditional Judaeo-Christian position with its deep roots in rational and historically based faith. Instead there is an explosion of infatuation with nonrational and non-historical expressions of pseudo-religious variety.

Irrationalism as a World View

The flight from scientism has many able and widely read advocates outside of any historical religious context. In *The Greening of America*, Charles Reich says

> At any rate, Consciousness III believes it essential to get free of what is now accepted as rational thought. It believes that reason tends to leave out too many factors and values—especially those which cannot be put into words and categories. . . . It believes that thought can be 'non-linear,' spontaneous, disconnected. It thinks rational conversation has been overdone as a means of communication between people.[1]

In view of the excesses to which rationalism (reason raised to the pinnacle of existence through scientism) has gone, the motive behind such words as these is clear. If rationalism symbolizes the impersonal society, the profit landlord, the self-seeking politician, the nation at war to protect its own materialistic interests at the expense of its neighbors, the reduction of the human being to a number—then, of course, there is a need to speak out against such excesses. But to be rational is not identical to being committed to rationalism. To be verbal is not identical to being indifferent to emotional response. Instead to be rational and to be verbal are unique distinctives of the human being, not shared with any other member of the animal kingdom. To denounce the disciplined use of one's mind and the careful choice of words for communication as principle, is to reject some of the essential qualities that define humanity.

Another exponent for irrationality is the historian Theodore Roszak. In reviewing his book, *Where the Wasteland Ends*,[2] psychologist-theologian Vernon C. Grounds says

> Yet in that book he calls for a fierce repudiation of scientific reason and depersonalizing logic; he calls likewise for an uncritical liberation of feeling, alleging that only thus can we hope for the renewal of our sick society. In that book he indiscriminantly applauds a wide range of mind-blowing techniques—psychedelic experimentation, sensory awareness, Gestalt therapy, contemplative disciplines, willful zaniness, primitive lore, ritual, occultism, passion, the heart, poetic genius, inspiration, intuition, sensation, sympathy, and imagination.[3]

Grounds feels that Roszak is calling for us "to go back to an irrational mysticism which is really paganism resurrected."[4]

In a later installment we consider in more detail the issue of pseudo-science and pseudo-religion, of a kind of mysticism that goes as far in its own way of depersonalizing man as scientism does in its way. Having called attention to the kind of defense of irrationalism of concern to us here, however, we limit ourselves to setting forth the positive contributions that science can make to a worldview. These positive contributions are of significance not only for science itself, but also for the context in which the Judaeo-Christian tradition is seen. Jehovah is Lord of Creation and of Redemption; Jesus Christ is Lord and Savior of the Cosmos. In neither the Old nor New Testament revelations is God seen as a uniquely "religious" figure; the understanding of Creation and Cosmos does not come from a completely relativistic and subjective worldview. If science is consistently seen to be nothing, then many of the deepest values of human thought have been lost.

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Science and Reality

Two words that need to be defined carefully, and that are intimately related, are the words "reality" and "truth." When these words are used, the speaker may be thinking about only relative realities and relative truths, i.e., realities and truths defined by the one who experiences them, or he may be thinking about *the* reality and *the* truth that exist and may be sought but cannot be independently defined by different people. The difference between these two possibilities is enormous.

In the Judaeo-Christian tradition, the basis for the existence of an objective reality is found in the Biblical doctrine of Creation. Creation means that there is a structure to the world (certainly not a static structure, but a dynamic pattern of interactions) which is given to us. This is a created structure, a structure that is independent of us, a structure which *is* whether we know it or not, and whether we like it or not. It is this created structure that gives content to what we mean when we speak of "reality" and even of "truth." It is this created structure of the universe that we mean when we speak of an objective reality not at the disposal of our subjective intentions.

To say that there *is* an objective reality is not to claim that this reality can be completely known by us at any specific time. It is however to claim that we should not confuse our *perceptions* of reality (sometimes highly subjective and always constantly changing) with the existence of reality itself. If the only reality there is consists of our perceptions of reality, then it makes sense to speak of "my reality" and "your reality" even if these are mutually contradictory. If, however, there is an objective reality that does not depend upon your or my perceptions of it, then this objective reality exists and persists quite independently of us. It is a goal toward which we can strive, even though we cannot apprehend it fully. It constrains us, rather than we constraining it. The doing of science depends upon the assumption of the existence of such an objective reality. Thus, not surprisingly, the successful doing of science depends implicitly on the existence of a structure as defined by the Biblical doctrine of Creation.

A serial presentation of notes based on Freshman Seminars at Stanford University in 1974 *and* 1975, *and a course given at Fuller Theological Seminary in* 1974. *Part* 1, *"Science Isn't Everything" appeared in March* (1976), p. 33-37.

"Truth" is again a very significant word. It is often bandied about rather like "reality," with claims made for the significance of "what is true for me," and "what is true for you," even if the two "truths" are logically incompatible. The link between "truth" and "reality" may be directly made: the true is that which conforms to reality. To the extent that a concept or a statement reflects the real situation, it is true. If our understanding of an event conforms to reality totally, then we have an understanding of complete truth—a situation rarely, if ever, encountered. Even if our understanding of an event conforms only partially to reality, however, we still have an understanding of partial truth. It is in the realm of partial truth that we as finite human beings are primarily confined. The search for truth is the search for knowledge of reality. Knowledge that does not conform to reality reveals itself to be non-truth. The search for truth is the search for understanding of the created structure of the world; this means not only the physical and chemical structure, but the biological, psychological, sociological and theological structure of the world as well. To speak in this way of reality and truth does not mean to imply that all truth is abstract. The Judaeo-Christian tradition sees truth also as profoundly personal; Jesus says, "I am the truth."

Science is one attempt to understand and describe the structure of the world. It is an attempt based upon a specific methodology, which limits both the questions that are asked and the answers that are received. Scientific truth is a partial kind of partial truth. It is a partial kind of truth since our scientific understanding is always incomplete and changing to conform closer and closer to the objective reality given to us. It is a kind of partial truth since it probes only certain aspects of reality and neglects whole realms of other aspects.

Although historical instances of scientists who did not consider acceptance of an objective reality to be essential (who, for example, regarded the practice of science simply as the manipulation of recipes) can be cited, the scientific enterprise as a whole has always assumed a belief in the existence of objective reality as a condition for its existence and progress. The formulation of scientific laws is an attempt to describe relationships characteristic of this objective reality, not to foist upon a shapeless realm the laws that have their origin only in the minds of their inventors. To do science means to strive as much as possible to stand open before this reality, probing and testing it for its content, without attempting to force it to adjust to presuppositions or preconclusions derived from any other philosophical or religious source.

The Christian scientist takes the created structure of the world seriously and believes that this work of God is a faithful and reliable witness. The non-Christian must no less stand open before the created structure in order to be successful in science. In a very real sense, it is only by the non-Christian's tacit assumption of the Christian position with respect to the givenness of the universe that he is able to be successful in the pursuit of science.

Science as Revealer of Reality

In many different ways the pursuit of science in its basic and especially its applied forms forces upon us the realization of the objective reality of the created structure within which we live. We are constantly reminded that the created structure encompasses and rules us, and not we the structure.

Scientific truth is a partial kind of partial truth.

If a man mistakenly believes that a description of reality in terms of the law of gravity is something totally imposed upon the universe by human minds and hence not binding on himself, he is certain to suffer the consequences of violating the conditions of life in the context of that law. If he believes that the attraction of gravity is available for subjective interpretation and that he has the individualistic freedom to walk off the top of a tall building in defiance of any objective reality to gravitational attraction ("Your reality may include gravitational attraction, but my reality does not"), he soon learns to his hurt that violations of the structure of the world cannot be made without paying the price.

If a man mistakenly believes that the laws of biochemistry and biology are such that taking a large dose of strychnine will have no affect on him, he soon learns that the structure of the world dictates what is poison for the human system and what is not. This dictate is not suspended by his attempt to ignore reality.

Engineering, technology, applied science—even more than basic science—bring home the necessity to conform one's design to the reality of the given structure of the world. The grandest idea, the noblest conception of the drafting room, the most elegant design conceived by the human mind, all must face the ultimate and intrinsic test of conformity with the natural world. A burning desire to design an airship in the shape of a giant octagon does not result in getting the craft off the ground unless the structure of the world that dictates the requirements of acrodynamic flight is heeded. Man can imagine what he will; his thoughts are confirmed only if they are consistent with that pattern of created structure which is given to him, which he did not form, and over which he has no ultimate control.

Is not one of the major ecological lessons man is learning today the simple fact that he is constrained by the given structure of this world? He is not free to violate this structure endlessly and without limit; his forgetfulness of this limitation leads him to upset the balance of nature that is infinitely more complex and intricately interconnected than he ever supposed before.

Interpersonal Reality

Reality is more than atoms, molecules and matter. Reality in the world in which we live involves persons and the relationships between persons. Although it is very difficult for competent science to deal as clearly with the created structure in the realm of interpersonal relationships as with the structure in the realm of physics and chemistry, still the perspective of science prepares us to be open to the possibility of created structure here as well.

The Christian believes that there is an objective reality about the world of physics and chemistry, and he believes also that there is an objective reality that governs the relationship between persons. For he sees persons as also being created and hence partaking of the created structure of the universe. There are patterns of behavior which define the appropriate structure of interpersonal relationships when persons live as fully as possible in accordance with their created attributes. These patterns of behavior are part of a complex objective reality that is ultimately just as independent of the individual as are the physical laws of nature. The Christian sees such Biblical summaries as the Ten Commandments or the Sermon on the Mount as expressions of the nature of the created structure governing interpersonal relationships. They describe the structure of these relationships if man is to live fully human within the intentions of the created universe. These structures cannot be violated with impunity, any more than the structures governing the physical aspects of matter can be violated without suffering the consequences.

Consider, for example, the commandment, "Thou shalt not steal." This commandment summarizes the profound truth that a society in which stealing is absent is a more human society than one in which stealing is present. We should expect that the findings of mature and competent science will confirm such statements; by a careful combination of psychological and sociological study, scientists conclude that stealing is not a positive element in a human society. Why is this true of stealing? Because of the attributes of human nature with which the human being is endowed. How is the human being endowed with these attributes? The ultimate answer must be either by Chance or by Creation. We wish to consider the meaning of that answer in more detail further in a later installment; for the moment it is sufficient to realize that human beings are so constituted that their humanity is decreased in the presence of stealing. This constitutes a law of interpersonal relationships. The Christian finds its origin in the same creating God who created other aspects of the universe.

Man can imagine what he will; his thoughts are confirmed only if they are consistent with that pattern of created structure which is given to him, which he did not form, and over which he has no ultimate control.

It is as pointless to claim, as some do, that "Thou shalt not commit adultery" is only a subjective judgment of a past culture, as it is to claim that "Thou shalt not take poison," or "Thou shalt not jump off a tall building," are only subjective judgments of a primitive people. To suggest that "not bearing false witness is the right way to live for you, but it's not the right way for me" is as irrelevant as to suggest that "not jumping off a tall building is the right way for you to live, but not for me." It is not that moral and ethical values are not formed by society; rather it is that the created attributes of human society define the moral and ethical standards that are appropriate for living in a fully human way.

If it is objected that aboriginal societies are well known to anthropologists where stealing, adultery and lying are common and accepted practices, it can be concluded only that that aboriginal society is a good deal less human than it might be if it conformed to the created structures of living for human beings. R. F. R. Gardner, gynecologist and theologian, offers the challenging observation,

> There are those who point out, correctly, that other societies have different patterns of relationships between the sexes, patterns which often approve of pre-marital intercourse, and sometimes permit multiple partners. What they do not go on to point out is that the quality of family life in these societies is inferior, both so far as the status of women is concerned, and in romantic love to our ideals. I write from experience of having worked among both polygamous and polyandrous peoples. Our traditional ideal of virginity before marriage and chastity within marriage can only be replaced by practices which are not only lower on an ethical standard, but yield less satisfaction to their practitioners.[5]

It is not strange that these last two descriptions should go together. Because of the created structure of interpersonal relationships, practices which fall short of the ethical demands of the fully human must of necessity yield less than fully human satisfaction.

Even the most ardent advocate of ethical relativism will be found to admit to *some* absolutes. At least in my experience I have never found anyone who would argue that for a human being to hate another human being was ultimately beneficial either to the individual involved or the society in which he lives. It appears, therefore, that "Thou shalt not hate another person," is indeed an ethical absolute. Why should this be? Again it is the consequence of the way in which human beings are made, a consequence of the created structure of interpersonal relationships. I have also never found anyone who would argue that it was beneficial for a human being to treat another human being as a thing to be exploited rather than as a person to be related to. Another ethical absolute appears, therefore, "Thou shalt not treat a person as a thing." And is this not, after all, the message of the biblical teaching about the ways that human beings should treat one another, perhaps more recognizable in its positive form as "Thou shalt love another person as a person even as you also are a person to be loved."

Freedom

The term "freedom' is part of the language that deals with persons. Atoms and molecules are not free, and attempts to construct illustrations of freedom in terms of physical indeterminacy (as we shall see further in a later installment) are largely misguided. It may be somewhat surprising, therefore, to realize that this science-based appreciation for the objective structure of the world is essential for an understanding of what we mean by living in freedom.

To live without due regard for existing structure is not the exercise of freedom; it is rather an invitation to loss of freedom both temporarily and possibly permanently. The truly free person must recognize fully the constraints and limitations by which he is bounded;

any attempt to act contrary to these constraints and limitations produces only loss of freedom.

Freedom can be experienced and developed only within the confines of created structure. No amount of individual subjectivism enables one to violate the physical laws describing this created structure in order to pursue some concept of absolute freedom. And similarly no amount of individual subjectivism enables one to violate the interpersonal structures of life in order to pursue some ideal of absolute freedom. Absolute freedom does not exist in the created universe, because it fails to take into account objective reality. Absolute freedom is characteristic only of chaos and is incompatible with order.

True freedom, freedom which is faithful to reality and which can therefore be experienced, operates within the framework of the created structure in both the physical world and in the world of interpersonal relationships. The freedoms of friendship can exist only within the constraints of love and understanding; how much more so the freedoms of marriage.

Summary

Reactions against the excesses of scientism have often led to a wholly relativistic, subjective and non-rational (or irrational) view of life. If scientism reduces man to a machine, irrationalism reduces man to an animal. To be human means to be rational and verbal, as well as to be emotional and feeling. An appreciation for scientific descriptions aids us in avoiding this extreme.

The pursuit of science is generally based on the acceptance of the existence of an objective reality that is not ultimately dependent on men. To perceive such an objective reality is to be able to speak of truth and to be delivered from a wholly relativistic view of life and values. The Judaeo-Christian worldview sees this objective reality to be the created structure of the universe, extending not only throughout the physical realm but throughout the area of interpersonal relationships as well. Although as finite human beings we have access only to partial truth, and through science only to a partial description of this partial truth, still such partial truths can be adequate for life. An individual's inability to know ultimate reality totally does not mean that there is no ultimate reality. We strive to make our perceptions of reality and truth conform ever closer to the objective reality and truth given to us by creation, and to know in a personal way the Creator.

The doing of science and the application of science is a constant reminder of our need to conform our practice to the structure of the given universe. The truly creative imagination is not one that runs amok disregarding the materials and principles of this world, but is one that brings new insight, new life and new understanding of reality through the materials and principles of this world.

A scientific understanding also helps us to appreciate what it means to be truly free. To be free does not mean to disregard with impunity any restrictions, but it means to live creatively and fully with due regard for the constraints and limitations given to us in the structure of our universe. It becomes clear, therefore, why all attempts to bring absolute freedom into practice must result in self-destruction. Since irrationalism is a movement motivated to a large extent by the desire for absolute freedom, it carries the seeds of its own failure.

Even the most ardent advocate of ethical relativism will be found to admit to some absolutes.

TOPICS FOR DISCUSSION

1. Consider the basic human emotion of love. When you love someone, are you engaged in a rational, a non-rational or an irrational activity? What circumstances determine your choice among these three terms? In one of the most well known definitions of love by the Apostle Paul in I Corinthians 13:4-7, he says,
   > Love is patient and kind; love is not jealous or boastful; it is not arrogant or rude. Love does not insist on its own way; it is not irritable or resentful; it does not rejoice at wrong, but rejoices in the right. Love bears all things, believes all things, hopes all things, endures all things.

   If you were to take Paul's concept of love, which of the three above terms would you apply to it?
2. Is religious worship a rational, non-rational or irrational activity? Can a general answer be given? What did he have in mind when the Apostle Paul said in I Corinthians 14:15,
   > I will pray with the spirit and I will pray with the mind also; I will sing with the spirit and I will sing with the mind also.
3. What assumptions about the nature of the universe is a person making if he assumes that ultimate truth either doesn't exist or can be apprehended only through irrational mysticism?
4. Consider the close relationship between the rational and the religious indicated in Jewish thought by Exodus 20:8, 11.
   > Remember the sabbath day, to keep it holy . . . for in six days the Lord made heaven and earth, the sea, and all that is in them, and rested the seventh day; therefore the Lord blessed the sabbath day and hallowed it.

   And in Christian thought by John 1:3,
   > All things were made through him (Christ), and without him was not anything made that was made. In him was life, and the life was the light of men.
5. Consider the following two statements from the *Time* article on "Reaching Beyond the Rational" (April 23, 1973, pp. 83-86),
   > This week the Science section considers the repercussions for science and technology (of discontent with entrenched intellectual ideas). It finds a deepening disillusionment with both, as well as a new view among some scientists that there should be room in their discipline for the nonobjective, mystical and even irrational.
   >
   > Beyond that, the new critics have suggested that science does not have a stranglehold on truth, and that the cold, narrow rationality so long stressed by scientists is not the only ideology for modern man to live by.

   Do these two statements say the same thing or two different things? Is there a difference between having room for the nonobjective and mystical in personal life and having room for the nonobjective and mystical *in the discipline* of science? What will happen to science if the mystical is called scientific? Is the solution for "the cold, narrow rationality so long stressed by scientists" the radical alteration of the discipline of science itself?
6. It is sometimes argued in effect that because we can never know God totally, we can never know God at all. Is this an accurate assessment? Do we ever know another person totally? Do we ever understand the physical universe totally? Show how partial knowledge can in each case give us sufficient insight into reality for us to live faithful to that reality.

7. What is involved in the claim of Jesus, "I am the Truth"?
8. Alchemists believed that they could transform lead into gold. Why couldn't they?
9. Consider the internal combustion engine and its role in the automobile. Indicate a number of ways in which the structure of reality limits its unrestricted use, e.g., availability of fuel, variety of environmental pollutants, need for highways and parking lots, etc. How much of the earth could be blacktopped for highways and parking lots before the temperature of the earth would rise sufficiently to melt the polar ice caps?
10. There is probably not a single person in the world who would not admit the constraints and limitations inherent in physical laws. Why are there so many to whom a corresponding set of relations governing interpersonal activity is completely unthinkable? What are the underlying assumptions?
11. The student of history knows that the record of human activity in the world is one of continuous inhumanity of man to man on the large scale of world events. Why are there so many who believe that a perfect world is about to appear tomorrow, or at least the day after? What are the underlying assumptions?
12. What are the minimum characteristics of an individual and of his circumstances in order for a description of his "freedom" to be meaningful? Must freedom itself actually be described on a variety of levels from the physical through the theological?

True freedom operates within the framework of the created structure.

FOOTNOTES

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[3]Vernon C. Grounds, "Neo-Mysticism versus True Supernaturalism," Christian Heritage, December 1973, p. 24
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[5]R. F. R. Gardner, *Abortion: the Personal Dilemma,* Eerdmans, Michigan (1972), p. 256

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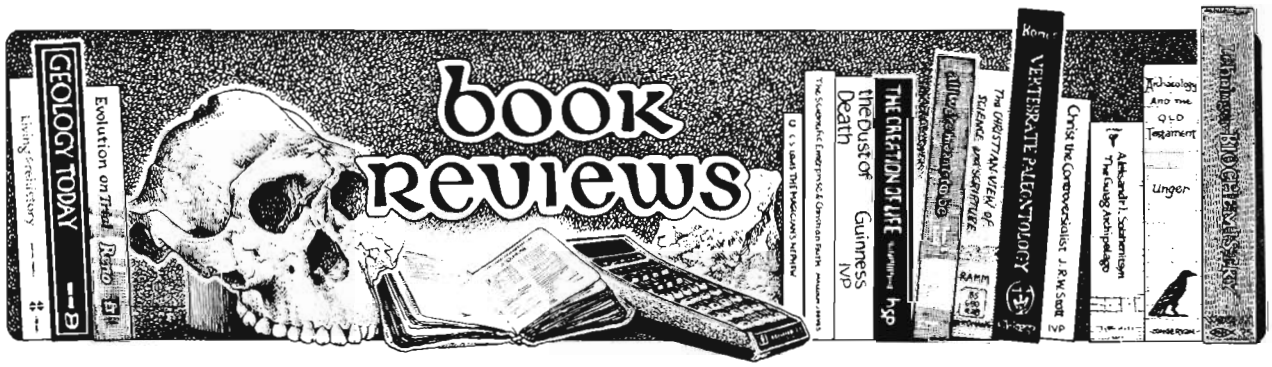

PASTORAL COUNSELING by Wayne E. Oates. Westminster, Philadelphia, 1974. $7.50, 236 pp.

The subtitle, "A Strategy and a Christian Philosophy of Pastoral Counseling", offers us hope for a synthesis of the distinctives, if there be such, of pastoral counseling. The author is well suited for the task, since Wayne Oates is one of the deans of the pastoral counseling movement, director of the doctoral program in pastoral psychology at the Southern Baptist Seminary in Louisville for a quarter century, and author of over 25 books in this field. So he speaks from experience, practice, and authority.

Oates builds the book around the "tensions brought about by ambiguity inherent in the identity and function of the pastor". He devotes a chapter to each of these so-called paradoxes of ministry: 1. The Institutional and the Personal, 2. Theological Continuity and Scientific Discontinuity, 3. Training and Charisma, 4. Durable and Short-Term Relationships, 5. Aggressive and Passive Pastoral Counseling, 6. Private and Public Ministries, 7. The Individual and the Group, and 8. The Family Ties and Liberation.

Woven into these chapters are many bits of practical wisdom, sage observations, careful reflection, and good clinical advice. These how-to-do-it tips are useful to any pastor, although not particularly novel and similar to material found in most pastoral counseling books. But this is not the main thrust of the book. Oates would clarify pastoral philosophy and strategy.

First the philosophy. He states that pastoral counseling takes place within a "God-in-Relation-to-Person consciousness". So far so good. But then Oates reverses himself by saying the counseling proceeds "often, in spite of the protestations of the counselee or without his awareness of it." Come now. Consciousness but no awareness? Later Oates rhetorically asks whose God is the focus of the relationship. The God of the pastoral counselor or the counselee? Oates answer: "the counselee". This is the answer of the secular psychotherapist. But is it the answer of the pastoral counselor? Does this imply that a minister can be pastor to Hindu, Buddhist, Christian Scientist, agnostic, theosophist, and humanist alike? Where is the distinctive of pastoral counseling in this?

Next Oates tells us that the pastoral counselor has an "awareness of God." This he defines as being an "ethically serious thinker". But I know many humanists and agnostics who are ethically serious thinkers. Third, the pastoral counselor engages in "conversation about Faith in God." To Oates this means using words like hope, joy, care, love, concern; "appropriate but earthy words need to be said". Is this conversation of faith?

Having given the counseling distinctive above, Oates goes on to give the distinctive pastoral roles: expert in his religious literature, knows his religious culture, has concrete community resources, has a public character, is an ethicist, has the power to bless, and has a prophetic role. These pastoral distinctives are given brief paragraphs and figure little in any subsequent discusssion of strategy.

Oates then tries to relate these pastoral roles to the counseling role of the minister in the subsequent chapters devoted to tensions between being a pastor and a counselor. In my opinion he fails because the tension is an artificial one. And both his failure and the artificial tension reflect the failure of the whole of the pastoral counseling movement.

The field of pastoral care has been more "clinical" care than "pastoral" care. In the history of the church there is a long tradition of the "cure of souls".[1] But many of these pastoral functions have been secularized and given social mandate as professional services. A major reaction among the clergy has been to embrace this secularization of their role and function. The pastoral counseling movement began as an adumbration of pastoral skills, became a "specialized ministry", then full time counseling, moved to separate pastoral counseling centers, and finally exited from the religious context altogether into private practice.

We have lost the "pastor" in all this. The pastoral counseling movement does not address him. Rather it tells him that the pastorate is a dead-end. The model of success is the psychotherapist, physician, social worker, community organizer. It tells him the most important tasks are to deal with the sick, deviant, and deprived. It tells him that further training and skill acquisition will provide him with status and function outside the pastoral role. It tells him that personal satisfaction, monetary reward, recognition and status are not found in the context of the pastorate, but outside the parish life as a chaplain, counselor, or community organizer.[2]

Although pastoral counseling has been built primarily on secular models, there have been recurrent efforts to "prove" that pastoral counseling was something unique and distinctive. In 1961 Hiltner and Colston published one of the few research studies that attempted to document proclaimed differences.[3] Since then there has been much rhetoric but little documentation. But more to the point, with occasional exceptions,[4,5] the movement has been devoid of a theological base. Likewise, in this book I find no commitment to a theological premise. Oates struggles between the pastor as secular psychotherapist (part time) and religious pastor (part time). No wonder he sees tension, ambiguity, and paradox.

To my mind, the resolution lies in the elimination of the dichotomy. We should stop trying to secularize the pastor and return him to his religious role and function. But this does not mean he does not counsel. Rather he counsels people *within* his role and function as pastor. That is his unique strength and position which the secular counselor cannot gainsay. Oates sees the pastoral roles as confusing and limiting the counseling role. I disagree. I see the pastoral role as strengthening the counseling role of pastor *qua* pastor. Only when the pastor tries to ape the conduct of the secular psychotherapist does he get into tensions. There is strength in the multiplicity, complexity, and ongoingness of the relationship betwen pastor and people. Oates sees this as an interference. But I think my own children have made the point most clear when they tell: "Hey Dad, stop being a child psychiatrist; just treat us like a father."

Now we turn to the strategy part, which unfortunately displays again the same weakness of the pastoral counseling movement. To wit, the movement has been parasitic upon the secular psychotherapies. Pastoral counseling books tend to be dreary translations of the most popular psychotherapy fad into religious jargonese. The "in" therapy of the year soon becomes the fad of pastoral counseling. In fact Oates admonishes pastors to "keep in touch with each passing emphasis." How can a busy pastor do this? Much less with acumen.

Another example of the phenomenon is the obeisance to professional wisdom. Oates runs through a long list of individual, group, and family methods and theories, a paragraph apiece. What pastor is helped by fifty pages on fifty therapies? One might expect that a pastor might look up the reference books. But Oates lists the popular best seller books on the psychotherapy market. Like many best sellers they are inaccurate, misleading, and lack the substantive scientific base of psychotherapy. So Oates leads the pastor to books of thin gruel, not warming substance. In fact Oates displays a lack of awareness of the basic scientific literature. For example, in his last chapter on the nuclear family, Oates is totally misleading on the nature of contemporary family structure, even though he lists a major journal where such research studies are reported!

In summary, Oates' book reflects the two major faults of the pastoral counseling movement, which in turn continue to alienate the pastor from the parish. I believe that Oates sees this dilemma. Hence the book. I regret having to render harsh judgement on the failure of the book. But it does not lead us forward; it reinforces the problems.

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THE EAST, NO EXIT and **ENCIRCLING EYES: THE CURRENT RESURGENCE OF THE OCCULT** by Os Guiness, Downers Grove, Illinois: InterVarsity Press, 1974, 54 pp. (each booklet), $1.25.

These two short bookets were originally published as part of a much larger work, *The Dust of Death* (InterVarsity, 1973) [Reviewed in *Journal ASA, 26*(4), 180(1974).]. As revised and enlarged in this special edition, Guiness has managed to say a great deal in both brief and lucid fashion.

In *The East, No Exit,* Guiness sets himself the task, chiefly, of exploring the reasons why many Western young people have in recent years "gone East"—whether to Zen Buddhism, Yoga, or some other version of Oriental mysticism. The author culls together strands of thought from various contemporary authors (such as R. D. Laing, Aldous Huxley, and many others) in buttressing his main thesis—essentially that Western thought, with the demise of Christian influences, has played itself out. In desperation, or boredom, many thinking people have consequently turned to some version of Eastern mysticism. But the latter is "no exit," because the philosophical difficulties underlying "mystical monism" are, though thinly veiled, much worse than the theistic world-view they are supposed to replace.

Monism, whether materialistic or idealistic, is the view that reality is all of one piece. Idealistic monism—the 'block universe" view, as William James once called it—has certain basic flaws: it tends to negate the reality of the physical world (hence time and space are ultimately unreal); it reduces the individual to the status of a mere wave on the ocean of the universe; and it has difficulty making sense of moral responsibility, because in a block universe everything is determined.

If Western monistic idealists have had to face philosophical difficulties, so, as Guiness shows, has Indian religious thought (and Zen as well). Common sense and science may only give us partial truth, but their truths are not illusory. And what is the advantage of a worldview which has, as in India, so often led to a despairing resignation, in fact a fatalism, about the events of history or one's personal life?

A brief review cannot do full justice to the richness of Guiness' analysis. If *The East, No Exit* has a shortcoming, it is perhaps an occasional tendency to overgeneralize. Guiness speaks of "the East" as though it were a monolithic entity, whereas in fact Oriental religion and philosophy have been, historically, quite as diverse as Western thought. Perhaps the mysical-monistic aspect of Eastern thought has had the greatest appeal for Westerners, but skepticism and naturalistic atheism are also to be found in the Orient.

In *Encircling Eyes,* as in the booklet just discussed, Guiness speaks from personal experience as well as from broad scholarship. The question he initially confronts is: why are we seeing an upsurge of occultism *now*? He suggests three answers: (1) "the death of rationalism"; (2) "the increasing recognition of mystery in modern physics." (Here I believe Guiness is a bit misleading: "At the subatomic level," he asserts, "objectivity fades like a shadow, the material dissolves into the mystical and the universe is seen, not as a machine, but as a thought"—p. 12. I am not sure even Eddington, an idealist, would have gone quite that far.); (3) the present state of psychic and parapsychologic research.

Whether or not one entirely agrees with Guiness' reasons as to why occultism is presently thriving, his interpretation of the phenomenon is quite convincing. For instance, after providing numerous examples of what he classifies as Superstitution, Spiritism, or Satanism, he notes that even when the *genuineness* of a particular phenomenon is admitted (and many are *not* genuine), we still have to ask whether the *source* of the experience is Divine or demonic. The experience *per se* is not self-certifying, contrary to what is often (erroneously) supposed.

Guiness correctly cautions us (as did C. S. Lewis) against *both* excessive skepticism regarding the occult, *and* an unhealthy interest in it. Today, he says, "many are coming to know God out of a background of firsthand acquaintance with the reality of the occult. Philosophical arguments are unnecessary. *That* God is, is no problem. It is *who* God is that is the crux of their conversion" (p. 37).

This short book is a valuable analysis of an important contemporary phenomenon. It of course does not aim at being a compendium of occultism, and says just what needs to be said without taking occultism either too seriously or not seriously enough. Both committed Christians and those who are seeking more light will find this short work, like the aforementioned, helpful.

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FAITH/FACT/HISTORY/SCIENCE AND HOW THEY FIT TOGETHER by Rheinalt Nantlais Williams, Tyndale House Publishers, 1974, 140 pp., $1.95.

As seen from its title, this little book covers a large spectrum of topics. The book is the development of a theme of a lecture given by Professor Williams at the University College, Cardiff, under the auspices of the D. J. James Pantyfedwen Trust. (Professor Williams is Professor of the Philosophy of Religion at the Theological College of Aberystwyth, University of Wales.) Other topics included in the book are reason, experience, the glory of faith and the birth of faith.

In the preface, Professor Williams states his convictions quite plainly:

> . . . the supreme Truth, which man is unable to reach, has, itself, reached man by assuming human nature, and this fact constitutes the foundation of the believer's knowledge of God and of the good news to which faith is a response.

He adds that the book is written in a popular fashion, to appeal to fairly well educated people. In this reviewer's opinion, this is no hindrance. I think it is a fine book for those who have not had extensive background in the areas discussed.

In discussing the various topics Professor Williams draws on his breadth of knowledge to show how at

least two opposing views are commonly held. (e.g., reason is hostile, friendly or indifferent to Christianity; science deals only with facts, religion with values, etc.) This has the advantage of setting the stage for his own views which, of course, do not fall in either of the extremes which he presents first. He aptly discusses the views of such noted men as Ayers and Russell, and shows weaknesses and inconsistencies in their thoughts.

His theme is best displayed in his chapter on History. It is not an attempt to give a philosophy of history: rather it claims that God has entered history in the person of Jesus Christ, His Son, and that Christ lived, died and rose again in history. It is this to which the apostles appealed when they presented the Gospel. He rightly claims that the resurrection of Christ is not just a proof that we too will be raised, but rather is itself an explanation of the cross. Here Professor Williams could have strengthened his case by including the truth that both the cross and resurrection can only be understood in the light of God's revelation to us, the Bible. Without it, we would be in darkness concerning the deeds of our Lord Jesus Christ. It is true that he later adds that our experience must be based on the objective fact that God has spoken. And I am sure that what he means by this is the Word of God, the Bible. But because of the current views of some of the so-called various forms of the "Word of God", he should have been more explicit.

He ends his book with a discussion of how faith begins. God must make the first move, and the move is to awaken us to our need (Regeneration). The fruits of this are repentance and trust. Even these, though, are gifts from God, and are in no sense produced by man. God is Sovereign.

The book is a good one. His theology is sound, has the warmth expected of an evangelical and the depth expected from a Calvinist. He views Christianity as being firmly rooted in historical events and claims that reason and science, if used within the proper perspective, can be of help in our understanding and propagation of the Faith. In my opinion, so can his book.

Reviewed by David E. Laughlin, Department of Metallurgy and Materials Science, Carnegie-Mellon University, Pittsburgh, Pensylvania.

FREE TO DO RIGHT by David Field, 1973, Paperback, $1.25, 111 pp.

TAKING SIDES by David Field, 1975, Paperback, 45p, 124 pp.

Both books published by InterVarsity Press, Downers, Grove, Illinois.

These two books form a pair by the Senior Tutor at Oak Hill Theological College in London. The first sets forth general principles of Christian ethics, and the second applies these principles to the specific areas of ecology, abortion, divorce, work and race.

In *Free to Do Right* the author argues that the character of God must be taken as the basic moral standard; any choice that goes in a different direction or seeks a different basis is *ipso facto* in the wrong. He challenges advocates of situation ethics and argues that "keeping moral rules and doing the loving thing do not seem to be nearly so opposed in New Testament teaching" as many modern moralists sem to think. He goes on to discuss rewards and punishments, the place of pleasure, the conflict betwen public and private, and instances where two principles clash with each other. He recognizes the necessity sometimes to make lesser-of-two-evils choices, but he argues that we must continue to recognize the evil as the evil and not attempt to promote it to good simply becauses it is the right thing to do under the circumstances.

Taking Sides starts with a brief review of *Free to Do Right*, and the author offers five guiding principles governing the right use of Scripture in dealing with moral issues: (1) examine the context, (2) distinguish the "weightier matters", (3) choose the lesser evil, (4) weigh the interests of others, and (5) listen to the voice of conscience. The author sees *stewardship* as the category in which man's role as creature and as manager are integrated; *quality of life* as the keystone to discussions of abortion, but not in a manner that "labels the deficient and deprived as disposable;" a *divine marriage-standard* that applies to all human beings, whether Christian or not, and allows for divorce only in cases of sexual unfaithfulness or desertion of a Christian by a non-Christian; *work* as part of God's ideal creation and in no sense a consequence of sin; and *universality of human dignity* without reference to race. Each chapter is concluded by a few questions designed to lead to discussion of the contents.

Although the author recognizes the reality of social problems and champions the involvement of Christians in their solution, his own approach is conservative and he frequently appears to slide off or over things that Christians could or should *do* to attempt to correct these inequities.

GOD AND THE GURUS by R. D. Clements, Inter-Varsity Press, Downers Grove, Illinois, 1975. Paperback. 64 pp. $1.25.

This is a convenient summary written to help Christians understand Eastern sects, particularly three of the best known ones: Divine Light Mission, the International Society for Krishna Consciousness, and Transcendental Meditation. It is the author's conclusion that these sects contain some insights that would be valuable for Christians to recover, and also some grave errors that Christians must vigorously combat.

Arguing that Christians do not need to try to disprove or invalidate mystical experience per se, the author points out that the elements of monistic philosophy often associated with mystical experience do not arise from the experience but are imposed upon it. Discussing the dangers of "getting hooked on experience," he suggests that mysticism can become "spiritual masturbation."

In discussing the pros and cons of meditation, the author always treats them as if the person involved were seeking a religious experience. He does not treat the possibility that many kinds of mental and physical exercise or relaxation may simply be good physiological practice for the body.

The pamphlet concludes with a series of "do" and "don't" suggestions for a Christian coming into contact with those involved in Eastern thought.

Reviewed by Richard H. Bube, Department of Materials Science and Engineering, Stanford University, Stanford, California 94305.

	Eastern Thought	Biblical Thought
CREATION	Brahman (the essential unitary reality, the "god", of the universe) *grows* into the universe, manifesting itself in diversity by way of a divine "prank" or "play." There is no decision or purpose in Brahman.	God gives names to his creation. . . . He also pronounces an objective evaluation of his work. The God of the Bible is in no sense to be identified with his creation. He possesses a distinct, personal existence over against the created world.
TIME	For Eastern philosophy generally, time is cyclic.	Time, which is part of the created order, is finite and linear. It progresses from the creation, the beginning, to an end goal with a definite purpose.
SIN	Man is just a part of the oneness of the universal soul. He cannot be alienated from that oneness by moral disobedience, since it is a oneness of essence, not just of interpersonal relationship. Sin is essentially the *ignorance* that prevents a man from realizing his oneness with everything else.	God makes man "in his own image" as a self-conscious, personal being who possesses limited sovereignty over creation. Man lost the privilege of intimate, personal fellowship with God because of moral disobedience, and that alienation continues until man's sin is forgiven and he is reconciled again to God.
SALVATION	Salvation is the experience of the "oneness" of a person with all things. This is enlightenment. Such an experience cannot be verbalized; one can only enter into it. Salvation is thus a matter of realizing what we are, rather than of becoming what we should be. It requires the loss of the personal ego-consciousness of the one who is experiencing it. All the complexities of Eastern religion derive from the many different methods of attaining this mystical experience where self-consciousness merges into cosmic-consciousness.	The Bible teaches that man stands in need of salvation primarily from his moral failure, and only secondarily from his ignorance of God. It is the Christian belief that in Jesus Christ God has provided a means for the forgiveness of man's sins, since man was morally impotent to save himself.
JESUS CHRIST	The Eastern religions give considerable attention to the appearance of incarnations of "god" in history. Certain types of Hinduism and one branch of Buddhism have as a central element in their pathway to enlightenment devotion to an *avatar*, i.e., a personal incarnation of "god." These incarnations act as transmitters of the enlightenment experience, not as saviors who make redemption possible.	The Bible teaches that Jesus was absolutely unique. Though he was perfect man, he was also the eternal, personal self-expression of the Godhead. That he should be perfect God and perfect man was necessary if he was to accomplish salvation for sinful men. His coming was part of God's eternal purpose.
THE SCRIPTURES	Eastern religions exclude the idea of a verbal revelation of God. God can only be experienced, and the scriptures can only describe the ways in which this experience can be sought. A man may be a Hindu and even attain enlightenment with no intellectual knowledge of the scriptures.	The Bible clearly regards itself as the verbal revelation of the personal transcendent God who is able to speak as subject to man as object. To be a Christian a man must know something about God and about the way of salvation, and ultimately this must come from the Bible.
PRAYER AND MEDITATION	Some Buddhist and Hindu devotion involves prayers to a particular incarnation, but this is always seen as a means toward enlightenment, and not as real, interpersonal dialogue with "god" in any sense. The normative Eastern mystical practice is meditation. The aim of Eastern meditation is not to meditate *on* "god's" person, but to meditate *into* his essence.	Jesus taught his disciples to pray using words that clearly reflect an interpersonal I-thou relationship between God and man. Where the Bible speaks of "meditating," it is always in context of deeply considering the law of God or the works of God. It is meditation *on* God. According to the Bible, it is *prayer* rather than meditation which is the normative Christian practice.

Abstracted with only slight editorial modification from R. D. Clements, *God and the Gurus*, InterVarsity Press, Downers Grove, Illinois, 60515 (1975), Chapter 1.

JOURNEY AWAY FROM GOD by Robert P. Benedict. Fleming H. Revell Company, Old Tappan, New Jersey, 1972. 189 pp. $4.95 hardback.

The discussion of the relationship, if any, of scientific knowledge, scientific claims to knowledge, and Biblical truths, seems to know no end. The particular scientific claims about the origin of life, its evolution, etc. continue to engage the interest of Christians. If they are true or shown to be true, is the Scripture false in all it says about the creation of man, of the world, and about God Himself, the Creator? Indeed, grave doubts could be cast over the veracity of the total belief system of Christianity.

Journey Away From God, by Robert P. Benedict, attempts to figure out the relationship of the claims of science about the origin of life and Scriptural truths. He suggests that the division between science and religion is clear and their "ways diverge sharply" (p. 9). To recognize that a conflict exists between them, as he does, is not enough. Rather, he urges ". . . let us attempt to resolve (the conflict) now so that our children can more fully realize their heritage" (p. 10).

The conflicts which are explored in this book are those of Creation, Evolution, The Flood and The Methods of Dating. In each of these topics, he locates methodologies employed in arriving at certain claims and Scriptural statements. He describes the scientific methodologies employed in arriving at certain claims that science presents to be true about a given problem. At the same time, the limitations, inadequacies, and difficulties of such methodologies are shown. Invari-

ably, the author concludes that most of the scientific methodologies are not absolutely trustworthy and reliable and if at all acceptable, only on a tentative basis.

Of the conflicts he discusses in his book, Benedict concludes that ". . . there is really complete agreement between the account of Scripture and the *known facts* of science . . ." in the matter of Creation (p. 58). However, in other areas explored, for example, evolution, Biblical records and scientific claims are in conflict (p. 97), are ". . . worlds apart—on the Flood account" (p. 120) and ". . . there is little hope for reconciliation . . . in the very important area of dating" (p. 153). Given these conflicts, the author urges his reader to choose: "Religion versus science. Science versus religion. Which way does your journey wend? (Away from or toward God?)" (p. 30). We must choose for there is no "middle ground" (p. 99).

What are the strengths of this book? The author is to be commended for his efforts at rendering, albeit in summarized version, scientific information in simple language. The discussions are easy reading and where there are technicalities involved, they are explained clearly and well. In the discussion on Creation, the author notes the different versions of Scripture and figures out their central agreements with regard to the use/meaning of the key terms employed in the creation story in Genesis. Side by side with the Scriptural record is a corresponding scientific explanation. The discussion in this section is well done, clear and engaging. The sections on Evolution, and Time and Dates are particularly informative. Both cover a wide range of information on the subjects, including the difficulties of the different methodologies employed which lead to controversies in the claims put forth by scientists. He presents, as well, some of the *claimed triumphs* of scientific investigations and shows why and which parts of these claims are questionable scientifically. The discussion on The Flood presents the three possible explanations about it, namely, (1) The Universal Flood, (2) The Local Flood Theory, and (3) No Flood at all Theory. There is not the same excitement here as in the two previous sections. Perhaps, this is so because the Flood has not been taken seriously by scientists as an agent in geological work since 1830 (p. 106).

There is no mention of the audience to whom his book is addressed. However, the simple language of the book and avoidance of complicated and intricate scientific problems relevant to the matters discussed indicate that the book is addressed to the reader who is not a professional scientist or who is not thoroughly at home in scientific knowledge/matters and their corresponding controversies. For the purpose of the author, it is immaterial whether or not the reader is a Christian. Anyone can profit from the reading of his work.

If this is so, then, the author has succeeded in informing the reader of the ways of scientific methodologies, the tentative nature of scientific knowledge claims, and the limitations of scientific endeavors that may be due to certain limitations of its techniques. In short, he has done reasonably well in introducing the reader into the manners and matters of science. Science is clearly portrayed as an aspect of human knowledge limited by the conditions and constraints of human knowledge itself, which prevent scientific claims from saying that they are always/will always be correct.

More importantly, the author is to be commended for his expressed concern that the scientific theory of evolution has seemingly ceased to be a scientific theory but, accepted as though it were a scientific certainty/fact, it is now the justification of a total way of life. It has become the description, the explanation, the interpretation of total life and its meaning (pp. 96-97).

Unfortunately, in his zeal to convince his reader that the Scriptures, as a form of man-made record, are trustworthy, perhaps even more trustworthy than scientific claims on matters about the origin of life, attempts at dating the age of the earth, etc., the author tends to make judgmental statements which are more expressive of personal convictions than descriptive of scientific observations on scientific matters. He tends to *over-emphasize* the limitations and difficulties of science and its methodologies, which scientists do not deny, giving his reader the impression that all scientific assertions/claims, especially where there is need for interpretations, are suspect and have failed to meet the necessary requirements of science.

Perhaps it is not a grievous shortcoming when the weaknesses and inadequacies of science are belaboured. But, surely, it is distressing to find, in what could have been responsible writing on these topics, insidious suggestions and indirections that there is a connection, however it is construed, between and among the concepts 'Satan,' 'lie,' and 'science.' The association among these terms may not be intended, but that there seems to be a suggestion that there is an association among them cannot, however, be missed. Consider the quotation:

> What shall we say to all these things (the conflicts discussed)? Scriptures say that the father of all lies is Lucifer—Satan—the Devil. Now it is well known that once we accept a lie we are doomed to live it. The alternative of God's creation is man's lie. Man who has rejected God will invent all sorts of arguments to back his position. So the initial lie (that there is no God) leads easily into the next lie—that man has evolved. And next, we are forced to reject the Scriptural Flood in favour of man's uniformitarianism. And we are not finished yet. . . . And so we accept the long, long dates of geology, astronomy, radioactivity . . . one lie leading to another, until we reach the ultimate lie. . . . Have the lies we live by in our very scientific world forced us to accept the ultimate lie of Satan, namely that the empty tomb does not exist? (p. 164).

It is, of course, possible that the author does not have science as his object of criticism but that which he calls "scientism" or "pseudo-science of rash men" (p. 43). But the use of these terms is not clarified; consequently, agreement or disagreement with him is not possible.

On the matter of clarification, the author tends to leave some of his statements ambiguous, sounding more like a slogan intended to arouse emotional, not critical, responses than a descriptive statement. Associating what he calls "the collective fall of modern man with the advent of science" (p. 15) and in turn associating science with "reason" (p. 16), the author then warns: "Reason is the greatest enemy that faith has" (pp. 34 and 91). But the meaning of such a claim is not clear. In writing his book, did the author employ 'reason?' If he did, is he against 'faith'? Or, is the author talking about a special kind of 'reason?' Unless such kinds of utterances are clarified, they are wrong and must be rejected.

The author repeatedly states that science rests on faith (pp. 31, 95, and 145). This suggests that science

cannot claim superiority over religion for like religion, science, too, rests on faith. Is this to say then that the claims of science about scientific maters have to be taken and accepted by faith alone? One's faith in something/someone, like a number of religious beliefs, can be given credence regardless of whether or not they can be supported by evidences. If the claims of science can be accepted in this manner, are scientific claims/problems identical, to religious problems/claims? Clearly not. It is still the case that the final test of acceptability of scientific claims rests with the ability of such claims to show themselves valid and verifiable, if not actually verified. Granting that the notion of 'faith' in science suggests that in part science is not verifiable, still this says that such a 'faith' if truly 'scientific' can also be checked scientifically. That indeed I have 'scientific faith' in the workings of my irrigation system is to say that I have exhaustive empirical evidences for such a claim. My evidences are *equal* to my scientific faith/belief in my irrigation system. The evidences and my faith in them are identical with one another; there are no irreducible elements in my faith in the irrigation system. In the case of 'faith in religion,' the demands of scientific faith are not necessary to the establishment of its claim to being a true 'faith in religion.' Also the evidences employed to argue for the credibility of one's faith in religion are not identical with one's religious faith. The evidences may be publicly true, checkable, but they do not necessarly imply one's religious faith. The same evidences may be used to argue against the same claimed religious faith. The gap is clearly seen when acceptance of empirical evidences supporting one's religious beliefs or faith in God result in acceptance of and believing in the revealed truths of God that are not logically related with the empirical evidences. The revealed truths of God that one believes cannot be verified, although the claimed empirical evidences for them can be. The historical fact of the birth of Christ can be verified, but the revealed truth that He is the Son of God who will save mankind from sin cannot be verified. The point is that there is a distinction between 'faith in science' or 'scientific beliefs,' and 'religious beliefs' or 'faith in God' which the author fails to make. Quite simply, the bases of the claim 'I have faith in God to carry me through life' and the claim 'I have faith in Capt. Jones, the TWA pilot, to fly me to Toronto' are different.

It is simply naive to say that "Man became scientific" is another way of saying that "man became more proud of his position in the universe than he should" (p. 159). One can also say "man became scientific" and "he did not become more proud of his position in the universe than he should" and there is no semantic nonsensicality that obtains. Or, one may be proud of his position in the universe even if he is not scientific but full of superstitious/mythical beliefs about himself and the world. Clearly, the two expressions are not logically related; one does not imply the other.

Is the author successful in his attempt to resolve the conflict that exists between science and religion? If 'to resolve' means 'to make up one's mind' or 'to decide' about a given problem, it is clear that the author, in his study, has 'resolved' the conflict, at least for himself. However, if 'to resolve' means 'to answer and explain' or 'to solve' the conflicts discussed (if they are indeed conflicts) then it is doubtful whether or not the author is altogether successful in his attempts to do so.

In part, the author failed because he did not inquire into the prior question of whether or not a conflict indeed exists between religion and science. If such a conflict exists, what is its nature? The fuzzy use of 'conflict' renders some of his statements and arguments ineffective, if not useless. He says: ". . . there is a realm of science and a realm of faith. These two areas of human thought have confronted, are confronting and will continue to confront each other face to face" (p. 30). How, in what ways, do they confront each other if each has its own realm? The author suggests that they do not: "Science and Scriptures really are at odds, really are in conflict, really do confront each other, *whenever one trespasses the grounds of the other*" (p. 165. Italics mine). As long as each area of human thought keeps to its own realm there is no conflict between them. There is, therefore, something odd to the author's claim that "(Scripture and science) cannot both be correct" (p. 31). But correct about what? If each realm has its own mode of operations, then it has to be admitted that scientific statements are correct scientifically (if they meet the standards of a correct scientific claim). Scriptures, likewise, are correct, are true, in the sense of Scriptural truth. The revealed truth of Creation, as a unique event outside the realm of science (p. 59), is correct Scripturally. Scientific statements, on the other hand, cannot be accepted as self-evident or revealed truths but must be judged acceptable or not when they meet the rules for establishing truth claims scientifically. Statements about the ebb and flow of the tide, changing atmospheric pressures, climatic conditions, the age of fossils and rocks, etc. may be spoken of as correct scientifically. Science and Scripture can both be correct according to the requirements of their specific distinct claims. Of course, religion and science cannot give the same answer to a given problem because the bases of their comments, notions of truth, evidence, and of logic, are distinct from one another, which is not to say that they contradict each other. One simply talks of that which is and the other talks of that which

Books Received and Available for Review

(Please contact the Book Review Editor if you would like to review one of these books.)

Baum, Gregory, *Religion and Alienation: A Theological Reading of Sociology*, Paulist Press, 1975.

Custance, Arthur C., *Genesis and Early Man*, Zondervan, 1975.

Hartley, William, *In the Beginning God: Jottings from Genesis*, Baker, 1975.

Holmes, Arthur F., *Philosophy: A Christian Perspective*, IVP, 1975.

Jungel, Eberhardt, *Death—the Riddle and the Mystery*, Westminster, 1974.

Kalsbeck, L. *Contours of a Christian Philosophy: An Introduction to H. Dooyeweerd's Thought*, Wedge, 1975.

O'Grady, John F., *Christian Anthropology: A Meaning for Human Life*, Paulist Press, 1976.

Ulanov, Ann & Barry, *Religion and the Unconscious*, Westminster, 1975.

Wilson, Jerry B., *Death by Decision: The Medical, Moral, and Legal Dilemmas of Euthanasia*, Westminster, 1975.

Murphree, Jon T., *When God Says You're O.K.: A Christian Approach to Transactional Analysis*, IVP, 1975.

is revealed or unseen. The 'eye of faith' discerns spiritual problems and the 'human eye' observes that which can be observed physically. In this sense, it is correct to say, along with Bridgman, that 'the scientific method of test-hypothesis-confirm-law-or-theory is always based on sensing natural phenomena, never does it attempt to examine spiritual matters, nor can it hope to" (p. 29). That which science cannot observe it cannot deny. However, it is also correct to say that depending upon one's beliefs about *ultimate matters,* beliefs that may be 'based on' Scriptural truths, matters of fact may be given an entirely different interpretation that need not be logically derived from or related to the given matters of fact themselves. Thus, given one's acceptance of eternity, one may view life and its possibilities differently from one who limits it to the earth. Both views, however, are necessarily metaphysical, thus not reducible to matters of observation.

Surely, to say that science demands that Scripture be scientifically correct before it can be accorded credibility, even if Scripture is not commenting on scientific matters and not claiming to be scientific, is to make a rash judgment on science. Also, the interests of science internal to itself or its essential objective is not ". . . to oppose religion and all that it requires in faith and belief in supernatural" (p. 25) nor "to consent bitterly against the church" (p. 24). Simply, it is to describe, to explain, and to predict the ways of the world of natural phenomena.

Unfortunately, it is true that some scientists have made disparaging comments about the beliefs of Christianity, casting serious doubts about Scriptural truths. Such comments are often assumed to be *strictly derived from* or *based on* scientific knowledge. But how can one claim that from matters of fact statements one can *strictly* derive conclusions pertinent to God, His creative acts, or eternal life: matters relative to one's belief in God? It is perfectly sensible and rational to say 'John is a scientist and he is a Christian' and sensible and rational to say 'Peter is a scientist and he is not a Christian.' There is nothing in the meaning of 'science' that says 'one ought (logical ought) or ought not to believe in God.'

That some scientists do violate rules of logic and meaningful discourse is no reason, on the part of Christian scientists, to blame science and what it has claimed to find. What scientists do with what they know about science may have nothing to do with science but may have something to do with scientists' personal history and private problems. To castigate science because of what scientists say about and do with science is similar to the tendency of some to blame, even deny, Christ and Christianity because of what Christians say and do about what they claim to know and believe about Christ.

Finally, it may be said that the author's intention in writing the book is not, strictly speaking, "to resolve" the conflict that he says exists between science and religion but 'to confront,' in the sense of 'inform,' the reader with the different findings of science on matters that may have *suggestions* regarding the truth status of Scriptures. He also confronts the reader with statements made by scientists that tend to discredit the claims of Scriptures. The author urges his reader to choose between science and the Scriptural records, (p. 104). How, on what basis, is he to make his choice? On his knowledge of both science and religion: "Through our study (of his book, for example) we will be in a better position to judge . . . what we believe it is good to believe, and so order the direction of our individual journey" (p. 31). The decision is private, individual, and ultimately ". . . between man and his Maker" (p. 31).

The continuing interest among Christians in science and religion surely necessitates a serious study of some related prior questions, namely, (1) Is there a relationship between scientific knowledge or scientific claims to knowledge and religious knowledge? (2) If so, what kind of relationship holds between them? (3) May religious knowledge seek the support of scientific knowledge for its claims to being true or being The Truth? Is such a support necessary? For what? Why? (4) On what grounds may religious knowledge reject scientific knowledge claims to being the justification of a way of life (if such is made)? (5) And, finally, do Christians know what it is that they are doing when they claim 'to believe in God,' 'to believe in the Scriptures and all that it holds?' In raising and attempting to answer these questions, the hope is that Christians will increasingly learn how to speak sensibly of their religious beliefs and commitments, of scientific knowledge and scientific claims to knowledge, and of the relationship that holds between them, if it is shown that indeed there is such.

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THE IDEA OF A CHRISTIAN PHILOSOPHY: Essays in Honour of D.H.Th. Vollenhoven, H. Dooyeweerd, editor, Toronto, Canada, Wedge Publishing Company, 1973, 232 pp., no price given.

This collection of essays, originally published as the 38th volume of *Philosophia Reformata,* were presented to honor Dr. Vollenhoven on the occasion of his eightieth birthday. The studies of Dr. Vollenhoven all have dealt basically with the history of philosophy and a detailed comparison of philosophical traditions.

The contributors represent a wide range of backgrounds and interests; not too surprisingy, most are either on the faculty of the Free University or have studied there, both groups experiencing personal contact with Vollenhoven and his philosophical approach. A variety of topics are developed, several of which deal with philosophical interrelationships between science and religion, indicating the influence of early work of Vollenhoven (his doctoral dissertation was entitled "The Philosophy of Mathematics from a Theistic Point of View"). Other areas explored include problems of time and sense, a consideration of non-Christian philosophy drawing from the works of Calvin and neo-Calvinistic writers, the impact of science and philosophy on ethical decisions, and several papers dealing with various approaches to the history of philosophy, emphasizing the contributions of Vollenhoven.

Many of the ideas have practical application and would be of value to a larger group, but are couched in the language of the specialist, making them somewhat inaccessible to most readers.

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Responses to "Original Sin as Natural Evil"

Some contentions similar to those in the article on "Original Sin as Natural Evil" (*Journal ASA*, December 1975) are the subject of current discussion in psychology.

My purpose in writing is to express some words of appreciation and encouragement. This article and the interesting responses to it pinpoint a most profound problem. Plantinga notes that Bube's view seems to leave God holding the bag for evil, but then I see no way Plantinga's view can be squared with evolutionary assumptions, or even more simply, with the historical reality that death is necessary for life. I admire Bube's courage in soliciting these critiques and in tackling this important issue.

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I very much enjoyed the article "Original Sin as Natural Evil" in the December 1975 issue of the *Journal ASA*.

Bube begins by characterizing evil as "that which is not in accord with God's creation purpose." This is a good definition, but care must be taken to distinguish this view of the "good" from the classical conception in ethics. This is probably part of the reason Plantinga finds ambiguity in the phrase "God's creation purpose". I took the statement to mean something similar to Bongoeffer's view of good in his *Ethics*. His first implied question: is evil possible without human involvement? also relates to the issue of the universality of the Fall, since so much of the universe contains no humans. The use of the term "natural" and its opposite "unnatural" raises another issue: what is the distinction between "unnatural" and "unfamiliar or anomalous"? Perhaps what we know as "nature" is itself an anomaly! Bube pointed out that natural events appear indispensable in the natural world, and thus called them "natural evil". There may be another alternative: that all events in Category 1 (not involving humans) are part of God's creation purpose, but man's *awareness* of them is conditioned by his sinfulness so that he sees them as evil.

On the next point involving human suffering, the same question as above might apply, i.e., man's awareness of suffering or *his attitude toward it* cause him to see it as evil. This avoids the Buddhistic view of suffering as *maya* (illusory), but places it in a perspective of God's creation purpose. Certainly this view is held in practice in the idea that God tests us in suffering; the concept of Heaven as a place with no challenges or blissful ease is more Islamic than Christian. One objection to this is that suffering manifests itself on earth so horribly that God could not possibly want it, but this objection has some weaknesses. The third point on *moral* evil raises the issue of the nature of the *imago Dei*. Are there any actions which do not cause suffering or death, but which might be called evil? The definition of suffering appears to be crucial here. Existentialists such as Medard Boss state that any action at all incurs ontological guilt; does this imply that *all* human action might be evil? At issue is also the question of whether suffering is a purely psychological concept (the Buddhist view). . . .

The recurring question of the range of the Fall appears to be tied in with the concept of evolution for a couple of reasons: first, the conditions for the evolution of life appear to exist on many planets in the universe (as indicated by the most recent scientific findings) and second, what would be the implications of the discovery of intelligent life elsewhere for *theology*? In that realm, our most sophisticated doctrines are as terracentric as pre-Copernican astronomy.

The first theory mentioned, that moral evil caused natural evil, runs immediately into this range of the Fall question. The second, placing responsibility on the Devil, may have some merit but seems to play into the "conspiracy-theory" mentality which makes up part of man's need to see things as part of a metaphysical unity. It also defines the Devil perhaps more clearly than he exists in fact. The Devil may benefit from or enjoy natural evil, but he is perhaps not totally responsible for it. The difficulties inherent in the term "natural evil" itself caution against Christians attributing suffering to either God or "the ruler of the world." The comment about Christians combatting natural evil is consistent with Bonhoeffer's defense of "good and just causes" within secular society; he defended them against those separatists who would shun the world on the basis of piety. . . .

Bube's suggestion that the Fall chronology is a symbolic temporal representation of an ontological reality is an interesting one; I would like to see the theological responses to that. One possible implication of a trans-temporal being (God) communicating with a temporal being, however, is that God's nature is seen in philosophical categories and the realm of ideas, for that is an area of trans-temporality to which we can relate. The danger is that it may then become difficult to conceive of God in personal or experiential terms. Marx and other philosophers have run into that sort of problem (God cannot "act", but we perceive Him in terms of action; God is not a person, but we perceive Him in personal terms). I believe that one of the great strengths of the Christian paradigm is that since Christ came, the nature of God-for-us has been established beyond abstraction.

In the section on original sin, the possibility of genetic inheritance is referred to. Koestler, in *The Ghost in the Machine*, offers the physiology of the brain as the area where this may have taken place. While a couple of the theologians felt that these concepts were making God responsible for sin, this need not be the case if in some way man had been given responsibility for his own development in ways which affected him physiologically. As to the guilt for sin, certain existentialists define ontological guilt as arising out of temporal existence; while this may seem to equate evil with finitude, it may offer some possibilities. If man is guilty for his own sins, we are back to the concept of *karma* again, with human action needed to discharge our "debts" (whether this action be works or acceptance of a Savior). . . .

I would agree that the traditional formulation (man commits evil because he is man) is inadequate, if only because it is a

A Request for Lecture Invitations

H. Harold Hartzler, guiding figure in the ASA for 35 *years, retires from his position as Professor of Mathematics and Astronomy at Mankato State College on June* 1, 1976. *An experienced speaker on the subject of science and Christianity, Dr. Hartzler is planning a lecture tour from September* 1, 1976 *to June* 1, 1977, *and invites inquiries about his availability as a speaker to church groups, Sunday Schools, elementary and secondary schools (both public and private), colleges and universities, service clubs, or any other groups that may be interested.*

The tour will place Dr. Hartzler in the following geographic areas at the times indicated: September (Wisconsin, Minnesota, North Dakota, South Dakota and Iowa); January, February and March (California, Arizona and New Mexico); April and May (Colorado, Kansas and Nebraska). October through December will be spent in Europe.

Address all inquiries and invitations to H. Harold Hartzler, 1311 *Warren St., Mankato, Minnesota* 56001. *Home phone*: (507)-388-4461.

tautology and does not impart any constructive information. Similarly, the non-Christian view of man as animal seems to deny some of the data (the actual behavior of animals, and the specific ways in which man and animals differ). However, I feel that to say that, in this approach, the concept of sin is "down-graded" makes the assumption that evolutionary incompleteness or cul-de-sac is not a serious matter. I think that some non-Christians would be willing to negotiate that point. If we have in some way been given part of the responsibility for our own development, and have misused that privilege, the consequences may be evolutionary but morally serious nonetheless. Such a transgression would not be smoothed over by time, but would require the participation of Creator and creation; such a model appears highly compatible with Christian faith statements.

The hypothesis that "animals commit evil because they are men" (or "when they become men") runs into problems because even an evolutionary understanding has not yet allowed us to observe an "animal" in the act of "becoming a man." Even to state that animals are "characterized by self-centeredness" is perhaps too simplistic an analysis (cf. Ardrey's *The Social Contract* on the death-related behavior of elephants). If brain size is seen as a criterion or possible concomitant of spirituality, then we may be forced to consider elephants, whales, and dolphins as less self-centered than "lower" animals; at least their behaviors suggest this. Schaeffer's comment demonstrates little more than semantic facility, since he is dealing with the animal issue in an abstract theological rather than a scientific sense. . . .

To say that "man cannot (choose to engage in sex indiscriminately) without forsaking his humanity", is to introduce from outside an assumed standard of humanity which may be shared by Christian readers but not by others. To state that God calls man to transcend an animal heritage is not the same as saying that God calls man to fulfill a *human* heritage. While Jewett says that sin has nothing to do with an animal heritage, I feel that this is an arbitrary application of the Theological Fallacy; because he may be making assumptions about an animal heritage which we as Christians need not make at all (such as its lack of responsibility, etc.).

Another question raised by separating man from the animals on the basis of the ability to choose evil, is the problem of the relative evil which animals commit and the social guilt which the higher ones seem to be able to learn. A recent *Psychology Today* described the behavior of a chimpanzee who "lied" to avoid punishment and "apologized" when exposed. Certainly there is always the danger of anthropomorphization, but at a point the data become highly suggestive. My own inquiries into the similarities and differences between socially learned guilt and the "Adamic" type of guilt strongly suggest a distinction, but this must be studied further. Thus when Plantinga states that "animals do not rebel against God," he is overlooking animals' seeming rebellion against *man*, who they might very well take for God. . . .

I felt that Bube's responses to the four commentators were accurate and direct. Of the four, it would be my opinion that Ramm made the most helpful comments; it seemed that the other three were at times missing the point and offering theological pronouncements which did not come to grips with the material. I hope that some of my comments may have been helpful and would welcome feedback on them. I found the article extremely stimulating and expect it will be helpful in my own consideration of the evolution issue.

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It has been the position of historic Christianity that truth is one. What is historically untrue or logically contradictory can neither possess religious value nor make theological sense. Error is error and nonsense is nonsense in every realm of thought. Problems there may be in understanding the relation of history to faith, and unresolved paradoxes that attest the finiteness of human understanding; but irreconcilable paradoxes there cannot be if they attest the inconsistency of God or the irrationality of the universe. If God cannot contradict himself, neither can general revelation contradict special relevation, neither can scientific truth contradict biblical truth, and neither can valid philosophical reasoning contradict valid theological reasoning. Just as a careful logic cannot allow contradictory truths without forfeiting the laws of thought, so a consistent theism cannot allow contradictory truths without forfeiting the veracity of God. Rather, when problems arise, the data are incomplete or misunderstood, or else the reasoning processes are fallacious or inconclusive.

Arthur F. Holmes

Philosophy: A Christian Perspective, InterVarsity Press (1975), pp. 23, 24

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PUBLICATIONS include the *ASA News* (sent to all members four to six times each year); four symposia: *Modern Science and Christian Faith,* F. Alton Everest, Editor, Van Kampen, Wheaton, Illinois (1950) (out of print), *Evolution and Christian Thought Today,* Russell L. Mixter, Editor, Eerdmans, Grand Rapids, Michigan (1960), *Our Society in Turmoil,* G. Collins, Editor, Creation House, Carol Stream, Illinois (1970), and *People, Power and Protein, Journal ASA Supplement* 1 (1976). Individual authors are also encouraged to publish independently.

LOCAL SECTIONS of the American Scientific Affiliation have been organized to hold meetings and provide an interchange of ideas at the regional level. Membership application forms, ASA publications and other information may be obtained by writing to: AMERICAN SCIENTIFIC AFFILIATION, Suite 450, 5 Douglas Ave., Elgin, Illinois 60120.

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