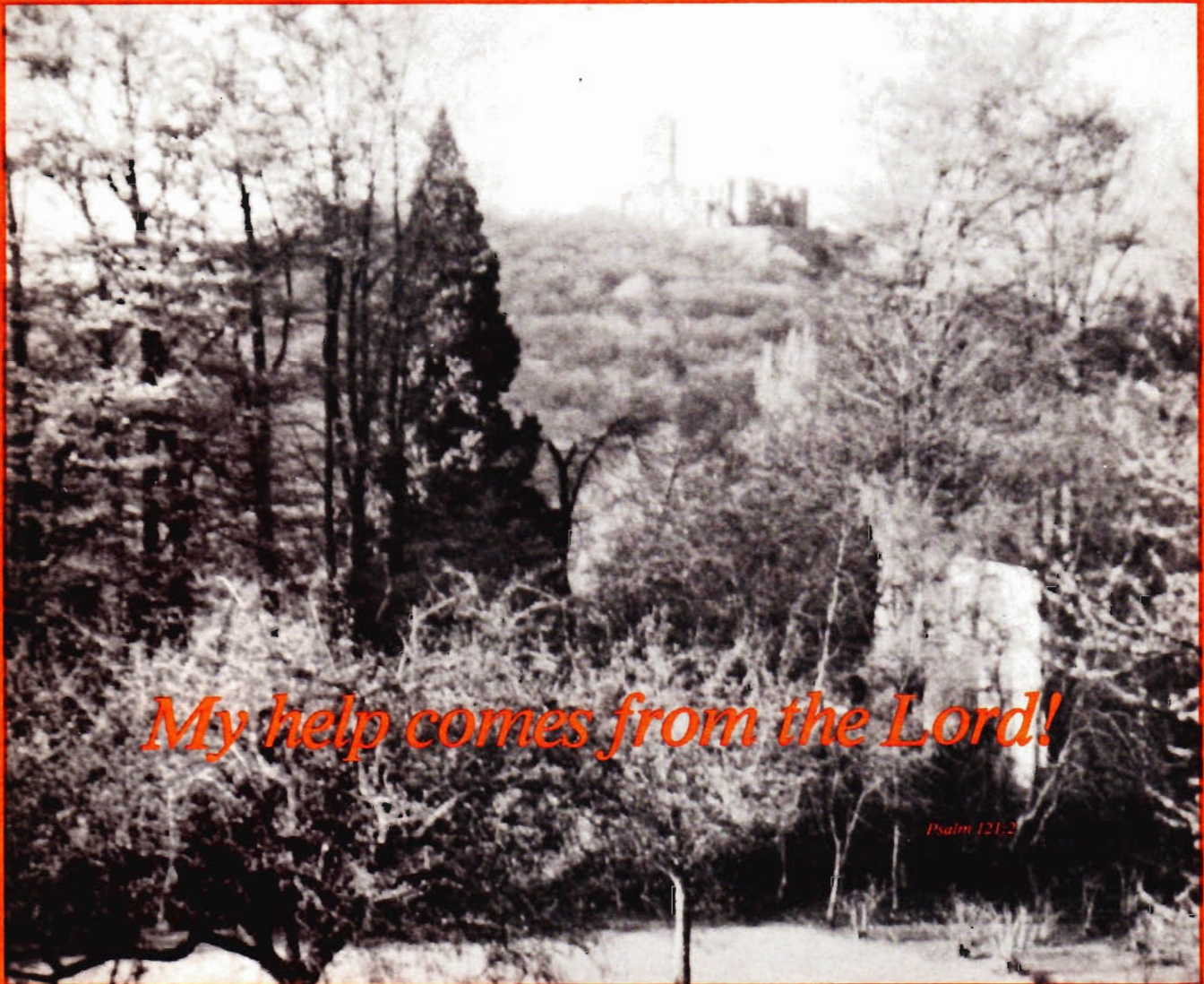


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An evangelical perspective on science and the Christian faith

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My help comes from the Lord!

Psalm 121:2

Ruin of the Koenigstein Schloss near Frankfurt, West Germany.

"The fear of the Lord is the beginning of Wisdom."

Psalm 111:10

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The Behaviorist Bandwagon and the Body of Christ III. A Christian Examination of Applied Behaviorism



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In Part I of this paper, we attempted to explain the nature of the behaviorist enterprise by distinguishing among (a) behaviorism as a total world view ("ontological behaviorism"), (b) behaviorism as a set of research principles for guiding laboratory investigation of human and animal behavior ("methodological behaviorism"), and (c) behaviorism as a marketable tool for changing behavior in the world at large ("applied behaviorism"). In Part II, we were particularly concerned to examine the implications of ontological behaviorism for the thoughtful Christian. We attempted to show that the assumptions of determinism, materialism, and "mental processlessness," to which the ontological behaviorist adheres, are incompatible with the biblical view of man: environmental determinism leaves no room for moral accountability; material-

ism leaves no room for spiritual realities over and above what is reducible to the purely physical; "mental processlessness" leaves no room for activities such as reasoning, feeling, or creatively imagining - activities which we know to be characteristic of God himself and therefore (however imperfectly) of human beings made in His image. Moreover, we pointed out that ontological behaviorists themselves, once they bump up against created reality, cannot themselves consistently live up to the assumptions of their position: in one way or another, autonomous man, morally-accountable man, thinking man, spiritually-oriented man returns to the behaviorist system which claims to have dispensed with him. This is a further reason for questioning the validity of this "new gospel."

However, the serious flaws of ontological behaviorism

do not alter the fact that the applied techniques of behaviorism are everywhere around us, are much used, and in many ways apparently "work." Since, as we have already pointed out, the applied behaviorist does not necessarily adhere to behaviorism as a total world view, perhaps we need to examine the track-record of applied behaviorism separately, trying to distinguish those components which a Christian may feel at ease in using from those towards which he should turn a skeptical eye. We will begin with some typical examples and standard working principles of behavior modification techniques, then go on to suggest what Christians might accept and reject from the system, and why. The following examples are based on techniques of *operant* conditioning exclusively, since it is these techniques that the lay reader is most apt to see being applied in schools, clubs, and homes. The application of *respondent* conditioning techniques, as described in Part I of this essay, is still largely restricted to the professional therapists' office and to very selective institutional settings.¹

Applied Behaviorism: Some Typical Examples

Let us return to Billy, the autistic child whose bizarre, unmanageable behavior was described at the beginning of Part I of this paper. When I first met Billy, although I had only a modicum of training in the techniques of behavior modification I spent some time showing Billy's parents how certain (essentially simple) principles of behavior modification could be used to "shape" socially desirable actions in their son and at the same time "extinguish" his bizarre habits: since he was a good eater, I simply took charge of his food dish while he was captive in his high-chair and made each spoonful contingent on his emitting some approximation to the word "food." To begin with, I promptly rewarded, or "reinforced" *any* chance grunt with a mouthful of food, but as the child began to make the association between vocalizing and getting food, I could begin to require progressively more of him: not just any grunt, but only an "oo-o" sound would then be rewarded, and a little later, only an "oo-d" and finally, only the entire word "food." In less than 10 minutes, Billy was saying a word, and (just as important) paying close attention to another human being. As an amateur behavior modifier, I had made use of essentially the same principle as animal trainers use to teach circus animals complicated tricks: one begins by rewarding remote approximations to the final "trick" - bits of behavior which the animal is likely to display anyway in the normal course of its activities, and once these "simple" behaviors can be reliably elicited by the food treats, the trainer can gradually require more and more complicated behavior for the same reward until the tiger is finally waltzing with the bear, or (a much-quoted example from B.F. Skinner's Harvard laboratory) the pigeons are playing ping-pong with each other by batting a celluloid ball back and forth across a table with their beaks. Of course, the pigeons don't "know" that they're playing a game called ping-pong, nor did Billy "know" that the noises he was emitting constituted a real word in a real language that could be used to communicate — but in the case of autistic children like Billy, what begins as a mere noise emitted to food which cannot be obtained any other way can gradually be taught to be used as a label, then as part of a request or question, and eventually as part of a real (albeit still somewhat mechanistic) conversation.

Another example: a severely regressed schizophrenic woman has been vegetating on the back ward of a mental hospital for years, unreachable by more traditional forms of therapy, spending what time she is not eating or sleeping in the endless repetition of bizarre phrases and actions, apparently almost totally oblivious to the real world around her. Then the hospital institutes a behavior modification program. The behavior modifiers point out that, far from *helping* the woman by tolerating or even indulging her bizarre behavior, the hospital staff are effectively rewarding, or "reinforcing" it, in the first place by giving her food and shelter while she persists in it, and secondly by paying attention to her when she engages in it. Suddenly the entire working operation of the ward changes. The woman discovers, for instance, that she will not get a meal until, for example, she begins to use the toilet for defecation instead of soiling herself. To the surprise of the skeptical ward attendants (who have been cleaning her up for years), she is toilet trained within days. A little later, she is made to "earn" yard privileges (or cigarettes, or candy, or *whatever* she finds particularly rewarding) by washing and dressing appropriately. Still later, she learns to hold a coherent conversation, or help with tasks around the ward, and "earns" not direct rewards, but plastic poker-chips, a sort of "local currency," with which she can "buy" a number of things, from tuck-shop items to a day-trip away from the hospital. Her "work," which began with the very basic task of being toilet-trained and was rewarded with the very basic reinforcement of food, becomes (as she is able to cope with it) gradually more socially demanding, and is rewarded with gradually less-immediate and less-tangible rewards: poker chips rather than food; social approval and encouragement rather than cigarettes. In this way, her once-vegetable-like existence is replaced by a life of at least relative social usefulness and the prospect of a return to the outside world.

A final example: a difficult child in a school-room situation is constantly disrupting the class by jumping up and speaking out of turn. The teacher (who has just arrived back from a summer course on applied behavior analysis and behavior modification) stops scolding him each time he does this and simply ignores him, counselling the other children to do the same. If he gets *too* disruptive, she may calmly and without fanfare isolate him from the others for a few minutes. At the same time, she lavishly praises him whenever he *does* put his hand up to speak, or even appear to be moving *towards* such a response. Meanwhile, she is keeping careful records on a graph of the number of times per day that he speaks out of turn and the number of times he puts his hand up first. Within a couple of weeks, the child has stopped disrupting the class and patiently waits to have his upraised hand recognized.

Standard Working Principles

These are fairly typical case-studies from the broad range of behavior problems which have responded to behavior modification techniques. What are the working principles which unify all three examples? In fact, the ground-rules are neither complicated to understand nor difficult to apply. Indeed, behavior modification programs have won a large following in part precisely because their principles need not always be put into practice by highly-trained specialists, but can be easily learned by parents, teachers, ward-attendants and other non-psychologists with a mini-

mum of direction from a specialist in the field. The basic working principles (in which you will see clear remnants of ontological behaviorism) are as follows:

1. Identify *precisely* the behavior you wish to change. Make sure that it is *clearly describable* in terms of *outward behavior* (e.g., "defecating on the floor"; "taking off his clothes in public"; "speaking out of turn in the classroom"). Do *not* give into the temptation to appeal to "inner states of mind" when dealing with the behavior problem (e.g., by saying "he's insecure"; "he's lonely"; "he's jealous," etc.). Stick to the *external behavioral activity* which you wish to change. At the same time, do not make any assumptions about the child's or adult's innate capacities for learning. Do not say "He's schizophrenic, so he'll never be able to eat with a knife and fork," or "She's retarded, so she'll never be able to read." If (as the ontological behaviorist maintains) behavior is largely, if not totally, controlled by environmental conditions, then it follows that we should be able to teach just about anyone to do just about anything, provided we discover how to structure the environmental conditions the right way. The business of "discovering how to structure the environmental conditions the right way" is precisely the specialized task of the behavior modifier, but the *applying* of those conditions, once discovered, can be done by any reasonably intelligent lay person.

2. Try to identify the "reinforcers" (or rewards) which have been *maintaining* that activity. Often these may be surprising, and contrary to your naive intuitions: for example, in all three cases mentioned above, undesirable behavior was being reinforced by "attention" (from parents, ward attendants, teacher, fellow students, etc.). The schizophrenic woman's entire bizarre life-style was being reinforced by the custodial care she received day after day *regardless* of how she behaved.

3. Before trying to intervene and change the undesirable behavior, keep a log of its frequency for several weeks: At what times of day, in what situations, and how regularly does it occur? Only if you have a record of this "baseline" behavior will you be able to affirm, later on, that your behavior modification strategy has worked. This log is also continued throughout the entire behavior modification process.

4. To actually modify the undesirable behavior, two processes must go on at once: (a) systematically *ignore* (i.e., fail to reinforce) each instance of the undesired behavior at the same time as you (b) reinforce or reward each instance of the desired behavior. Some elaboration is needed here: first of all, with regard to (a), most behavior modifiers (drawing on the results of laboratory research with animals) maintain that it is better to *ignore* (or "extinguish through non-reinforcement") undesired behavior than to actually *punish* it. This is because punishment does not so much suppress the *behavior* as it simply motivates escape from the punishing circumstances. Thus, the undesired behavior may persist, but merely be transferred to circumstances where punishment is not forthcoming. Actual punishment is also eschewed because (as in the case of the disruptive school-child) it may actually be functioning as a kind of

We need to examine the track-record of applied behaviorism separately, trying to distinguish those components which a Christian may feel at ease in using from those towards which he should turn a skeptical eye.

twisted reward: negative attention is better than no attention at all! Secondly, with regard to (b), the reinforcement of the desired behavior should take place promptly after each occurrence (at least in the preliminary stages) and, where the state of the person permits, be accompanied by an explanation that clearly *links* the reward to the new behavior (e.g., "I gave you that toy because you put your hand up so nicely."). Finally, the process of determining "what constitutes a reward, or a reinforcer?" is a very individual one, qualified by the old dictum that one man's meat is another man's poison. Most people with biologically-normal bodies are reinforced by food - provided they are hungry - but beyond that, the would-be behavior modifier must simply *discover* what sorts of things are peculiarly rewarding to his client, easy to administer, not overly-costly, and not easy for the client to obtain elsewhere. Once this is done, the desired behavior should become more and more frequent as it is systematically rewarded, and the undesired behavior should disappear, or "extinguish," as it consistently fails to be rewarded anymore.

5. During the preliminary (or "acquisition") phase of the new, desired behavior, it will need to be reinforced upon each occurrence of the behavior. Additionally, one may have to begin by rewarding not the full-blown behavioral response, but rather begin by rewarding anything that resembles a "try" or an "approximation" to the behavior, gradually requiring a closer approximation to the final behavior before the reinforcement is given. However, once the behavior reliably occurs, it can be maintained thereafter on *intermittent* reinforcement - that is, reinforcement given only occasionally. Laboratory research in operant conditioning seems to show that once a behavior is established, it is in fact *better* not to reward it after each occurrence; otherwise, if for some reason the constant reward suddenly ceases, the newly-learned behavior will also cease, whereas behavior which is only intermittently reinforced is very "resistant to extinction"; it will even persist long after *all* rewards have been totally withdrawn.

6. As a final point, a distinction needs to be made between "primary" and "secondary" reinforcers. *Primary* reinforcers are said by behaviorists to be those rewards to which an organism "naturally" responds (if it is biologically normal): *food* during a state of hunger, *water* when thirsty, *sleep* when fatigued, *sexual release* during a state of sexual tension - these are all primary reinforcers to which we are largely "pre-wired" to respond and for which we do not normally have to acquire a taste. *Secondary* reinforcers

This is the third of a three-part series on behaviorism from a Christian perspective.

(and we will have reason to question these definitions a little later) are said to be those acquired through association with primary reinforcers. Thus, to return to a practical illustration, the autistic child may begin by learning to make sounds only for a food reward. But if that food reward (a *primary* reinforcer) is always accompanied by the presence of his mother and her delighted praise over his accomplishment, then "mother's presence" and "mother's praise" become secondary reinforcers for which the child will eventually work *regardless* of whether they are accompanied by the more primary ones.

Since would-be behavior modifiers rarely want to follow around their clients popping food rewards into their mouths indefinitely, they tend to try to "wean" them from primary to more secondary reinforcers as quickly as possible. This means that even while primary reinforcers are the standard rewards, they are accompanied clearly and consistently by other things which can later act as secondary or alternative reinforcers. In point of fact, just about anything can become a secondary reinforcer. The poker-chip "tokens" given to the mental patients in the case-study cited above are a clear example: like ordinary money, they have no intrinsic value to the one who possesses them; rather, they acquire their value by their *association* with other, more primary, reinforcers such as food, clothing, cigarettes, and so forth. But even the *setting* in which primary reinforcement is given may become a secondary reinforcer. Thus the autistic child who has become used to getting his food rewards (primary reinforcers) in his high-chair may soon perform desired behaviors simply for the privilege of *getting into* the highchair (which has become a secondary reinforcer by its association with food). The process of discovering and exploiting secondary reinforcers is another skill exercised by the professional behavior modifier, but one which, once understood, is easily applied by the lay worker as well.

Applied Behaviorism: What Can Christians Accept?

As we have stated in earlier parts of this essay, ontological, methodological, and applied behaviorism all have a host of critics,² whose guiding values, if not Christian, may be humanistic, rationalistic, Marxist or whatever. And so it is not simply applied behaviorism itself but also its critics which must be judged by the standards of biblical revelation. In the absence of thoughtful reflection guided by biblical principles, it is all too easy for Christians either to accept or reject unconditionally the entire enterprise of applied behaviorism. This is hardly surprising, since it is our contention that applied behaviorism is compatible with certain biblical truths and incompatible with others. The difficulty comes in distinguishing among these. What follows is a preliminary (and far from exhaustive) attempt to do so by discussing three common criticisms of applied behaviorism.

*Criticism 1: "Behavior modification techniques work on the assumption that man is purely selfish, hedonistic pleasure-seeker motivated to work only for the sake of reward."*³

This is a criticism which, from a Christian standpoint, is *valid* if the concept of "reward" is too narrowly-defined, but *invalid* if it assumes that man is intrinsically more self-

sacrificial than we know him to be on the basis of biblical revelation. To elaborate, there is nothing in Scripture which contradicts the notion that even the redeemed man is a seeker after rewards: C. S. Lewis (who was otherwise no friend—indeed, he was a deadly foe—of behaviorism)⁴ points out in his essay, "The Weight of Glory" that

The New Testament has lots to say about self-denial, but not about self-denial as an end in itself. We are told to deny ourselves and to take up our crosses in order that we may follow Christ (but) nearly every description of what we shall ultimately find if we do so contains an appeal to desire. If there lurks in most modern minds the notion that to desire our own good and earnestly to hope for the enjoyment of it, is a bad thing, I submit that this notion has crept in from Kant and the Stoics and is no part of the Christian faith. Indeed, if we consider the unblushing promises of reward and the staggering nature of the rewards promised in the Gospels, it would seem that Our Lord finds our desires, not too strong, but too weak. We are half-hearted creatures, fooling about with drink and sex and ambition when infinite joy is offered us, like an ignorant child who wants to go on making mud pies in a slum because he cannot imagine what is meant by the offer of a holiday at the sea. We are far too easily pleased.⁵

Lewis is making two very important points here: firstly (on the side of the behaviorists), an appeal to "reward" for work done (even the "work" of learning a new behavior) is not an intrinsically un-Christian notion. Indeed, the *opposite* assumption—that man at his highest can work in a purely disinterested, self-sacrificial manner—although it *sounds* superficially Christian, is actually a legacy of optimistic humanism and not of Christianity at all. Not only does God build the incentive of *ultimate* heavenly rewards into the description of the redeemed life (as Revelation 21 and 22 unashamedly show) but the entire history of His dealings with Israel indicates clearly that God's people were regularly exposed to His reward and favor when they lived by his standards and to his chastisement when they did not. And if the Creator in His wisdom assumes the need for immediate and long-range incentives in us, we are scarcely being un-Christian in assuming like needs in one another.

Having thus apparently opened the door to the unapologetic use of behavior modification techniques by Christian parents and teachers, let me hasten to make a second very important qualifying point from Lewis' quote. Lewis points out that "Our Lord finds our desires not too *strong*, but too weak;" this leads us to the very important consideration of what *constitutes* a "reward" or reinforcer in a behavior modification scheme. A little earlier, we spoke of the behaviorist distinction between "primary" and "secondary" reinforcement. This distinction, in its extreme form, assumes that man's only "built-in" motivation is that of physical comfort, and that all other motives (desire for approval, desire for satisfying work, desire to learn, desire to find the meaning of life) are simply derived from the primary incentive to work for physical comfort. Such an assumption would hold, for instance, that a child's interest in religious matters derives from the fact that his parents reinforce him with "social approval" for such interest, and that child's capacity to be reinforced by the parents' social approval in turn derives from the fact that the parents are the ones who feed, clothe, and protect him. Now it cannot be emphasized too strongly that this "hedonistic assumption," about the nature of man is no less a faith-assumption of ontological behaviorism than the

assumptions of determinism, materialism, and "mental processlessness" with which we dealt earlier. It is an assumption (or hypothesis) which *precedes* behaviorist research—not one which has been unequivocally *demonstrated* by it, as some seem to believe. While not all applied behaviorists adhere to this "hedonistic assumption," it is part and parcel of ontological behaviorism and as such constantly creeps into behavior modification schemes when they are applied by unreflective people or by those who are tempted to see the entire behaviorist enterprise as some kind of gospel for the solution to all man's problems.

The practical question is not whether Christians should exercise the authority which accompanies whatever office we fill, but the style in which that authority is exercised by the Christian.

What is wrong with such an assumption from a Christian standpoint? After all, isn't it true that *without* the basic physical necessities such as food, shelter, and sleep nothing else would get done? True, but "is not life more than food, and the body more than clothing?"⁶ If we are made in God's image, then included among our most *basic* motives will be such things as the desire to do creative, meaningful work,⁷ the desire for fellowship,⁸ the desire for "play,"⁹ and (if we are true to our biblical image of man) *none* of these can be assumed to be mere derivatives from the desire for food, shelter, sleep or sex. Indeed, biblically speaking, the most *basic* need of *all* men (if they could only recognize it) is *not* their need for physical survival, but their need for reconciliation with their Maker. "Thow hast made us for Thyself, and our hearts are restless until they find their rest in Thee," wrote Saint Augustine. *God Himself* is man's "primary reinforcer," and we forget this scandalous truth only at our own peril—"for what shall it profit a man if he gain the whole world, and lose his soul?"¹⁰

So what does all this mean for the judicious use of behavior modification by Christians? In practical terms, it means that the physical rewards of food, candy, cigarettes and trinkets so over-employed by so many behavior modifiers *should not be used* unless it has become abundantly clear that the person is temporarily incapable of responding to the "higher order" reinforcers such as social fellowship, the opportunity for creative work or play, the opportunity to exercise artistic talents—yes, even the opportunity to worship and learn more about God. For despite man's profound and inbuilt ambivalence towards that "ultimate reward" of reconciliation with God, we should expect to find traces of that yearning for God even in emotionally disturbed, autistic, or retarded children—especially when they have been claimed by their parents for God's kingdom through baptism or dedication.¹¹

Even the recent research literature on behavior modification is beginning to caution against the naive over-use of

tangible, physical rewards in situations where they are not needed. In one study, it was shown that children who originally showed a spontaneous interest in coloring activities tended to stop doing so after they had been systematically rewarded with a gold ribbon for being "good colorers." They had, it was concluded, been transformed from happy amateurs who colored for the sake of coloring into mercenary professionals who now required tangible rewards for the exercise of their talents. The research report concludes with a warning against the use of "extrinsic rewards" in situations where it is clear that "intrinsic rewards" (such as satisfaction in the mere doing of the activity) are already at work.¹² Christians can welcome this developing recognition among behavior modifiers that their original notions about "rewards" were far too simplistic—but they should be warned that there often still exists a tendency to resort to primitive physical rewards as the "easy way out." We know of this temptation in our own lives as parents: it's easier to give the child a cookie when he scrapes his knee than to take the time to comfort him or read him a story. And the cookie "works"—at least in the short run. So do cigarettes and candies when used as reinforcers for learning new behaviors—but do we really want the wholesale addictions to sugar and nicotine which can be the long-term results? It is ironic that the behavior modification community includes both those who routinely use cigarettes and candy as reinforcers for new behaviors and those who, for a fee, will help you to eliminate your nicotine and calorie dependencies through the use of behavior modification techniques! Beware, therefore, lest an over-reliance on primitive, lower-order reinforcers turn you into someone who is educating a child or adult for dependence rather than for responsible freedom—into someone who more resembles a drug-pusher than a true teacher.

Criticism 2: "The practice of Behavior modification divides people into two classes: the 'controllers,' who know and practice the system and the 'controlled' who must submit in passive, ignorant helplessness. This then opens the door to authoritarian, totalitarian regimes."

Like the first criticism we considered, this second one is both valid and invalid, Christianly speaking, depending on certain other considerations. It is *invalid* if it assumes that there is something intrinsically wrong with the existence and exercise of authority and the capacity for control which accompanies that authority. But it is *valid* inasmuch as it reflects a concern about the potential for exercising control in a powerhungry fashion with no acknowledgement of accountability for the way it is used. Again, let us elaborate both qualifications of this criticism.

Catholic theologian Michael Novak, in a recent essay on behaviorism¹³ comments that "there is a widespread belief, in this Protestant (*sic*) nation, that Christianity is a religion of individualism, each man his own priest and pope, each conscience inviolable, each person a potential source of autonomy and dissent." Novak then goes on to point out that this concept of man as a free, autonomous being answerable only to himself and perfectly justified in resisting any and all attempts at control is a legacy of the Enlightenment, and not of Christianity at all (however much the church has been mistakenly tainted by this teaching.)

Three critical factors tell against the model of Christianity as individualism: the teachings of the scriptures; the practice of early Christianity, and the actualities of Christian life. The reaction against an exaggerated and errant (although in some ways helpful) emphasis on individualism has been well under way for several decades. . . . Professor Skinner's emphasis on the social character of human existence is thus, from a theological point of view, confirmatory of a well-established trend.¹⁴

Hence legitimate authority in the context of community is not to be confused with authoritarianism, and Christians are to listen to the voice of Scripture, not to the drumbeat of secular humanism, in deciding what circumscribes the exercise of control in applied behaviorism. The biblical view of man and society clearly includes authority structures—parents over children, husbands over wives, the state over its citizens, the judge over the criminal, the church elders over the congregation—and for this reason Christians need not reject applied behaviorism on the all-too-popular grounds that it smacks of "control" and that "control of anyone by anyone else is always intrinsically bad." It isn't. Indeed, according to Scripture, the fruit of rebellion against legitimate authority is not sweet tolerance and freedom but chaotic and ugly self-seeking (as the book of Judges vividly testifies in documenting an era when "each man did what was right in his own eyes"¹⁵). Only a naively optimistic view about the perfectibility of man holds otherwise.

Again, lest I appear to be opening the door to the very exercise of despotism so feared by the secular critics of applied behaviorism, let me qualify the above remarks. The critics of behaviorism do well to be concerned about the misuse of behavioral technology in the hands of the unscrupulous—or even simply in the hands of those who trust too naively in the claims of the system. Observing the trends in British government, law, and social science in the post-war period, C.S. Lewis took up his pen at almost the same time Skinner was writing *Walden II* and produced an anti-behaviorist fantasy novel called *That Hideous Strength*.¹⁶ In this novel too, science has been given a blank check (this time by the government of a country rather than an experimental community) to perfect man and further harness the powers of nature. Here too, an elite of specialists works for the supposed greater good of mankind. The difference between *Walden II* and *Belbury* (the scientific think-tank of Lewis' novel) is that the planners in the latter situation, through willful misuse of their power, through sheer ignorance of their own limitations, or a combination of both, degenerate into a dog-eat-dog competition for control. This competition eventually ends in the destruction of the entire institution and the merciful restoration of normal life to the surrounding area, whose people and resources had been appropriated and manipulated in the name of progress. Lewis' novel is, of course, no less a work of fiction than Skinner's, and his negative version of the results of a scientifically-planned society no less speculative than Skinner's positive one. To support his case for the finiteness and depravity of man, he appeals to the evidence of history and of Scripture, while Skinner appeals to the past achievements of science and the present successes of behavior modification as evidence that man can not only plan his own destiny, but do so without necessarily abusing the accompanying power. Adherence to *either* position takes the reader beyond evidence to basic faith-assumptions about man's capacity for unlimited progress and goodness.

How, then, are Christians to walk the fine line between legitimate exercise of authority and sinful degeneration into despotic authoritarianism? We are not guaranteed immunity from the temptation to assume selfish power in a way that is being so consistently role-modelled for us in the twentieth century industrialized world. However, a few reminders from the scriptural comments about authority may be of help.

Whatever authority a Christian exercises in the offices of parent, teacher, husband, employer, or governor is never self-generated, but is derived from God Himself, accountable to Him, and therefore to be exercised with an awe verging on fear and trembling. Our office is not accorded to us because of any intrinsic merit: we are as fallen and prone to sin as those under our command. And so the apostle Paul, even as he admonishes children to obey their parents and servants their masters, promptly warns those same parents and masters not to abuse their authority "knowing that both their Master and yours is in heaven, and there is no partiality with Him."¹⁷ The practical question is not *whether* Christians should exercise the authority which accompanies whatever office we fill—be it parent, teacher or whatever. Let me rather suggest four important questions regarding the *style* in which that authority—and its accompanying power to dispense rewards and punishments—is exercised by the Christian.

Firstly, *in what spirit* are you exercising control? Are you trying to change the person's behavior in order to indulge your own desire for power? Are you exercising control to compensate for the frustration of being controlled by other people or other circumstances, pecking-order fashion? Are you putting on a show of authority to cover up your own uncertainties about the situation? Are you merely trying to tailor the other person's behavior to fit your peculiar needs and idiosyncrasies? *None* of these, I submit, are valid motives for resorting to the powerful tools of behavior modification. Ontological behaviorism may insist that the existence of such motives (being irrelevant internal mental processes) makes no difference whatsoever to the effectiveness of a behavior modification program—but such thinking must be resolutely rejected. Just as God discerns and judges the spirit behind an action, so do those over whom we exercise authority—and that spirit makes all the difference in the world as to the effectiveness of our program. In the long run, only when fueled by a sincere and unselfish desire for the other's good will any attempt at behavioral control succeed. Again, this is a truth that is being brought home to applied behaviorists by the realities of their accumulating professional experience. The architect of one behavior modification project with difficult children in a California school system has concluded that

sincerity is an integral part of instruction in behavioral engineering The teachers working with (me) on the experiment have sometimes doubted each other's sincerity. One person compliments another, who says 'You're just reinforcing me!' And the response is 'Oh, the hell I am! I really mean it!' With the kids and the staff, we've had to continually stress being sincere. You should *really want* the other person to change.¹⁸

Secondly, *for what* are you exercising control? Is your long-term goal the training of an equal, fellow-member of the Body of Christ—someone who may well at some future

time be in a position of responsible authority over *you*, circumstances and gifts permitting? Or are you, consciously or unconsciously, playing the role of the animal-trainer, educating for a more and more total dependence on yourself? If the latter, then beware! You are not God; any sovereignty you have over the life of another exists only to direct that other to the true Master of us all. We are called to be willing bondslaves of Jesus Christ and Him alone: deference to all other legitimate authority is the by-product of obedience to Him, and cannot—indeed, dare not—exist on its own.

Thirdly, *how independently* are you exercising behavioral control? As Christians, we are given the gifts of prayer, Scripture, and the counsel of fellow-believers as safeguards against our sinful tendency to distort reality. Is the use of behavioral techniques being subjected to these three courts of appeal for endorsement, modification, or outright rejection? In particular I would stress the responsibility of believing bodies of Christians not to be intimidated by the scientific trappings of behaviorism: it is for us to hold applied behaviorism accountable to the standards of the Word, and not vice-versa.

Finally, *how hastily* are you resorting to the techniques of behavioral control? A recent reviewer of the behavior modification scene reported surprise when one of the most prestigious pioneers of behavior modification introduced a token-reinforcement system into a highly disruptive seventh-grade class "only as a last resort after more traditional methods had failed to end the chaos. When I asked why, he replied, 'Why use tokens when something else will work?'"¹⁹ If a non-Christian specialist in applied behaviorism employs his tools only as a last resort, we would do well to ask ourselves why. I suspect that the emerging cautiousness of such practitioners reflects their growing awareness that learning is *not* simply a matter of tangible rewards and punishments, however much of these do enter into the picture. Indeed, a constant reliance on such rewards and punishments may simply cause the child to regress to notions of primitive reciprocity ("you scratch my back and I'll scratch yours") in his dealing with others when, in fact, his behavior was already quite amenable to change based on an appeal to reason, emotion, religious conviction or a combination of all three. Ontological behaviorism does not make room for the possibility that children may pass through definite stages in their social, intellectual, and moral development (with a rewards-and-punishments orientation a legitimate, but very immature phase in that development).²⁰ Rather it assumes that the stimulus-response laws of respondent and operant conditioning are the sole vehicle of learning for all organisms (animal or human, normal or abnormal) at all ages and stages of life. But the truth of the matter is that we know far too little about the degree to which these techniques pioneered almost exclusively on animals and "marginal" human beings—such as retardates and severely disturbed persons—are applicable without substantial qualification to persons leading ordinary lives in ordinary homes, classrooms and workplaces. The track record of applied behaviorism increasingly suggests that a healthy skepticism is warranted.

Criticism 3: "By locating all causes for behavior change in the environment, behavior modification programs deny, or at least ignore, the existence of free will, and hence assign human beings no credit for their accomplishments and no blame for their misdeeds."

This final criticism to which this paper addresses itself is a rather complex argument to handle from a Christian point of view, given the theological differences which have historically existed within the church regarding the part played by man's will in the process of both Salvation and Sanctification. But I am personally inclined to agree with Novak,²¹ when he maintains that the thrust of Scripture is such as to give man no credit for anything *good* he does (all such goodness being rooted in the grace of God), but, on the other hand, to hold him (but for the work of Christ) fully responsible for his *sinful* deeds even while acknowledging that such sin is not *merely* personal because the entire creation has been flawed by man's fall and is never totally supportive of good actions. This is one of the apparent paradoxes of Scripture which is hardly amenable to analysis by the fragile tools of human logic—but even so, it does shed light on two issues regarding the Christian's attitude to applied behaviorism: firstly, if the source of our goodness lies *outside* ourselves, then we need not reject applied behaviorism merely on the grounds that it denies man due "credit" for his good deeds. True, behaviorism errs in citing not God, but the environment as the ultimate source of man's accomplishments; but the opposite position whereby man himself is exalted as the autonomous source of all noble actions is simply another legacy of the humanistic rejection of God and His replacement by so-called autonomous man as the center of the universe. Hence we can agree with Novak when he supports Skinner to the extent of saying "at no point is man's autonomy such that he can take credit for it. Such as it is, it has been given to him, both in its abiding tendencies and in its actual exercise. It is 'grace' or 'gift,' rather than his own creation," although as a Christian he then parts ways with Skinner in affirming that the ultimate source of that gift is in God and not (or only secondarily) in the impersonal pressures of the environment. "Hence," (he concludes) "theonomy" rather than 'autonomy' is a more accurate name for the human reality."²²

On the other hand (and this is my second point) if the source of our *badness* lies essentially *within* ourselves, and we are answerable for it, then the Christian and behaviorist views of *justice* must diverge quite radically from one another. For it will be recalled that, according to strict ontological behaviorism, man's behavior (aside from certain genetically-programmed dispositions) is totally determined by the events of his environment and that for this reason both personal freedom and the personal credit (i.e., "dignity") resulting from our accomplishments are illusory. By the same reasoning, however, the notions of personal responsibility and accountability are also illusory: if my environment is to be credited with my achievements, it must also take the blame for my mistakes and misdeeds. This leads to a philosophy of justice according to which law-breakers are regarded not as responsible agents who have willingly and knowingly violated certain standards of conduct, but as persons whose misdeeds should either be entirely overlooked ("Poor fellow—he's just a victim of his past!") or at most treated as "illnesses" needing to be "cured," rather than as "sins" needing to be "punished." At first glance, this seems like a very enlightened attitude; but in point of fact, its practical application results all too often in one of two opposite abuses: either the victimization of society at large or (paradoxical as it may seem) of the criminal himself.

If the Source of our badness lies essentially within ourselves, and we are answerable for it, then the Christian and behaviorist views of justice must diverge quite radically from one another.

With regard to the first abuse, the growing tendency to regard the criminal as "more sinned against (by his environment) than sinning" appears to be generating a state of increasing judicial anarchy in the western world. Reduced or suspended sentences have become increasingly the norm even for what used to be regarded as serious crimes—with no accompanying evidence that this attitude of sympathy and leniency has in any way reduced the likelihood that the criminal will repeat his offence.²³ In the traditional system of criminal law,

... vengeance and retribution were recognized as important threads of the social fabric, not because they deterred or reformed the offender, but because they reassured and satisfied the offended. This was not the satisfaction of some dark animal need. Citizens entered into the social contract with the understanding that society would guarantee—or at least put a premium on—their lives, dignity, and the right to enjoy their possessions. It was only when retribution followed injury that citizens could be reassured and satisfied that society really did place some value on other persons. This was—and is—a central need for any society. And, just as excessive or unjust punishment brutalizes the offender because it suggests that he is of no value, insufficient punishment brutalizes the victim for the same reason.²⁴

These are not words written by a Christian journalist—but we can echo her sentiments when we recall that Romans 13 speaks of the civil government (whether she realizes this fact or not) as being "God's servant for your good. . . (and) the servant of God to execute his (i.e., God's) wrath on the wrongdoer."

But one result of the ascendancy of a behaviorist view of crime has been the unquestioned assumption that it is only environments, not people, that can be held accountable for crime. Consequently, the state whose penal system rests on such an assumption may violate the biblical imperative in two serious ways: In the first place, it assumes that persons are not *born* prone to evil, but are merely *tabulae rasae* ("blank slates") on which the environment alone writes the program of our subsequent behavioral tendencies. By this reckoning, crime is totally the outcome of poverty or deprived social conditions—although this, (continues the same journalist)

does not explain why the overwhelming majority of poor Canadians do *not* commit crimes, nor why so many well-off ones do, (nor why), during the 1950's-1970's when Canadians were enjoying rapidly improving standards of living and social services unequalled in any other period of history, the crime rates—instead of going down—were rapidly going up.²⁵

In the second place, in refusing to exercise its retributive mandate against the wrongdoer, the behaviorist-leaning penal system, and the state which condones it, have failed to strike the balance between justice and mercy demanded by biblical norms for society.

Regardless of whether punishment deters or rehabilitates, it is necessary for justice. . . . Cynicism and callous indifference to good and evil are the products of a society that, like ours, is less concerned with the needs of those who observe its rules than with those who break them.²⁶

If journalists of the secular press—without the privilege of biblical faith or literacy—are, on the basis of the observed chaos in criminal justice, appealing for a return to a more biblical view of crime and punishment, it should give thinking Christians much cause for reflection on the type of government they wish to support in the future.

But the victimization of society by criminals held inadequately responsible for their actions is only one result of adherence to an environmental determinist view of behavior. The other, strange as it may seem, concerns the likelihood that the criminal *himself* will be unjustly victimized. For it is not always the case that behaviorist-influenced penal systems end up doing *nothing* to the criminal, on the grounds that his crime is "really his environment's fault, not his." It is just as likely that such a theory of criminal treatment may very well *acknowledge* that the offender's environment has indeed disposed him towards continuous wrong-doing and that he therefore merits the privilege of re-education at the state's expense. C. S. Lewis was prophetically sensitive to the hidden potential for injustice inherent in such a view when the jargon of criminal "rehabilitation" first began to replace the traditional notion of "retribution" in the minds of penologists a quarter of a century ago. According to this newly-fashionable theory (Lewis called it "The Humanitarian Theory of Punishment"), when a criminal himself is held responsible for his crime and punished accordingly, he is being victimized by a barbarous and unenlightened spirit of revenge, whereas when he is exposed rather to "treatment," "rehabilitation," or "reeducation," he is being treated in an enlightened and scientific manner which is kinder to the criminal and also promotes the goals of future crime-deterrence. "Thus," (in changing from retributive to a behaviorist theory of penology) "it appears at first sight that we have passed from the harsh and self-righteous notion of giving the wicked their deserts to the charitable and enlightened one of tending the psychologically sick."²⁷ But, Lewis goes on to say, let us not be fooled by a change in terminology:

the things done to the criminal, even if they are called cures, will be just as compulsory as they were in the old days when we called them punishments. If a tendency to steal can be cured by psychotherapy, the thief will no doubt be forced to undergo the treatment.²⁸

Even worse, Lewis warned, once a person passes from the category of "morally wrong" to the category of "psychologically sick," then there is an accompanying loss of precision both in the definition of what is "sick" *and* the definition of what constitutes adequate "treatment." Seriously "sick" people, having no specialized knowledge themselves of medicine, must necessarily trust their doctors to know both that they really *are* sick, and what and how long it will take to treat them. The traditional concept of "deserved" punishment was rooted in the notion that not just a specialized elite, but that *all* adults capable of functioning in society were able to distinguish between lawful and unlawful acts. Once we concede that people passively "catch" bad behavior from their environment in the same way they "catch" measles or

bubonic plague, then it is up to the specialists both to diagnose the disease and prescribe the cure. In extreme cases, the sick person can be quarantined indefinitely for his own good and the good of society, whether he likes it or not. Hence an additional danger of a behaviorist-rooted theory of penology is that the definite sentence for a definite type of crime, to which traditional jurisprudence adhered, may be replaced by an indefinite sentence which can be lengthened or shortened at the discretion of the psychological "experts."

A further danger is that, having conceded to specialists their superior wisdom in defining what is "criminally sick," we may find ourselves, under an unscrupulous political regime, being labelled "sick" and forced to undergo "treatment" for *any* opinion or practice that is deemed threatening to the *status quo*.

We know that one school of psychology already regards religion as a neurosis. When this particular neurosis becomes inconvenient to government, what is to hinder government from proceeding to 'cure' it? . . . And thus when the command is given, every prominent Christian in the land may vanish overnight into Institutions for the treatment of the ideologically unsound, and it will rest with the expert gaolers to say when (if ever) they are to re-emerge. But it will not be persecution. Even if the treatment is painful, even if it is life long, even if it is fatal, that will only be a regrettable accident; the intention was purely therapeutic. In ordinary medicine, there were painful operations and fatal operations; so in this. But because they are 'treatment,' not punishment, they can be criticized only by fellow experts and on technical grounds, never by men as men and on grounds of justice.²⁹

Eager to assimilate and apply these "progressive" concepts of prison reform, the Britain of the early 50's would give Lewis no hearing for his arguments (he finally published them in an Australian legal journal.) It was only a little later, however, that the first reports of so called brainwashing procedures began to leak out of China. A recent Skinnerian critic writes:

When China began industrialization, it adopted procedures much like those described in *Beyond Freedom and Dignity*. It often applied reinforcement rather than aversive methods to induce its people to accept the new behavioral environment. It then arranged its reward system so as to positively reinforce actions that were in conformity with the values of the new environment. Deviation was not so much punished as it was treated. Recalcitrant individuals were given group-think treatments—called brain-washing—in which they were rewarded for expressing approved sentiments.³⁰

The judicious arrangement of reinforcers in the *outside* environment has now been buttressed by the use of drugs to alter—or at least render innocuous—the *internal* minds of dissidents in Russia, as Solzhenitsyn and others have reported. And lest we be tempted to think that such abuses (naive or deliberate) could "never happen here," it needs to be pointed out that in California (unquestionably the most eager state in the union when it comes to employing the latest ideas from psychology and the personnel to implement them), since the introduction of rehabilitative, behavior modification types of prison programs in the fifties, "the median term served by 'felony first releases' has risen from twenty to thirty-six months—twice the national average."³¹ This strongly suggests the materialization of Lewis' fears of "indefinite sentencing." Reports from prisons in other parts of the country where behavior modification programs are in use stress repeatedly that prisoners would "rather have remained in solitary confinement"³² than take part. A typical program consists

of several different "levels" of privileges that the prisoner must attain by displaying the right behavior, which is rewarded by the distribution of token-points by guards and psychiatric staff

on their own arbitrary discretion. . . . Inmates are awarded tokens for proper responses to guards, such as 'Good morning sir? how are you, sir? Yes, sir,' etc. . . . (During group therapy, the prisoner's therapist) will point out what problems as inmate has, and, whether they're real or not, that inmate is required to solve his problem in the group. If the inmate doesn't try to solve this problem forced on him, then he's not cooperating with the behavior modification program, which results in a hard way to go on all fronts. One way in which an inmate is harassed is in receiving less tokens per day. Since tokens are given out by state-employed personnel at their own discretion, an inmate could find himself in a tight situation if he starts receiving just enough tokens for everyday necessities and nothing else. . . . if one doesn't have enough tokens to pay rent, one is simply thrown (down to a lower level) for a period of time.³³

In this program, too, the uncertainty of indefinite sentencing is routine:

It usually takes a six-month period for one who is cooperating with the behavior modification program to complete it and be transferred out. However, with this arbitrary means of distributing tokens, and in the name of therapy, an inmate can be forced to remain (in the program) until the maximum of his sentence is up.

These anecdotal reports come to us from individual inmates who, it can be argued, are hardly supplying us with careful documentation and may, in addition, be prone to exaggeration. But confirmation of the agonies of "indeterminate sentencing" comes from another, more articulate source—one who might be expected to support the *status quo* of the prison system, not oppose it: Charles Colson was a crack Washington lawyer and Richard Nixon's top aide who, in the wake of his conversion to Christianity decided to plead guilty to certain Watergate-connected offenses and take no privileges for the duration of his prison sentence. Now working full time in the cause of prison reform, he writes in his recently-published autobiography, that one of the most agonizing aspects of prison life is the guessing game which all inmates must constantly play with regard to the probability of being paroled or not at their next hearing—a probability which appears to be almost totally determined by the caprice of an overworked, underinformed committee.³⁴

One is also reminded of the question, raised in an earlier part of this essay, as to whether or not environmental manipulation of behavior can work at all effectively if the target of that manipulation is a human being who knows, or has guessed, the nature of those manipulations and simply decided that he does not agree with their goals. Again, the first-hand reports of prisoners in behavior modification programs would suggest not: "The guards put on a front of politeness, concern, and friendship. I had had enough of the cells, guards, and phoniness those few hours between the 6th and 7th of April and refused to eat or talk to anyone." Fellow inmates co-operating with the program are regarded no less cynically: they are

brain-washed inmates . . . stool pigeons, snitches, puppets, and serve the purpose of carrying out the personnel's wishes to a fuller degree. These inmates set 'examples' for the newer block residents, advocate block policy, and of course keep the personnel up on all the activities of inmates whom officials are keeping a close eye on, and especially those inmates who are in opposition to the program.³⁵

In light of such comments, Lewis' words of two and one

half decades ago ring particularly prophetic:

To undergo all those assaults on my personality which modern psychotherapy knows how to deliver; to be taken without consent from my home and friends; to lose my liberty; to be re-made after some pattern of 'normality' hatched in a Viennese (or Harvardian?)¹⁶ laboratory to which I never professed allegiance; to know that this process will never end until either my captors have succeeded or I grow wise enough to cheat them with apparent success—who cares whether this is called Punishment or not? That it includes most of the elements for which any punishment is feared—shame, exile, bondage, and years eaten by the locust—is obvious. Only enormous ill-desert could justify it; but ill-desert is the very conception which the Humanitarian theory has thrown overboard.¹⁷

This lengthy discussion of the potential for abuse inherent in applied behaviorism—abuse of the rights of the law-abiding majority, but also of the crime-performing minority—is intended to emphasize the fact that Christian responsibility for the uses of these techniques extends beyond the confines of our individual lives as the parents and teachers of children and into the very bedrock of our society and the social consequences of its policies. We are living with the legacy of several centuries of combined belief in the "science ideal" (the notion that the entire universe is impersonal and mechanistic) and the "freedom ideal" (the notion that man, on his own can somehow transcend his own determinism and play God)—and both ontological and applied behaviorism are part and parcel of this legacy. Change will not come easily—partly because of the longstanding and pervasive nature of this "alternative religion," but also partly because, for all its errors, it is not totally lacking in elements of biblical truth, as I have tried to indicate. This makes the business of separating wheat from chaff one which requires all of the wisdom that the Holy Spirit can give to us, both as individuals and as interdependent members of the one Body of Christ. It also renders very challenging the business of deciding under what circumstances we should or should not support the schemes of applied behaviorism, and (just as important) the process of articulating clearly, forcefully—and if necessary, sacrificially—our reasons for taking either of these stands at a particular time. This trio of articles has been a preliminary attempt to provide some Christian guidelines to that end.

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Christianity and Culture

III. Biblical Absolutes and Certain Cultural Relativisms



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The Choice to Sow while Letting Others Reap

There is in Galatians 6:7 a law of God's universe: what you sow you reap. God made this law; it works through cultural, psychological, and social channels. The tragic thing about it, from my point of view, is that it works to the third and fourth generation (or more). What I sow, somebody else may reap through cultural structures and relationships; and the children of the criminal, or of the negligent, or of the divorced, suffer difficulties along with or because of their parents. This seems to me to be an empirical fact. If somebody gets in trouble with the law and goes to jail, the wife has to work, the child may be forced to the streets where he gets into trouble; then his children, in turn, may get into trouble; and this can, in fact, carry on for two or three generations, physically, culturally, and psychiatrically. Notice, however, that although it says in Exodus 20:5 that God *visits* the iniquities of the parents onto the heirs, as is visibly true, it does not say that He *punishes* the great grandchildren for the greatgrandparents. There is a vast difference in those two terms between punishing and visiting.

By this statement in Exodus, God acknowledges His responsibility. I am glad that He doesn't refuse to take some responsibility for this frightening situation, since He made the laws of cause and effect in culture. On the other hand, we want to balance this view by comparing Exodus 9:12 with Exodus 8:15. In the one we learn that in some sense God hardened the heart of Pharaoh, but then in the other we find that when Pharaoh saw that there was a respite, he hardened his heart himself. Here we have a double way of looking. Pharaoh hardened his heart; God hardened his heart. I am suggesting that God made the laws of cause and effect, which—when brought to bear upon Pharaoh with whatever he was—led him to harden his heart by his own choice.

There are extremely difficult philosophical problems involved in seeing how these two aspects can co-exist

without logical contradiction. This has been discussed extensively by Donald M. MacKay in numerous articles—e.g. in *Freedom of Action in a Mechanistic Universe*, (Cambridge: University Press, 1967). He argues (11-14, 17, 19) that determinism requires an unchanging base of prediction; but that if the subject knows about the prediction, then the fact of his knowing changes the basis of the prediction, and hence the former prediction is now invalid. Hence (21) "Even when a detached observer can predict an action with complete certainty, this does nothing of itself to prove that the *agent* had no freedom to do otherwise;" *standpoint* (27), or perspective, affect the discussion and logical validity of belief. Furthermore (in "The Sovereignty of God in the Natural World," *Scottish Journal of Theology* 21, 1, 13-26, 1968), he says that an "author" standpoint differs logically from that of the characters in a play; the author knows all from the beginning (so that a thousand participant years may be but a single day for the author), but the characters from their standpoint do not, and have time ahead of them with freedom from their perspective. Hence there remains logical indeterminacy for the characters. Yet at the Incarnation there comes into the scene a "Creator-Participant" which leaves us with logical problems and deep mystery. I shall leave such discussions to MacKay and others, as being outside my range of competence.

I once knew a Christian woman who was engaged to marry a non-Christian professor in a large university. The mother of the woman was deeply concerned. She asked me to talk to the woman (who had been a student of mine). So I did. I said: "I have no arguments to make about what you already know; what I want to do is just to tick off one or

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two questions to see if you have thought about them. The minute I find that you have thought about one, I am dropping it and going on to others." Eventually I asked: "When you have growing children, suppose they say to you: 'You tell us that we get to heaven by believing in Jesus—is Daddy going to heaven?' What are you going to tell them? If you say yes, but don't believe it, you have problems with yourself. But if you say no, your children will have problems. Or suppose that your children say to you: 'Daddy doesn't go to church, why do I have to go to church?' Your children will have other problems. Then their children are going to have problems, which may pass on to their children. What I am asking you is, have you considered the effect, not on your children, but on your grandchildren?" She started to cry, and broke the engagement. (Later the man was converted, they married, and have a happy family.)

The grace of God through forgiveness can cut out some of our sinful mess just as—perhaps—you can erase a tape recording. But if I am driving an automobile carelessly (or in a drunken fashion), and if (God forbid) I run over and kill a child, grace does not necessarily bring the child back to life, even while it forgives me. But this result may not necessarily satisfy the father of the child, nor prevent his reaping anger or hostility to God because of me. He still reaps from my careless sowing.

Trying to Match God's Absolute Character

When we are looking for absolutes, the big one is God Himself. If we lose track of this fact, I think we are in very deep trouble in any discussion with a cultural relativist or a situational ethicist. When I say that God is our ultimate absolute, I mean that God made and sustains all other absolutes, whatever they may be, as well as all relativisms, whatever they may be. In this sense, any relativity is ultimately to be seen relative to His character. And the demand on us as Christians is to be like God in character. The demand is that as our heavenly Father is, so we should be (Matt. 5:48). I accept that fact, and I fail bitterly. But I am glad of the beatitudes that tell us that if we hunger and thirst after righteousness, God will ultimately take care of us, satisfy us, and give us some of that character of God which we hunger and thirst after. God does, in fact, use our intent and our struggle as a channel of grace to get us moving toward this goal, working again through cultural opportunity and cultural failure. Any situation which I discuss must include an aim at an absolute, reflecting our understanding of God's model of Himself, God's model through Christ, and His demand upon us through Christ and the Word.

Sin as Following my Own Judgment Instead of God's

"Is it sometimes right to do wrong?" I quote a crucial question from the cover of a booklet reporting a debate between Joseph Fletcher and John Warwick Montgomery. (*Situation Ethics, True or False* (Minneapolis: Dimension Books, Bethany Fellowship Inc., 1972). For further discussion of such matters see Marvin K. Mayers, *Christianity Confronts Culture* (Grand Rapids: Zondervan, 1974) Montgomery refers to "ambiguous ethical situations" (46) in which (following materials of William May) "sinful human situations require a choice to be made between conflicting absolute moral demands" in which "the 'lesser

of evils may have to be accepted, but it is still in every sense an evil and must drive the Christian to the Cross for forgiveness" (46-47). Fletcher presses hard to have Montgomery say *when* and *why* one should kill a tyrant, or interrupt a pregnancy, or lie (49-50), insisting that it "is ethically foolish to say we 'ought' to do what is wrong!" (53, and cf. 70, 80, 82). Yet Montgomery has little more to say in reply than that "I am still committing wrong" even if "I am forced to do this" (51, and cf. 64-65-70, 82).

Fletcher, in his earlier principle work on the subject, *Situation Ethics, The New Morality* (Philadelphia: The Westminster Press, [1966] 1974), quotes Karl Barth as saying that "there are situations in which the killing of germinating life does not constitute murder *but is in fact commanded*" [italics by Fletcher]. This puts Barth in the anomalous position of saying that to obey God's command (to act lovingly) is to do something absolutely wrong. Clearly this is theological-ethical nonsense" (62).

My own philosophical-theological competence is not adequate to handle this issue. I asked for a comment on it from Dr. Terry Schram (brought up in the Calvinist tradition, graduate of Calvin seminary, with a doctorate in theology from Utrecht). In connection with the issue just summarized, I asked: "Can God command you to do what is wrong?" His response: "No, because 'wrong' can be defined only in terms of disregarding God's command." Sin is not essentially the breaking of a commandment, but the *following of one's own judgment against God's*. This, for him, is a more basic category than breaking a commandment. The command simply provides the occasion for deciding between my own judgment and God's judgment in a concrete situation. Sin may exist apart from the law, but the law serves to expose it, since it shows us God's judgment. If we go against that judgment, then we have chosen to disregard God's view of the matter.

As for Adam's situation, a sort of classic case in Schram's view, the fruit was not in itself evil. But there was a prohibition which provided a test as to whether Adam would follow God's command or his own judgment when a decision between the two had to be made. He wasn't deceived. He chose to follow his own judgment and go along with Eve rather than to take whatever risk he saw involved in following the command. The decision was not made in the abstract but in a complex situation where the apparently easy command forced him to choose between what God had said and what seemed sensible to him.

The practical Pauline view, according to Schram, is that whatever is not of faith is sin. And *faith is personal response to God*. The clash was between God's judgment through a command and Adam's own judgment; the clash is between God's judgment expressed in a variety of commands and my own judgment as I view a given situation and would rather do things my way. Thus truth about God provides an occasion, just as the command provides an occasion; and in Romans 1:18 people who knew something of God and didn't follow it were in trouble.

But, he says, life is too complex to formulate positive commands for every situation; rather *general commands signal danger points*, such as "Don't play in the street." The response to God in every situation is the important concern, and the essential choice is between God and myself. That the creature could prefer itself to its Creator sounds silly in theory, says he, a contradiction of its own status. In practice, it is sin. The possibility of sin is given in God's

creation of us like himself. He made us (we "are" in response to him) free (we can follow him or contradict him). The free moral agent can acknowledge his Creator but can also choose to ignore Him, following his own judgment when it varies from God's. That is sin.

As to the possibility that God could command you to do something that is wrong, Schram said that in this connection he could think only of specific commands contradicting general ones. For instance, "don't kill," which is the general command, was negated many times: by the order to kill Isaac as a sacrifice (Gen. 22:2-14), or the requirement to kill people who sacrificed their children to Molech (Lev. 20:2, 4-5), or to kill mediums (20:27), or those who cursed their father and mother (20:9), or were caught in adultery (20:10), or in homosexuality (20:13), or in blasphemy (24:16). All of these are in the same context of the general command not to kill. So, it seems to him, human life is not an absolute and the general command does not in itself define the boundary between "right" and "wrong." God gives life and takes it away. He can do it by the hand of man if that suits a situation better in His judgment. "Wrong" is refusal of God's judgment of the situation.

This, it seems to me, still leaves us with dangers in the Crusades (which, in my opinion, were dreadful); and during the Inquisition there were people, I suppose, who thought they were thereby doing God's will—as Jesus promised that the time would come when some people will kill us, thinking they are doing God's service.

Progressive Responsibility

A Mennonite pastor and I are close friends. He is himself deeply pacifist in a background of centuries of conviction. We understand each other well enough so that we could move in fast on a tough problem. I said: "Let us grant for the moment that pacifism is correct, taking it unchallenged; then how do you explain the order of God in the Old Testament to kill people—men, women, and children so that 'in the cities of these peoples that the Lord your God gives you for an inheritance, you shall save alive nothing that breathes. . . . they may not teach you to do according to all their abominable practices which they have done in the service of their gods, and so to sin against the Lord your God' (Deut. 20:16-18)." His reply: "It was like the law about divorce, which Jesus referred to, where Moses because of the hardness of their hearts, gave them permission to give a bill of divorcement (Matt. 19:8), although it was not so from the beginning." In that dispensation, the pastor went on to say, God dealt with them differently. Since, however, the Mosaic regime was in itself a special situation, with its special moral responsibilities, I then wanted to know how he would differentiate this dispensational situationalism (or perhaps dispensational relativism) from the kind of situation ethics of Fletcher, of which we both disapproved. How do we differentiate responsibility under progressive revelation from situational ethics, when we see responsibility changing over time and place? To this extremely tough question, the Mennonite replied that the absolute is in the character of God. (This I agree with heartily and have always started with as I did above.) Thus, in teaching a child mathematics, we do not demand of him calculus at first; we say "good" when he comes home with a problem done in long division. And he added emphatically that God is rational, and deals with people rationally, not like a machine in which if X happens, Y immediately slaps the offender. (That is, God is not a

What you sow, you reap. God made this law; it works through cultural, psychological and social channels.

machine, with artificial or merely coded laws to go by.) So again I asked how this differs from situational ethics. The Mennonite pastor's view was that he does not wish any view to go so far as to lose balance, and that situational ethics, in his opinion, does so.

To look toward such a balance I would like to mention again one of the principles above: The absolute is in the person and character of God, and into this pattern we must try and pray to grow. But this character is seen by us at work *through cultural* situations; *in action* as applied to Old Testament characters and scenes, and New Testament ones; and *in Person* in the acts of God incarnate—Jesus—and in His words and philosophical comments. For me, it is important to recall that the world was made through Him, that John 3:16 was spoken to a "college professor"—a teacher in Israel, and that those of us who are university professors must recognize Him (I blush to say it) as overwhelmingly our academic superior. But Fletcher, on the contrary, will take no norms or lessons from Jesus on such matters. He says (in Fletcher and Montgomery 1972:55): "he [Jesus] said nothing directly or even implicitly about [the question of situational ethics and absolutes in relation to] it. Jesus was a simple Jewish peasant. He had no more philosophical sophistication than a guinea pig, and I don't turn to Jesus for philosophical sophistication."

Loving Oneself and Neighbor

In the preceding sections we have related especially to the first commandment—to love God with mind (Matt. 22:37), as well as heart and soul. We now turn to the second, to love "your neighbor as yourself." This, I feel, is another absolute—but beyond my capacity to grasp in philosophical principle or in empirical detail, or to implement adequately; and it is beyond my capacity to specify adequately its demands in relation to varying cultural situations. But the command to love with mind requires that we struggle, even in such mental weakness, with the meaning of loving a neighbor.

There appears to have been a general slippage in the understanding of many Christian college students. I asked members of a Bible class of university students in Ann Arbor, Michigan, to list absolutes. One of them suggested two: the love of God and the love of neighbor. As for the first, he saw that Jesus Christ was the same yesterday, today, and forever—something of His character does not change. As for the second, he raised the question as to how to answer dorm mates who may claim that homosexuality is not hurting the neighbor. To this my reply is that they are in fact distorting the second commandment; the command is not *just* to love the neighbor—certainly not to destroy one's self—but to love him *as yourself*. There is an unfortunate rumor floating around among such students that it is selfish to take interest in or care for one's self. On the contrary, we are told "to keep the commandments and statutes of the Lord. . . for your good" (Deut. 10:13), or "for our good always" (Deut. 6:24). It is not enough not to hurt your neighbor; it is also important that we do not damage our

inner conscience, our own peace. We must not damage our chance to conform ourselves to the image of God or to our own ideal.

For example, when my son was very small he came in one day and said: "Mommy, can Johnny have a cookie, and can I have one too?" This, in my view, is loving your neighbor *as yourself*; what you want for yourself you want for your neighbor. You do not say: "Mommy, please give Johnny a cookie, but don't give me one, because that would be selfish." God doesn't play the game that way, as far as I can see.

As another example, consider an orchestra. Suppose some hoodlum comes in to have fun and you allow it, ignoring yourself since he is, after all, your neighbor. He stomps on the cellos, he takes a hatchet to the kettledrum, he breaks the flutes over his knee. And he goes away feeling that he has been very smart. But he has destroyed the aesthetic satisfaction of that group of orchestra players, who, for their own aesthetic satisfaction, must be concerned for the welfare of the whole, and in addition must keep to the rules, follow the notes (unless it is an improvisation situation), keep in time and in tune. So when God said these rules are made for *your* good, it is also for *my* good today, for my long range situation in heaven, and for my character that I want conformed to the image of God. But in relation to rules of this type, for the orchestra's good there may be flexibility under invention; there may be occasionally even pleasing disharmonies which a good current composer can work in (if they go past fast enough), by making them adequately related to the matrix of time, place, and culture which give the emic framework within which pleasantness is constrained or felt.

Here, then, I am in disagreement with Fletcher who says that ([1966] 1974:105) "*Agape's* desire is to satisfy the neighbor's need, not one's own, but the main thing about it is that *agape* love precedes all desire, of any kind" (and for neighbor-priority over second-place self, see also 110).

Individualized versus Generalized Love and Ethics

Basic ethical problems remain, of the kind that Fletcher is especially sensitive to: Would you, for example, have hidden a Jew from a Nazi? One of my friends in the Netherlands had a father who was a pastor who helped to shelter Jews from the Nazis. Her fiancé was involved in the group. And one day he said to her: "Honey, it is very dangerous. If you want, we will stop." She said: "No—it is our responsibility; let's keep on." Then one day the Gestapo came and knocked at the door. He ran to the second floor to jump out. He jumped. But it was cold, and there was frost on the windowsill. He slipped, fell, and hit his head on the pavement below, becoming partly irrational. The Gestapo quizzed him there for two hours without taking him to the hospital. He died.

In this general situation, what should they have done? Did they have to try to deceive? I suppose so. But I do not know how to take care of the philosophical problems which this raises.

Fletcher's answer is that situation ethics "holds flatly that there is only one principle, love, without any prefabricated recipes for what it means in practice, and that *all other* so-called principles or maxims are relative to particular, concrete situations." If it has any rules, they are only rules of thumb ([1966] 1974:36 and cf. 26, or 55 for "*maxims*, never rules"); but these are relative to love as an

absolute, since there "must be an absolute or norm of some kind if there is to be any true relativity" (44); and "In *Christian* situationism the ultimate criterion is. . . 'agapeic love'" (45).

Here it seems to me that Fletcher is approaching *part* of a truth: that scriptural Old Testament laws such as the one enjoining us not to kill are general guidelines qualified in the Scriptures themselves, as the one not to kill is over-ridden there by the command of God to kill under circumstances summarized above. In this sense, the evangelical, it seems to me, is in some agreement with Fletcher in principle. There is an *emics* to structural situations, a pattern of times, seasons, growth, dispensations, or structures which allow for special application of principles, or a *hierarchy* of principles, such that it is good to do good on the Sabbath, to save life rather than kill, as Jesus implied so clearly when rules were challenging God's underlying intent (Mark 3:4, Luke 6:9).

There is an unfortunate rumor floating around among students that it is selfish to take interest in or care of one's self.

But I have three deep disagreements with Fletcher. The first I have treated enough for our current purposes—that for me the first commandment takes precedence over the second, in that the top absolute lies in the person, character and opinions (judgments) of God, with the command to love one's neighbor taking second place rather than being absolutized to the first. A second disagreement already mentioned is that I accept as binding on us the command to love one's neighbor as one's self. I interpret this to mean that we are to love our neighbor but also to love ourselves on a par with our neighbor.

I turn now to a third area of disagreement: For me, a prime responsibility of love is appreciation and (deep, emotionally costly) concern for the *individual* next to me; concern for a nameless faceless mass of persons must not stop me from concern and service to a specific individual in need, even though it may appear to block some potential for service or (superficial) concern for a larger whole. (But neither should service to a few individuals block a part—undefined—of my attention to the service of larger society at home and abroad.) I would seem, however, to thereby fall under the condemnation of Fletcher when he says ([1966] 1974:92): "What untold foolishness and moral purlblindness have been caused by the individualizing error of pietism!"; by casting aside "breadth of vision and imaginative foresight" love "is ethically crippled," and "the name for it is sentimentality" (92).

The extent to which Fletcher pushes this view is seen best in his radical complaint (97) about the story of the anointing at Bethany (cf. Mark 14:3-9, Matt. 26:6-13, John 12:1-8). Fletcher labels the action "impetuous, uncalculating, unenlightened sentimental love" by a "thoughtless but sincere woman." I, rather, would see it as an extraordinary spending of one's life's reserves (from the only "bank" in which she could readily hold such reserves in her cultural

situation—goods costly but taking small space, and sellable for cash under emergency), in an act to highlight compassion of person to person: an act to go beyond words when hurt was felt, and sympathy needed to be expressed in the face of dark clouds foreshadowing attacks upon Him unto death. Such sympathy and personal relating is the ultimate essence of love (for me) and it vastly overshadows an impersonal casting of alms of the same amount to throngs in the street, to try to rid oneself of an *abstract* conscience obligation. I suspect that Jesus felt that this woman with compassion had a character which was approaching the character of compassion of God Himself—and she was moving further into His image.

In order to make his point, however, Fletcher insists that the Gospel accounts are wrong, and that “We do not have to conclude that he [Jesus] ever said anything at all like, ‘You always have the poor with you.’” Fletcher states, rather, that “If we take the story as it stands, Jesus was wrong, and the disciples were right,” because they say “that love must work in coalition with utilitarian distribution, spreading the benefits as much as possible.” But here, again, I am in sharp disagreement, not only with Fletcher’s handling of the text, but with the principles he purports to approve. For me, there are personal values, indicated above, which are under some circumstances (of which this anointing was one) in which love for the individual must override the crass materialism of mathematical subdivision of the available “pie.”

It is inconceivable to me that Fletcher himself can be assumed to have followed out his own principles. Did he wear shoes when he lectured (or jacket, or tie), when people who are hungry in Asia could have used the cash from their sale to secondhand stores? Did he eat any meat that week, when soybean meal could have kept him alive for that period, so that the food cash that his diet represented could have kept numerous Asians alive for that week? Did he read a book, paid for by someone’s money; or write one; or help a relative to go beyond the second grade; or travel by air, train, or car instead of by foot; or do any one of a thousand other things (if not these) which distribution might conceivably have eliminated? If not, he has neither demonstrated kindness-love (1 Cor. 13) nor giving-body-to-be-burned love. Fletcher has objected to the inconsistencies in the handling of rules by others in relation to the

Concern for a nameless faceless mass of persons must not stop me from concern and service to a specific individual in need.

commandments, but has not discussed here his own inconsistencies. Nor has he commented on the possibility that the statement of Jesus (that the poor are always with us) may well have been a sad but empirical always-to-be-with-us fact, due to the nature of populations breeding up to the level of their food supply. Certainly in our own generation we have not blocked that headache; and even the mass-distribution of medicine, to the degree that it has been effective, leads to more population almost exponentially, with parents-who-are-kept-alive adding to the spiral.

Cross-Cultural Differences in Conscience

Now I return to specific problems of cross-cultural conscience (related to those mentioned in Part I), against this background of the more general problem of biblical commands in their absolute and their relative aspects. In the Philippines some time ago, one of my colleagues of the Summer Institute of Linguistics reported a difficulty met by a missionary who had a dog. The local people were deeply bothered because the missionary talked to the dog. This, they said, was incest—because a dog cannot talk, and talking to one was therefore unnatural (except, that is, for a “Scram!”). Since incest is treated there as unnatural and wrong, by culturally carried conscience, and since talking to a dog is unnatural, therefore talking to a dog seemed to them to be basically a variety of incest (or some kind of member of a class of activities sharing a moral component with it). So he himself stopped talking to the dog. In this he was wise (following 1 Cor. 8:7-13, 9:1-4), since one does not want to damage the conscience by attacking it in its cultural manifestations before it can be brought face to face with scriptural principles that might modify that stance in detail (but not force change either in the neutral or the good aspects of its own idealism). But later these people would have to face the problems of cross-cultural conscience if, for example, they were to go to Manila and meet Christians who did in fact talk to dogs. Then the theory of conscience would have to be brought to them—by asking if talking to a dog hurt the dog, or anyone else. If they were to then say no, but if they were in turn to ask if they themselves then *ought* to talk to dogs, the answer to them would be that no such requirement is upon them (any more than Christian Jews needed to eat pork if they did not wish, or Gentile converts needed to eat food offered to idols if it bothered them).

Later I was in Ecuador working on an alphabet in the jungle. The head of an economic mission to Ecuador from the United States came out to the jungle to visit us. I was walking along the paths telling him how we tried to find patterns of sound so that we could make an alphabet and that to analyze the grammar, getting ready for Bible translation, one must study the way they talk, analyze their stories, and in so doing discover what their rules of grammar are. He replied: “Why don’t you teach them incest?” I said: “What does that have to do with it?” He answered: “You are breaking the laws of grammar!” But he was unable to grasp the fact that there were no written grammar rules for that language; we were discovering them and describing them. Laws of grammar are unconscious rules underlying the way such people talk. We were like surveyors, not passing laws. He completely misunderstood this, and had begun to think of something like the English *ain’t* which he apparently felt was “wrong.” He thought that since there is a rule of grammar forbidding the use of *ain’t*, it is therefore unnatural to say *ain’t*. The use of *ain’t*, then, is going against naturalness, and since incest is against naturalness he equated *ain’t* with “non-naturalness,” and he equated our making an alphabet with breaking the laws of grammar and hence with incest. If such a sophisticated person could make such an equating, we should not be surprised when preliterate persons confuse issues of conscience.

Another problem: Some of us use Christmas trees at Christmas. I do. I suppose they have been “baptized” in a sense by most of us. It does not bother my conscience that a

It is worthwhile for us to ponder carefully how many specific commands in the Bible each of us has disobeyed this day on cultural grounds.

Christmas tree may at one time have been a part of worshipping some pagan god of a Germanic group—it is just pretty. Now the closest I have come to seeing something similar happen elsewhere was on an All Saints Day in a Mixtec Indian village. They had a kind of altar to the spirits of the dead, who supposedly came back and ate the spirit of the food; after the spirits ate the spirit of the food, you could eat the “remainder” of food and enjoy it. It turned out that the believers where I was did not want to be discourteous to the community, but they did not want to set up their own altars, so they set up private “fruit stands,” where they could exchange foods with a clear conscience, eating what was offered to them, but returning food from a “neutral” stand.

General Evangelical Treatment of Some Scriptural Commands as Cultural Rather than Theological

In the light of such problems it is worthwhile for us to ponder carefully how many specific commands in the Bible each of us has disobeyed this day on cultural grounds—including instructions which we have trained ourselves not to refer to as commands. There is a strong probability that every one of us has recently disobeyed (by deliberate choice) clear, explicit, statements in the New Testament on cultural grounds. Once we see this clearly, we should then be a little more careful about accusing others in relation to a different list of such items (which do not happen to apply to us). How many of you greeted the brethren with a holy kiss this morning when you came into the room (I Thess. 5:26, Rom. 16:16, I Cor. 16:20, II Cor. 13:12)? I did not and do not intend to in our culture; it would not be viewed as holy. Yet if I were in some culture very long where it is seen as appropriate, I might do it. Jesus once chided a man for discourtesy when he did not give Him a kiss (Luke 7:45); but if Jesus were to come into the room today, I doubt very much indeed that I would give Him a kiss; it is much more probable that we would offer to shake hands with one another.

Notice carefully, then, that there are (or have been) *some habits we abandon on cultural grounds, not theological ones*. After we have seen this fact, the argument is no longer between those of us who do and those of us who do not believe that there are conditions in which culture appropriately allows (or forces) changes in instructions or commands, but the argument is rather over *which* commands, or *which* elements of these commands, reflect the absolute character of God and must not be changed, and which are legitimately variable in the cultural incarnation of their underlying principles.

Another instance: I am speaking with my shoes on, but Moses was told to take his shoes off—it was holy ground (Ex. 3:5). And when I have been in India, I was not allowed to enter a temple or a mosque, to see it as a tourist with my shoes on. In Japan, for related reasons, one is not allowed to enter a high class restaurant room with shoes dirtied

from the street; they must be replaced by clean sandals. Both of these cultures are closer to the scriptural pattern than we are—and the first makes a strong religious issue of the habit.

It is interesting that Paul's argument about women and long hair (in relation to which, I suspect, many of our wives, with bobbed hair, would come under the classification of having short hair) makes his ultimate appeal to something quite other than theological: to cultural practice (“we recognize no other practice, nor do the churches of God,” I Cor. 11:16), to cultural judgment (“Judge for yourselves; is it proper. . .” 11:13), and to “nature” (11:14); this seems to be nature via culture, rather than nature via genetic code, since in fact many societies have men with long hair (e.g. some American Indian groups and some Papua New Guinea areas).

Similarly, I would assume that the demand for a head covering, supported with theological arguments by Paul (I Cor. 11:4-13), is interpreted by most of us as being only culturally related to that time and as not theologically binding on us in our own culture—since we enter prayer groups with women who pray without a hat. (This consensus in many of our Protestant churches reminds me also of the problem about eating blood, Acts 15:20; large numbers of Christians feel no constraint along this line, now that the dominant matrix of Christian behavior is not that of the former Jewish community.)

Presumably, however, there are *areas of indeterminacy*, where neither our theological tools, nor our sociological or anthropological ones, can yet determine just where the line is to be drawn between cultural demands upon us, and demands in relation to the character of God, or perhaps to His creative ordinance reflecting that character in His demands on culture, or His implanting of genetic responses to culture. In the process of time, the change point (where Christian culture decides that an item once thought to be of theological relevance is in fact at least in part culturally conditioned) may be passed over only with much debate and struggle related to that of Acts 15—and to Paul's later abandonment of some of the conclusions of that conference.

Perhaps the most recent point in general dispute is the relationship of leadership in the church to women. Any conclusions concerning it inevitably have implications for the program of the Wycliffe Bible Translators and the Summer Institute of Linguistics. Some of our most competent women have been unwilling to teach linguistics, or to speak at our devotional times, because they are afraid that since Adam was not deceived, but Eve was, that therefore they must be vulnerable—and they should be silent and have no leadership in groups which include men. And yet some two-thirds of Wycliffe membership is made up of women. Since, furthermore, brains are genetically evenly distributed, across the sexes, as far as I know, and since many of our most competent men, who are in the minority, have been elected to administrative office (by women, through majority vote), the major proportion of remaining academic brilliance is left with the women. Yet they have often resisted the acceptance of an academic leadership role because they were afraid because of these cultural and presumed scriptural restrictions on them. Such restrictions seemed to me highly undesirable for Wycliffe, on grounds of “ox-in-the-ditch,” if nothing else—whole cultural groups were going to lack the Word translated if the understanding of some men (that these women should

not teach a man, for example) were to be consistently applied in the U.S.A. (in our linguistic classes), or abroad (with new believers whom they had won to the Lord).

My own view (that at least some of the underlying reasons for the Pauline constraints should be interpreted in terms of their relevance to the cultural situation that made his rules sensible and desirable) has been in part molded by having lived for a time in a culture where some of these rules could be easily seen as needed for preserving rational order. A generation or more ago in the Mixtec culture women were largely nonliterate and untrained either by school or home habit to discuss theoretical, academic, abstract, or theological matters. When, therefore, numerous families would gather together (husbands, wives, and children sitting on the floor) to discuss important matters, the women had not yet learned to enter the discussion, nor had they learned to listen. Instead, they would either chat with each other about social matters irrelevant to the basic discussion, or might interrupt with derailing questions. Here, then, was a time and place where it was best for the women to be quiet, and to wait to ask their husbands about matters at home. But such a situation has little culturally in common, or in rational demands on its subculture, with the Wycliffe situation with its large number of trained women—often more erudite than the particular men present for a particular discussion or lecture.

In this situation, I asked for help from a theologian, Dr. (Canon) Barton Babbage, principal of the New College, University of New South Wales in Sydney, where some of the questions had been raised by Wycliffe women. I wanted to know, for example, how the Church of England justified the fact that its prayer book led its people to pray regularly that they might be loyal subjects to a woman—the Queen—if a woman is not to have authority over a man. He replied that this relates to governments (but I was not able personally to apply this comment to my own Wycliffe needs). When I asked further, about the fear of some of our women that they might easily be deceived, he replied that it has been suggested that it took only a woman to get the man into trouble, but it took the devil to deceive Eve.

When do We Stop? The Need for Emics When There is Etics

There are many indeterminacies in applying any criterion of guilt-or-guidance in relation to the will of God. Neither Scripture, nor conscience, nor culture, nor the combination of all three tells us in some specific instances precisely what *ought* to be done. William Antablin has told me, in this connection, that one must take guidance by faith, just as he takes salvation by faith—one cannot always see the surface evidence that one is wise or guided by God. Paul Tournier (in *Guilt and Grace*, New York: Harper and Row, [1958] 1962) argues that the “Fear of losing the love of God—this

is the essence of our human problem,” patterned after the fear of losing love of parents (189) in the way pointed out by Freud. We must learn to accept His grace for us as guilty sinners or our inner state can be destructive. Yet, Tournier says, that a “certain degree at least of disquiet. . . seems to be indispensable for human experience, for vital development, and for recognition of grace.” (137). And although “God blots out conscious guilt, He brings to consciousness repressed guilt” (112).

When do we wish to stop seeing all the guilt contaminating our actions, which the psychologists or analysts seem to be able to force to our attention? My answer is to use linguistics as a parable. When one is faced with the pronunciation of a language with sounds very different from those of English, a little bit of phonetics is extraordinarily enlightening and helpful. Difficult sounds are made easy in a few moments or hours (instead of failure after twenty years some times). And many sounds are now heard which before were not distinguished at all. These can be written down to help in the initial steps towards making an alphabet and keeping one from overlooking sounds. If, however, the phonetic training is continued, it may become very damaging. The very help now becomes a plague! The ear gets overtrained to hear many shades of sound which are not useful for an alphabet, since they are not contrastive in carrying the differentiation of words, and they fluctuate randomly since there is no semantic control on their occurrence. How does one guard against this phonetic blessing becoming destructive? We call it phonemics, the technique added to phonetics; the technique consists of studying the way that one ignores semantically-irrelevant deviation from a norm. One learns to focus analytically on the relevant, the significant, the contrastive bearers of meaning. This, then, is a scientific way to get value from phonetics without its curse. One stops detail when further detail does not contribute to the further specification of *how to act* in a culture (i.e. how to talk intelligibly).

Analogously, in the religious area, perhaps the study of patterns of guilt helps one to see more of his own failures, and hence his many needs for growth in his conformance to the image of God. But too much attention to such error, rather than to the character and will of God, can lead to morbidity, self-looking and loathing, rather than positive acts and communication with God and neighbor. In these circumstances, the emics of grace comes in to turn the focus away from self, after one has reached a crucial useful amount, and on to the will of God, by “looking unto Jesus” (Heb. 12:1-2) Who is the Author of the faith that lets us “run with perseverance the race that is set before us, laying “aside every weight, and sin which clings so closely” as well as “despising the same” which others might think is appropriate to us in our circumstances with our personality, and output. Such grace is given to us limited by and relative to the needs we face, but in turn it has no limit other than the absolute in the character of God.



Flood Geology is Uniformitarian!



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The principle of the uniformity of nature can be summed up in the familiar statement, "The present is the key to the past." Since the publication in 1830 of *Principles of Geology* by Charles Lyell most geologists have approached their science, the study of the Earth, in terms of this principle. Modern geological practice is uniformitarian¹ in outlook.

Since the days of Lyell there have been individuals within and at the fringes of the geological community who have challenged the validity of the principle of uniformity in nature. Among these individuals, especially at the present time, are those who adhere to the theory of flood geology. These individuals generally wish to be considered as catastrophists.²

It is the contention of catastrophists that modern historical geology is fundamentally in error because of its adherence to the principle of uniformity. It is said that many of the conclusions of modern geology, for example, the great antiquity of the Earth, are in error because they are based on this false principle. It is argued that the principle of uniformity is incapable of explaining the observed data of the rock record. It is said to be an inadequate explanatory principle. Many catastrophists also charge that the principle of uniformity is an unbiblical principle and should therefore be abandoned, especially by those who are Christians. Thus uniformitarians are urged to reinterpret the data of geology in light of the true and scriptural principle of catastrophism. Critics of modern geology would suggest that we have, in the interpretation of the geological record, a conflict between two diametrically opposed philosophies, catastrophism versus uniformitarianism. Our differences are considered to be fundamentally philosophical differences.

In this paper we show that modern flood catastrophists³ do not really understand the principle of uniformity as it is generally used by geologists today, and we shall show that even flood catastrophists, though they might deny it, subscribe strongly to the principle of uniformity as it is applied in modern geology. Modern flood catastrophists are really uniformitarians who have falsely interpreted the geological evidence. The differences between modern flood catastrophists and more orthodox geologists are not so much differences of philosophy. The problem is that flood

catastrophists have avoided that vast body of evidence which is contrary to their preconceived theory.

Flood Geology's Challenge to Uniformitarianism

Flood catastrophists believe that the principle of uniformity is lacking in explanatory power. It is charged that it is an inadequate principle. For example, in a book review of *Franciscan and Related Rocks and their Significance in the Geology of Western California*, theologian Bernard Northrup begins by stating, "Seldom has a book been written within the interpretative framework of evolutionary macrochronological geology⁴ that has so effectively demonstrated the inadequacy of that framework to explain the facts found in field research."⁵ In yet another paper on the Sisquoc diatomite beds near Lompoc, California, Northrup says that he is

convinced that reality in geological time has been grossly misrepresented on the walls of the contemporary science classroom by the deceptive shadows of evolutionary uniformitarian time values. At Lompoc this distortion is remarkably evident. The fossils that were trapped in the abrupt deposition which left this unique graveyard tell a story violently contradictory to the classroom interpretation. Every fossil found supports a denial that it had been buried at a geological 'snail's pace.'⁶

In a general discussion of sedimentation Henry Morris states that

the principle of uniformity turns out to be entirely inadequate right at this most important aspect of geologic interpretation. Modern processes of sedimentation are in general quite incapable of accounting for the sedimentary rocks of the geologic column. This is true whether the environment of deposition is thought to be geosynclinal, deltaic, lagoonal, or some other.⁷

Nevins comments that

the many contradictions encountered make the Principle of Uniformity unacceptable to the historical geologist. The principle which has long been considered the basis for historical geology has been shown to be inadequate.⁸

Steinhauer maintains regarding two aspects of uniformitarianism that "one is at variance with observation; the other, though correlating with many observations, leads to logical and philosophical contradictions."⁹ And finally Whitcomb and Morris repeatedly stress the inadequacy of uniformitarianism. Regarding continental ice sheets, "the principle of uniformity is once again woefully inadequate to account for them."¹⁰ Regarding the formation of coal, "the fundamental axiom of uniformity, that the present is the key to the past, completely fails to account for the phenomena."¹¹ Thus we see that, according to catastrophists, the phenomena of sedimentation, fossilization, volcanism, tectonism, glaciation, and the like, cannot be accounted for in terms of the principle of uniformity.

It has also been charged that uniformitarian thinking is unbiblical. Uniformitarianism is thought to be a false unchristian philosophy. So, for example, Whitcomb and Morris have appealed to II Peter 3:3-10 in support of this contention. In this passage Peter warns that, in the last days, there would be scoffers who would say, "Where is the promise of his (Jesus') coming? For since the fathers fell asleep, all things continue as they were from the beginning of the creation." Peter then goes on to remind his readers of the flood judgment and of the coming final judgment. With regard to this passage, Whitcomb and Morris say,

Here again the Flood is used as a type and warning of the great coming worldwide destruction and judgment when the 'day of man' is over and the 'day of the Lord' comes. But the prophet is envisioning a time when, because of an apparent long delay, the 'promise of his coming' is no longer treated seriously. It is to become the object of crude scoffing and intellectual ridicule. It will be obvious to 'thinking men' in such a day that a great supernatural intervention of God in the world, as promised by Christ, is scientifically out of the question. That would be a miracle, and miracles contradict natural law!

And how do we know that miracles and divine intervention contradict natural law? Why, of course, because our experience shows and our philosophy postulates that 'all things continue as they were from the beginning of the creation'! This is what we call our 'principle of uniformity,' which asserts that all things even from the earliest beginnings can be explained essentially in terms of present processes and rates. Even the Creation itself is basically no different from present conditions, since these processes are believed to have been operating since even the 'beginning of the creation.' There is no room for any miracle or divine intervention in our cosmology; therefore, the concept of a future coming of Christ in worldwide judgment and purgation is merely naive!¹²

Thus, at least in the view of Whitcomb and Morris, the principle of uniformity is an unbiblical principle.

The solution to all of this is to accept the principle of catastrophe and to reinterpret the data of geology in terms of it. Now for catastrophists the catastrophic principle involves the idea of global catastrophe. This catastrophe, or at least one of the catastrophes, is generally regarded as Noah's flood¹³ which supposedly inundated the whole Earth for about a year. During this period there was catastrophic sedimentation, volcanic activity, and mountain building. The catastrophic philosophy is believed to offer at least as good if not a superior explanatory principle for accounting for such phenomena as fossil graveyards, sediments, the mode of fossilization, polystrate trees, mountains, volcanoes, and the like. Thus Burdick, for example, says that

many of the vexing problems of stratigraphy would be solved if we simply took the evidence we see at face value instead of attempting

Modern flood catastrophists do not really understand the principle of uniformity as it is generally used by geologists today.

to fit it into the concept of uniformitarianism made popular by Sir Charles Lyell. Lack of space forbids a discussion of all the simplifications resulting from a return to catastrophism.¹⁴

Rupke argues that the polystrate fossils "constitute strong arguments in favor of cataclysmal deposition, and, generally, support catastrophism as a scientific principle to interpret the earth's history."¹⁵ From the remainder of his paper it is evident that his cataclysm is the flood. And constantly we read statements like "The Flood seems to be a reasonable explanation for the deposition of widespread chert blankets"¹⁶ and

it is highly consonant with the whole character of the catastrophic action attending deposition of the Deluge sediments to infer that the processes of compaction, cementation, drying, etc. leading to final lithification could have been accomplished quite rapidly.¹⁷

Many catastrophists would also maintain that the principle of catastrophe, unlike the principle of uniformity, is a biblical principle.¹⁸ It is maintained that the Bible teaches a purely miraculous creation which took only 144 hours, a fall of Adam with catastrophic implications, and a catastrophic worldwide deluge. Thus Christian geologists in particular are urged to give up the principle of uniformity and adopt the principle of catastrophe.

Flood Geology's Understanding of Uniformitarianism

Just precisely what is it about the principle of uniformity to which flood catastrophists object? What does the catastrophist understand by the principle of uniformity? Again we need to turn to their writings for the answer.

In his discussion of uniformity Steinhauer suggests that it is possible for the

assumption of uniformity to be overextended and overextrapolated, leading to a simplistic or even grossly inaccurate view of the universe. This is indeed the case when scientists propose that those process rates and conditions presently observable have always operated in the same way or with the same intensity.¹⁹

Steinhauer asks us to consider this assumption that process rates and material conditions are uniform and invariant when viewed on a global scale. He argues that process rates depend on material conditions so that as the latter vary so must the former. Process rates cannot thus be uniform since material conditions have varied. He gives us examples such as human population growth to show us that the rates of global phenomena do change. This assumption of a uniformity of process rates is a "titanic extrapolation, a blind leap of faith that contradicts what is observable in the universe. A few scientists have recently become aware of this leap and abandoned it."²⁰ In another paper Steinhauer states that

evidence comes from every quarter that the history of Earth's crust is one of trauma and cataclysm. Geologists have assembled a great volume of facts supporting global catastrophism. This is in spite of

the domination of their science by the uniformitarian axiom of a peaceful Earth history.²¹

Elsewhere he says "some kinds of sediment are *not* being formed today, which contradicts an axiom of uniformitarianism."²²

Nevins has also discussed uniformity at great length. He charges that "the possibility of catastrophic events during this evolutionary development is rejected. Characteristic of this limited thinking is the reliance on the Principle of Uniformity as a basic assumption."²³ He says that "the Principle of Uniformity sternly rejects any catastrophic event like the Flood."²⁴ Nevins then goes on to discuss at great length an aspect of uniformitarianism that has recently been termed *substantive uniformitarianism*.²⁵ Basically substantive uniformitarianism is the idea that the processes and process rates of the present may be extrapolated indefinitely into the past and that geologic phenomena may be sufficiently accounted for in terms of a uniformity through time of processes and process rates. Such process rates are very slow and not cataclysmic since modern day rates are presumably rather slow in general. In opposition to substantive uniformitarianism, Nevins says that the fossil record indicates "rapid changes of environments rather than . . . slow and uniform change."²⁶ Also,

evidence of continental glaciation shows that a colder climate existed at one time. There is abundant geologic evidence of former catastrophic events. Rock formations show current structures which indicate that transcontinental flood conditions once prevailed. Critics of substantive uniformitarianism have found fossil graveyards, trees buried by massive lava flows, frozen mammoths in Arctic regions, and many other exceptions to a strict adherence to the substantive uniformitarian view. The great mass of evidence indicating catastrophe has been largely ignored by geologists.

Actually, the assumption that process rates must be uniform is without scientific backing. There is no scientific law which requires a natural event always to proceed at constant rate. A scientific law only describes an event under a fixed set of conditions and as conditions vary so does the rate. Conditions, not scientific law, determine the rate of a process.²⁷

Finally, Nevins says that "the substantive uniformitarianism of Hutton and Lyell was an *a priori* assumption formed not upon evidence but upon a preconceived opinion of how nature must ideally operate if we are to study it by inductive means."²⁸ And

the principle of simplicity and consideration of the evidence of the fossil record logically establishes a catastrophe similar to Noah's Flood recorded in Genesis. This hypothesis, however, must be carefully tested only from evidence contained in the rocks. By no means should the old argument of Lyell (substantive uniformitarianism) be used to deny the reality of the Flood.²⁹

In his paper on the Sisquoc diatomite beds, Northrup gives us an inkling of his understanding of uniformitarianism when he discusses fossilization.

It is deposition of fossils in the normal bedding plane of the diatomite that first suggested that these fishes and birds had simply fallen to the bottom after death, to be slowly covered by the slow 'rain' or 'snow' of diatom structures from the waters above. There are several factors, however, that make this simple uniformitarian explanation impossible.

First, the perfect condition of the bodies of the fossilized fish repudiates slow deposition. . . The supposed gradual deposition of millions of carcasses, untouched by other bottom feeding fishes, and their painfully slow burial by the postulated 1/1500 to 1/2 inch per year deposition rate simply is not possible. . . Secondly, there are

fossils found which show that the rate of deposition was extremely rapid. Some are clearly deposited by a violent action which has torn scales and even removed fins from the body.³⁰

For Whitcomb and Morris, the idea of uniformity is essentially that

geomorphic processes which can be observed in action at present, such as erosion, sedimentation, glaciation, volcanism, diastrophism, etc.—all operating in essentially the same fashion as at present—can be invoked to explain the origin and formation of all the earth's geologic deposits. The doctrine of uniformity thus is supposed to render unnecessary any recourse to catastrophism, except on a minor scale.³¹

Modern flood catastrophists are really uniformitarians who have falsely interpreted the geological evidence.

Further on they say "Historical geology purports to explain all of the earth's geologic formations in terms of the essentially uniform operation of processes of nature that are now occurring and can be studied at the present time"³² and

Thus it is now believed that the present-day geomorphic processes (including erosion, deposition, volcanism, diastrophism, etc.), acting essentially in the same manner and at the same rates as at present, can suffice to account for all the earth's physiographic features when properly studied and correlated.³³

Finally they say "It is processes such as these which the uniformity concept asserts can explain the earth's stratified and massive rock formations. Our basic objection to this contention, however, is that the character and rates of activity of the processes cannot have been the same in the past as in the present."³⁴

It is quite clear from these selections and indeed from most flood catastrophist writings that uniformitarianism is generally understood as meaning substantive uniformitarianism—the idea of uniformity of processes through time and also uniformity of intensity or rates of processes through time. The processes and rates are basically those presently observable. As a result catastrophists seem to think that uniformitarians postulate very slow process rates and a very peaceful Earth history in which there are virtually no catastrophes. Indeed flood catastrophists almost seem to think that uniformitarians *a priori* reject the very possibility of great catastrophes. And they seem to think that uniformitarianism means that there must be forming in the world somewhere today an example of every kind of rock found in the geological record since the present is the key to the past and present process rates were the same in the past. They seem to think, therefore, that since chert is supposedly not forming in the world today,³⁵ uniformitarianism is somehow contradicted. They seem to think that very rapid, violent processes are inconsistent with uniformitarianism. They seem to think that evidence for catastrophe is inconsistent with uniformitarianism.

Modern Geology Rejects Substantive Uniformitarianism

Now substantive uniformitarianism, as we have seen, has been attacked repeatedly by modern day catastrophists because they seem to think it is the principle to which modern geologists subscribe. The subtle implication is that, since substantive uniformitarianism is incorrect, therefore flood catastrophism is probably correct, as if we had to choose between these two alternatives alone. Now the fact of the matter is that substantive uniformitarianism is an incorrect principle. It is not in accord with the facts of nature. There are many geologic phenomena which cannot be accounted for in terms of uniformity of rates through geologic time. So, for example, the earlier part of solar system history and of Earth history was a time of far more intense meteorite bombardment than at present. Volcanic activity of the moon certainly was far more intense early in its history. Such activity on the moon is virtually extinct now. Core formation in the Earth has no doubt virtually ceased. Such a process may have been extremely rapid during the earliest stages of Earth history. Continental drift may not have occurred at all during early Earth history, whereas it does occur now. Glaciation rates have certainly varied enormously through time. Thus catastrophists like Nevins are quite right when they charge that the viewpoint of substantive uniformitarianism is an imposition on nature as to how it should behave. At least this is so to the extent that substantive uniformitarianism becomes an *a priori* principle which we impose on nature before actually looking at the evidence contained in the rocks.

It may well be that Lyell and some other geologists of his time and of succeeding years adhered to what might be termed substantive uniformitarianism. It is even possible that many geologists rejected the very possibility of great catastrophes on principial grounds even before studying the phenomena of the rocks carefully enough. Perhaps Lyell may have been guilty of this to a certain extent.³⁶ But as time went on Lyell gradually backed away from his earlier position and began to recognize that the rates of processes had varied through time much more than he had recognized previously. It is even possible that a few geologists today cling to substantive uniformitarianism and would reject the possibility of major catastrophes in Earth history. All this is somewhat irrelevant, however.

Flood catastrophists spend considerable effort in beating a dead horse, because it is highly questionable whether any significant number of geologists has held to anything like substantive uniformitarianism for a number of years.

The fact of the matter is that flood catastrophists spend considerable effort in beating a dead horse, because it is highly questionable whether any significant number of geologists has held to anything like substantive uniformitarianism for a number of years.³⁷ The geologic community does not think in terms of substantive uniformitarianism.

When a geologist goes out to look at rocks he does not go out with a preconceived notion that present processes must always have operated at the same intensity throughout history. Nor does he go out with a preconceived notion that a great catastrophe (or several of them) cannot have happened. If geologists do not subscribe to the flood geology theory, it is likely that they are persuaded that the totality of the evidence argues against it, not because they approach geology with a preconceived idea as to what rates of processes must have been like. Geologists hardly feel that sedimentation and burial of fossils must always and everywhere have been excruciatingly slow, peaceful, and non-violent. Geologists hardly feel that just because chert and dolomite are not formed to any significant extent today that this poses a serious threat to the uniformity of nature. Geologists hardly rule out the possibility of great catastrophes.³⁸

The flood catastrophists have noted that a few scientists have seen the weakness of substantive uniformitarianism and have given it up. This is an understatement of tremendous (shall we say catastrophic!) magnitude. The geologic community had given it up long ago. One might even question whether the geologic community as a whole ever did enthusiastically adhere to substantive uniformitarianism. The brand of uniformitarianism of which flood catastrophists accuse geologists is not generally held. Catastrophists attack a straw man.

Methodological Uniformitarianism

If the geological community has abandoned substantive uniformitarianism, however, are we not then driven into the camp of the catastrophists, as they would seem to imply? By no means. Modern geologists are still uniformitarians. They generally adhere to what Gould has termed methodological uniformitarianism.³⁹ Briefly stated this is simply the idea that the laws of nature are invariant in time and space⁴⁰ and that Earth processes of the past behave in accord with those laws just as they do now. Catastrophists have been far more reticent about attacking this aspect of uniformitarianism than substantive uniformitarianism and with good reason, for to attack this principle is to begin undermining the very foundation of science itself. In fact Morris has said that "true uniformity has to do with the inviolability of natural *law* (e.g., the laws of thermodynamics), and not to the uniformity of process rates."⁴¹ Elsewhere Morris speaks of methodological uniformitarianism as the true uniformitarianism.⁴² Steinhauer has some reservations about methodological uniformitarianism to the extent that it excludes divine intervention into the world, but recognizing that there must be some kind of uniformity in order to make science possible, he substitutes a scriptural principle of uniformity which again stresses the regularity of nature and the laws which God has implanted into the structure of the universe.⁴³

The Christian geologist who adheres to the principle of methodological uniformitarianism in his scientific work must not, of course, make it a complete philosophy of life. To adhere to methodological uniformitarianism for geological study does not mean that I must reject the possibility of all miracles. I do believe that God has performed miracles in which He suspended His laws, but I still accept the idea of uniformity of law in the universe since God first created the initial stuff of the universe. God

A firm commitment to the infallibility and inerrancy of the Bible does not require flood catastrophists to believe the theories of Creation and the Flood to which they doggedly hold.

is very economical with miracles. Miracles in the Scripture are usually closely tied in with the history of redemption and have little if any bearing on geological history. The catastrophists have not proved from the Bible the contention that creation, the fall, and the flood were shot through and through with all kinds of miracles in which God dispensed with the laws of nature as definitely as is the case with, say, the floating axehead and the virgin birth and resurrection of Jesus Christ. When I look at rocks, I have no reason to believe from the Bible that what I am looking at is the result of a whole series of miracles.⁴⁴ In order for geology to be a science we must operate with methodological uniformitarianism. But this does not compel us to reject God or the supernatural.

If we are to look at the Earth's past scientifically, we must interpret the formation of rocks and landforms in terms of processes which are either known to us now or are somehow conceivable in terms of the laws of nature. Processes analogous to those of the present may be consistent with such laws. The rates of those processes must be consistent with the laws of nature although not necessarily constant throughout time and not necessarily even slow. This is all we ask of methodological uniformitarianism. The processes and rates and material conditions are inferred from the evidence of the rock record. None of this implies an *a priori* rejection of catastrophes of a global scale. If there have been such catastrophes, all we ask is that those catastrophes be interpretable in terms of the laws of mechanics, dynamics, optics, meteorology, chemistry, electricity, and so on. Methodological uniformitarianism cannot *a priori* reject the flood geology theory without looking at rocks. After all floods are processes which occur in nature in accordance with laws. It is clear from their writings that catastrophists generally try to interpret the Flood in terms of natural law even though the Flood was sent as a divine judgment.⁴⁵ There is little attempt to treat the Flood as a pure miracle in which natural law was suspended.

Flood Catastrophists are Uniformitarians

Modern flood catastrophists are really proceeding on the same principle as modern geologists. We both accept the idea that rocks should be explicable in terms of processes that behave in accord with the laws of nature. It is clear that catastrophists are talking in terms of a modern day observable process, a flood, and that this flood behaves in accordance with natural laws. The only difference is one of scale. But they expect their flood to do things that floods do. And so we find statements such as the following by Nevins in reference to certain layers of rock rich in fossil clams:

How was this clam layer formed? The best explanation seems to be that the clams were *washed* into their present location and buried

alive. If the clams had died prior to burial, the shells would have been open rather than tightly closed. The clams must have been transported because they could not have lived amassed in the layer in which they are found. Turbulent and flowing water seems to be the only mechanism which could rapidly transport and deposit heavy objects like clams. Some catastrophe like the Flood seems to be a most reasonable explanation.⁴⁶

In spite of the appeal to catastrophe, this is uniformitarian thinking if ever there were such. The appeal is not to the unknown and the unknowable, but the appeal is from the geological evidence to experience with modern day processes, i.e., washing, the way clams die, turbulent transportation in water, and so on. Nevins' appeal is to knowable and known processes with which we have experience in the modern world, processes that he expects to have behaved in the past as they behave today because they obey the laws of nature.

Also notice what Nevins says in regard to graded bedding and turbidites,

It is noteworthy that the Flood would have generated turbidity currents as well as conditions very similar to turbidity currents. The waters of the Flood would have stirred up a heavy and viscous load of sediment. When the turbidity of the waters decreased, very rapid deposition would have occurred over vast areas. Minor oscillations in current would have introduced new sediment which could have been deposited on previous beds producing the characteristic repeating graded beds.⁴⁷

Notice how frequently "would have" is used. Again Nevins can say "would have" with some degree of confidence because in uniformitarian fashion he is appealing not to some unknowable miraculous occurrence but to his experience with present day observable phenomena and processes. Nevins' flood acts the way we would expect flooding waters to behave. It produces the kinds of phenomena we would expect a great flood to produce.

Or take this statement from Whitcomb and Morris regarding the formation of evaporites from brines:

...perhaps it is not too presumptuous to suggest that these unusual brines may have been generated during the volcanic upheavals accompanying the Deluge and that unusual conditions of vaporization and separation of precipitates may likewise have been caused by the locally high temperatures accompanying these same upheavals.⁴⁸

Again it is clear that we have no appeal to miracle, but uniformitarian construction of a hypothesis appealing to knowable processes which operate in accord with natural laws. When we speak of high temperatures generated by volcanic activity, and of vaporization of water and precipitation of chemicals caused by those high temperatures, we are arguing on the basis of our experience of present processes, and in so doing we are doing what any modern uniformitarian geologist does.

This is not to say that flood geologists are consistent uniformitarians, for they are not, but they are uniformitarians nonetheless. They are not always consistent in making reasonable inferences from the geological data in terms of natural processes and laws. We find them making their most reasonable inferences when the data seem to support their preconceived flood hypothesis. Then they become quite consistent uniformitarians when it is so convenient. But we find them making their most outrageous inferences when the data flatly contradict their flood hypothesis. Even then their false reasonings are cast in terms of natural laws and they argue in terms of what

"would have" happened. Thus when it is not so convenient, flood catastrophists become less consistent, but even then they cannot escape being *uniformitarians*.

Some further examples should help to illustrate that this is so. As we saw earlier, Northrup argued that dismembered fossil fishes implied turbulent water action and rapid burial. Very well preserved fishes also implied rapid burial. He thought all this was against uniformitarianism, but it is not. It is very good uniformitarian thinking in spite of the fact that he attributes this violence and rapidity of deposition to the Flood. It is uniformitarian because he argues from evidence to what would likely happen in the world today. Very turbulent water action and rapid burial probably would dismember some fish and preserve them from predation of scavengers. Flood catastrophists are often very consistent uniformitarians when dealing with stratigraphy. Sometimes one gets the impression that they think stratigraphy is the only aspect of geology.

The consistency of their uniformitarianism deteriorates when we move into other aspects of geology. For example, Barnes maintains that the Earth's magnetic moment has steadily and exponentially decreased from an astronomically high value at creation only a few thousand years ago to its current value.⁴⁹ He wants to show that the Earth is very young. Of course, one could counter that the evidence from radiocarbon dating alone shows that the Earth has been in existence much more than just a few thousand years, thus bringing into question the whole idea of recent creation. But, reasoning in uniformitarian fashion, Barnes argues that increased values of the magnetic moment in the past would increase the shielding effect of the Earth from cosmic rays. Since cosmic rays would be deflected away from the Earth's atmosphere, there would be less carbon 14 production in the upper atmosphere. This, in turn, would completely upset radiocarbon dating. Other flood catastrophists such as Whitelaw have expressed similar ideas. They criticize the validity of radiocarbon dates because of what Earth's magnetic field would do to cosmic ray production during the Flood. Now Barnes, Whitelaw, and the other catastrophists have not done a good job of interpreting the scientific evidence in this area. Their inferences and conclusions are wrong because they have neglected abundant archaeological and geological evidence from the field of paleomagnetism which clearly indicates that the Earth's magnetic moment has not decreased exponentially from the beginning but has fluctuated greatly throughout time. Yet in spite of their distortion of and ignoring of the total magnetic evidence the catastrophists have unavoidably reasoned from the evidence which they choose to consider in a uniformitarian manner. They constantly stress the causal interrelationship between the magnetic field, cosmic rays, and carbon 14. Barnes, Whitelaw, and the others speak in terms of such causal interrelationships not only at present but in the past as well. In other words they accept the idea that the same laws of magnetism that are in existence now were in existence in the past and that cosmic rays and radiocarbon production responded in accordance with those laws. This kind of thinking clearly makes uniformitarians out of the catastrophists. They are arguing in the same way as modern geologists do except that they ignore or distort the evidence which contradicts their most fundamental world hypothesis.

Why the Big Difference of Opinion?

One would think that if modern geologists do not, as

many perhaps did years ago, insist that rates of processes be slow so that no global catastrophes are needed, and if we have no *a priori* principal objection to the possibility of a global catastrophe, and if flood catastrophists and modern geologists both argue essentially from methodological uniformitarian premises, then there would not be such a great rift between us. Why do we see the history of the Earth so very differently? I think the answer is basically simple. The flood catastrophists are unwilling to read the totality of the available evidence properly.⁵⁰ They are unwilling to abandon their hypothesis even when the evidence has made it untenable. They have ignored or distorted a vast body of evidence which is contrary to their preconceived notion of what Earth history is like. They have focussed only on what is favorable to their own theory. They claim continually to argue from the evidence, from the facts of nature, but they ignore what is inconvenient for them. It is true that many phenomena of the sedimentary rock record might be interpretable in terms of a great flood. But many of the phenomena to which they appeal, such as fossil graveyards and graded bedding, are easily explicable in terms of much smaller scale processes than global catastrophic floods. More importantly flood catastrophists have ignored abundant evidence of glacial deposits, lake deposits, desert deposits, delta deposits, shore deposits, reef deposits, and evaporite deposits in the rock record. The presence of these argues completely against a global flood having deposited almost the totality of the sedimentary rock pile. Catastrophists have ignored the evidence from heat flow from cooling magmas, metamorphism, and the kinetics of mineral formation. They have tried desperately to make the evidence from radiometric dating say something opposite from what it does say. Although a fraction of the geological evidence might suggest the global flood, the overwhelming totality of the evidence argues mightily against it.⁵¹ I would impress upon the flood catastrophist that a firm commitment to the infallibility and inerrancy of the Bible does not require them to believe the theories of Creation and the Flood to which they doggedly hold. The data of the Bible certainly do not demand that we hold to these views. I wish that all Christian scientists could learn to relax a little bit and stop being afraid that somehow or other some scientific evidence will disprove the Bible. Let's not be afraid to follow the evidence that God has put into His world.

Failing this, the only recourse that flood catastrophists have to save their theory is to appeal to pure miracle and thus torpedo the very possibility of historical geology.

NOTES

¹ The sense in which I use the terms "uniformity" and "uniformitarianism" will become clearer through the paper. There has been a great deal of discussion of the meaning of these and allied terms and of the statement, "The present is the key to the past" among geologists. No doubt many geologists would reject my using the terms "uniformity" and "uniformitarianism" as I do. But this is basically irrelevant because I am not so much interested in terms as I am in principles, and the principle which I enumerate and call uniformitarianism is one that is nearly unanimously agreed upon by geologists. For some interesting discussions of the idea of uniformitarianism see G.G. Simpson, "Uniformitarianism. An Inquiry Into Principle, Theory, and Method in Geohistory and Biohistory," in M.K. Hecht and W. C. Steere, eds., *Essays in Evolution and Genetics in Honor of Theodosius Dobzhansky*, Appleton-Century-Crofts, New York, 1970, p. 43-96; and also R. Hooykaas, "Catastrophism in Geology, Its Scientific Character in Relation to Actualism and Uniformitarianism," *Koninklijke Nederlandse Akademie van Wetenschappen*, afd. Letterkunde, Med. (n.r.), v. 33, 1970, p. 271-316. Both these papers

- have been reprinted in C.C. Albritton, Jr., ed., *Philosophy of Geohistory: 1785-1970*, Dowden, Hutchinson, and Ross, Stroudsburg, Penn., 1975, 386 p.
- ²In this paper I am using the term "catastrophist" in reference to those who believe that Earth history has been overwhelmingly dominated by a very few global catastrophes, primarily the flood. I hesitate to do this since modern geologists certainly believe in the existence of past and present catastrophes and therefore might legitimately be called catastrophists. With tongue very much in cheek we might call the former *oligomacrocatastrophists*, those who believe in a few big catastrophes, and the latter *polymicrocatastrophists*, those who believe in a lot of little catastrophes! Even the latter term is really unsatisfactory because many modern geologists think there may also have been very large if not global catastrophes.
- ³We are here thinking of such men as John C. Whitcomb, Henry M. Morris, Donald W. Patten, Melvin A. Cook, Duane Gish, and most members of the Creation Research Society.
- ⁴For Northrup, "evolutionary macrochronological" is the same as "uniformitarian."
- ⁵B.E. Northrup, "Franciscan and Related Rocks, and Their Significance in the Geology of Western California," a book review, in G.F. Howe, ed., *Speak to the Earth*, Presbyterian and Reformed, 1975, p. 253.
- ⁶B.E. Northrup, "The Sisquoc Diatomite Fossil Beds," in G.F. Howe, ed., op. cit., p. 3.
- ⁷H.M. Morris, "Sedimentation and the Fossil Record: a Study in Hydraulic Engineering," in W.E. Lammerts, ed., *Why Not Creation?*, Presbyterian and Reformed, 1970, p. 123.
- ⁸S.E. Nevins, "A Scriptural Groundwork for Historical Geology," in D.W. Patten, ed., *Symposium on Creation II*, Baker Book House, Grand Rapids, 1970, p. 97.
- ⁹L.C. Steinhauer, "Is Uniformity Meaningful?" in D.W. Patten, ed., *Symposium on Creation V*, Baker Book House, Grand Rapids, 1975, p. 89.
- ¹⁰J.C. Whitcomb and H.M. Morris, *The Genesis Flood*, Presbyterian and Reformed, Philadelphia, 1962, p. 143.
- ¹¹*Ibid.*, p. 165.
- ¹²*Ibid.*, p. 452.
- ¹³Those who hold to the gap theory also propose the existence of global catastrophes, but these are associated with the supposed judgment of Lucifer in Genesis I rather than with the flood of Noah.
- ¹⁴C. Burdick, "Streamlining Stratigraphy," in W.E. Lammerts, ed., *Scientific Studies in Special Creation*, Presbyterian and Reformed, 1971, p. 125.
- ¹⁵N.A. Rupke, "Prolegomena to a Study of Cataclysmal Sedimentation," in W.E. Lammerts, ed., *Why Not Creation?*, p. 164.
- ¹⁶S.E. Nevins, "Stratigraphic Evidence of the Flood," in D.W. Patten, ed., *Symposium on Creation III*, Baker Book House, Grand Rapids, p. 60.
- ¹⁷Whitcomb and Morris, op. cit., p. 408.
- ¹⁸See e.g., L.C. Steinhauer, "The Case for Global Catastrophism," in D.W. Patten, ed., *Symposium on Creation V*, p. 99-109.
- ¹⁹Steinhauer, "Is Uniformity Meaningful?," p. 85.
- ²⁰*Ibid.*, p. 90.
- ²¹Steinhauer, "The Case for Global Catastrophism," p. 106-107.
- ²²*Ibid.*, p. 107.
- ²³Nevins, "A Scriptural Groundwork for Historical Geology," p. 80.
- ²⁴*Ibid.*, p. 81.
- ²⁵S.J. Gould, "Is Uniformitarianism Necessary?," *American Journal of Science*, v. 263, 1965, p. 223-228. In this very important article Gould has carefully distinguished between substantive uniformitarianism and methodological uniformitarianism. The meaning of these terms is explained in the text of our paper.
- ²⁶Nevins, op. cit., p. 88.
- ²⁷*Ibid.*, p. 88.
- ²⁸*Ibid.*, p. 90.
- ²⁹*Ibid.*, p. 99.
- ³⁰Northrup, "The Sisquoc Diatomite Fossil Beds," p. 7-8.
- ³¹Whitcomb and Morris, op. cit., p. 130-131.
- ³²*Ibid.*, p. 136-137.
- ³³*Ibid.*, p. 137.
- ³⁴*Ibid.*, p. 200.
- ³⁵Actually, an example of modern day chert precipitation has been reported. See M.N.A. Peterson and C.C. von der Borch, "Chert: Modern Inorganic Deposition in a Carbonate-precipitating Locality," *Science*, v. 149, 1965, p. 1501-1503.
- ³⁶In saying this I want to make clear that Lyell did not first dream up the idea of uniformity and then go and force it on the rocks because of some philosophical revulsion to catastrophism. Lyell was first attracted into geology by the Oxford geologist, William Buckland, a leading catastrophist! Lyell thus probably started out under the catastrophist influence but the many field studies and observations he carried out on past geological phenomena and present processes in the decade prior to the publication of *Principles of Geology* led him to the realization that operation of present processes could more easily account for geological facts than the cataclysmic hypothesis. For a helpful paper see L.G. Wilson, "The Origins of Charles Lyell's Uniformitarianism," in C.C. Albritton, ed., *Uniformity and Simplicity*, Special paper 89, Geol. Soc. America, New York, 1967, p. 35-62.
- ³⁷Three recent introductory texts make this quite clear. See, for example, F. Press and R. Siever, *Earth*, W.H. Freeman, San Francisco, 1974, p. 61-62. They say, "Uniformitarianism, as we understand it today, does not hold that the rates of geological processes or their precise nature had to be the same." See also S. Judson, K.S. Deffeyes, and R.B. Hargraves, *Physical Geology*, Prentice-Hall, Englewood Cliffs, N.J., 1976, p. 18-19, and R.F. Flint and B.J. Skinner, *Physical Geology*, 2nd ed., John Wiley, New York, 1977, p. 84-85. The latter text says, "The more we learn of Earth's history, the more we must question whether the rates of all cycles have always been the same as they are now. The evidence seems against constancy, and some rates may once have been more rapid, others much slower."
- ³⁸Just to see what a colleague would say, I asked him if he rejected the possibility of global catastrophes on *a priori* principal grounds. He said no. Then I said, "So then you would reject catastrophes because of the geological evidence?" He replied that that wasn't true either because he had seen many catastrophes. I said that those are only small-scale catastrophes. He then said that he thought anything was possible and that he thought there might have been great catastrophes in the past. For example, he thought the Earth passing through a comet's tail might have some devastating effects and thus be considered as a global catastrophe. This is hardly a rejection of catastrophes, and yet my colleague also thinks of himself as a uniformitarian!
- ³⁹Gould, op. cit.
- ⁴⁰Naturally one could write at great length about the meaning of this statement. I do not mean to imply that *every* law is *everywhere* and *always* applicable. There are many situations where, for example, the ideal gas law does not pertain to the situation. All the statement intends to say is that God created a lawbound universe in which the laws of the past are continuous with those of the present. This could even mean that as the configuration of the universe changes, some laws have systematically varied as a function of time just as some laws are a function of scale. But this only means that the law which is varying is dependent on a higher, more over-arching law.
- ⁴¹H.M. Morris, "Science versus Scientism in Historical Geology," in W.E. Lammerts, ed., *Scientific Studies in Special Creation*, p. 109.
- ⁴²*Ibid.*, p. 111.
- ⁴³Steinhauer, "Is Uniformity Meaningful?," p. 92.
- ⁴⁴I have attempted to develop this point at great length in my book, D.A. Young, *Creation and the Flood*, Baker Book House, Grand Rapids, 1977, 217 p.
- ⁴⁵An example of this is Patten's attempt to explain catastrophes in terms of errant movements of bodies within the solar system.
- ⁴⁶Nevins, "Stratigraphic Evidence of the Flood," p. 37.
- ⁴⁷*Ibid.*, p. 43.
- ⁴⁸Whitcomb and Morris, op. cit., p. 417.
- ⁴⁹T.G. Barnes, "Decay of the Earth's Magnetic Moment and the Geochronological Implications," in G.F. Howe, ed., *Speak to the Earth*, p. 300-313.
- ⁵⁰My impression is that flood catastrophists feel that the Bible can't possibly *not* be teaching the views they hold on creation and the flood. I almost seem to detect a fear that nature might really be saying something different from what they think the Bible is saying and that, if this is the case, the Bible would be wrong and the whole Christian faith would fall to the ground. Hence a struggle to prop up the faith by "reinterpreting" the evidence. I sincerely hope I am wrong, but this is what I sense.
- ⁵¹By no means does this mean that I necessarily do not think the flood was global to some extent. It only means I reject the common catastrophist viewpoint which sees nearly all sedimentary rocks formed as a result of the flood. In my judgment if the flood truly was global then we ought to look for the evidence where we might expect to find it, namely, among Pleistocene or Recent deposits. Even then, I'm not sure how well we could recognize it.

Human Sexuality (B) Love and Law



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Love vs Law

The third argument advanced by advocates of a sexual revolution on Christian grounds is that restrictions against extra-marital sexual expression are legal in nature, and that ultimately love must supercede law. This brings us naturally to a consideration of love vs law, a subject with far greater significance than the sexual revolution alone.

Not only are love and law not mutually exclusive, but in a Christian context neither can be understood without the other. Law is the guide to what it means to love (Psalm 119:97-104), and love is the fulfilling of what the law requires (Romans 13:10). Examples of extreme pitfalls are legalism on the one hand, which forgets the intent of the law in favor of its letter, and situational ethics on the other hand, which in seeking no law but love so subjectivizes love that it retains little content. In order to love, we must act in accordance with the real world; we do not love a child by giving him everything he wants, nor do we love our neighbor by seeking his presumed "welfare" at any cost. When Jesus was asked which was the greatest commandment in the law, he answered that it was to love God and to love your neighbor (Matthew 22:37-40). On the night before his death, he linked love and law indissolubly together when he said, "If you love me, you will keep my commandments." (John 14:15) To claim that one can love without reference to the law is to deny implicitly the created reality in which we live. The principles of the law inform us as to what it means to truly love in *this* world. The situation does not determine the law; the situation determines how the law manifests itself in love.

In speaking of biblical law, I mean the principles of living laid down in the Ten Commandments, the Sermon on the Mount, and other similar and related prophetic and apostolic exhortations for godly living. This biblical law is given to us by God's revelation of

the nature of the created universe and of interpersonal relationships in that created universe because he loves us. Biblical law tells us what it means to live as a child of God, as he has intended us to live by creation, in the real sinful world in which we find ourselves. If we kept the first of the Ten Commandments, we would be fully human and would need no others; our human situation in its present state, however, is such that this is not possible for us, and God has provided a variety of guidances in practical living in the real created world. When this law tells us "You shall not steal," or "You shall not commit adultery," it is indeed reflecting the real content of actual human experience, but it is not ultimately derived from this experience as a relative end in itself. The content of human experience confirms that it is a better world without stealing and adultery because this is the very intrinsic nature of the created world. It is divinely revealed and it is experientially and even empirically testable; one description requires the other, and does not eliminate the other. The commandment, "You shall not commit adultery" tells us quite simply that committing adultery can never be an ultimate exercise of love in the real world, the appealing theme of *Tea and Sympathy* to

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the contrary. Its effects are not "up for grabs" any more than the law of gravity or the laws of electromagnetics are at our subjective disposal.³⁰ We can never love a person by pushing him off the top of a tall building because he feels like flying. I can conceive of situations where the choice to perform an undesirable deed (a "known evil," if you will) might be the consequence of realizing that in this imperfect world not to act would result in a known greater evil, but such exceptions retain validity only as evil is recognized as evil, and is not called good, and as exceptions—never if they are treated as a guide to the norm.

Many people's sexuality has indeed been damaged, sometimes grievously, by having been shaped within the confines of a narrow and non-biblical view of sex: a view in which sex and the human body are viewed as intrinsically "dirty." In this context sexual aberrations take on the aspects of forbidden fruit, becoming all the more desirable because of the intense efforts of local cultures to suppress the expression of bona fide biological needs through creation-designed channels. Rebellion against such a distorted view of the subject often takes the form of a shift to a position in which sexual activities are viewed with maximum liberality. It is claimed that sexual sins and crimes are *caused* by the omnipresent prohibitions against them, and that Christians bear a heavy weight of guilt for their role in this historical process. The solution for anti-social sexual excesses, it is also argued, is to ignore the sexual issue completely, be completely free in allowing everything rather than prohibiting, and instead concentrate on communicating what love is really all about; once it is understood what love really is, then sexual excesses will wither away in a natural way. There is enough truth to this argument that it should not be simply ignored; if negative prohibitions are not liberally seasoned with positive example and training, a distorted view of sexuality is extremely likely to develop. But to argue that a person can be simply permitted to continue in sexual sin until his realization of the true meaning of love delivers him, fails to recognize the totality of the whole person. First, it neglects the fact that sin is more appealing than righteousness to the sinful nature. Second, it is like urging a person to develop better health by diet and exercise while ignoring the fact that the person is swallowing a dose of poison each day. Understanding and appreciation for sexuality within the context of a sustained and committed love relationship, and the continued practice of acts and lifestyle that contradict this, are mutually exclusive activities.

Christian advocates of a sexual revolution argue that the Christian no longer has any relationship to the law. All decisions are to be based on love alone in the midst of the particular situation.

We have not met a single creative Christian who has not found the old rules wanting in some respect. Not one of them thinks that the Christian response should be to turn the volume up on the Church's transmitter proclaiming premarital chastity, pure monogamy, and abstinence from adultery. . . . *All ethics are contextual or situational nowadays.*³¹

It is argued that Jesus himself affords a prime example of one who repeatedly broke the law in order to meet the requirements of love by healing on the sabbath, eating corn in the fields on the sabbath, and not con-

demning the woman taken in adultery to death (Matthew 12:1-12; Mark 3:1-6; Luke 13:10-17; Luke 14:1-6; John 8:1-11). Here there is a double confusion. First of all the "laws" that Jesus "broke" were part of the ceremonial or civil laws, many of which had been greatly elaborated far beyond anything set forth in the Mosaic ceremonial or civil laws, and not part of the universal moral law. Secondly, Jesus rather showed what God's intent in these laws was, as contrasted to the human requirements that had been added to them; the actions of Jesus must be considered as clarifying and fulfilling the essential intent of the law, not as *breaking* of it in any meaningful way.

Another argument for the relevance of only love and not law for the Christian is an interpretation of Paul, particularly the letter to the Galatians, which supposedly shows that "grace overrides law totally."²² Here again there is a major confusion. Paul's entire argument against the supremacy of the law is directed toward people who believed that it was obedience to the law that earned them righteousness before God. Paul, on the other hand, is arguing eloquently that our relationship with God rests upon the grace of God in Jesus Christ, and that for Christians to still consider obedience to the law as the way to salvation is not to understand the life and work of Jesus Christ. The usual discussion of the relationship between grace or love and law among Christians, however, is concerned not with whether salvation comes through obedience to the law or not, but whether, having been saved by God's grace, the Christian can simply ignore the law or whether it can still serve as a guide (indeed, *must* serve) to what it means to live a fully human life here on earth. The answer to this latter question can hardly be derived from Paul's former argument. Instead it must be recognized that to consider the moral law of no value whatsoever in guiding Christian living, is essentially to turn one's back on interpersonal reality in favor of an idealism that the real world seldom substantiates.

Love vs Sex

Sex itself is not the answer to the need for love, nor need it be supposed that the need for love cannot be satisfied without sex. There is a genuine biological urge in sex, and the physical release from this urge can be achieved through any number of practices not involving love. The very failure of these methods of relief of the biological urge only, when problems of the whole person in loneliness and need for love are concerned, is self evident. Many in recent years, caught up in the despair of life without God, have sought to deify sex as the ultimate mystical experience, the answer to life's problems and the slogan "Make love, not war" can be understood fully only in this context. When one person *uses* another to obtain relief from his or her sexual drives, the persons involved are being treated as "things"—and this is certainly one of the basic attitudes incompatible with the Christian position.

The biblical treatment of sex within the "one flesh" concept emphasizes that this relationship is at least intended to correspond to the closest union of man and woman possible. It must be admitted, of course, that sex can be approached on a much lower level than

this, and that sexual relationships can be in practice treated as nothing more than the fulfillment of a biological need. But this is possible only because it is possible for man to forsake the image of God with which he is endowed by creation, and to behave as if indeed he were nothing more than an animal for which the category "human" is inappropriate. Whenever sex is treated casually and is experienced outside of a lifelong commitment of love, both parties involved forsake the potentialities and the destiny of their humanity, lose the concept of united personhoods, and to a greater or lesser degree pattern their behavior after sub-human creatures.

The biblical perspective is that sexual relations between man and woman fulfil their proper role when experienced in the context of a lifelong commitment of love. It is this lifelong commitment of love—as opposed to the brief giving and taking of casual liaisons—which makes it possible to have meaningful, celebrating, person-affirming communion. To claim that the pursuit of such communion is possible without a lifelong commitment of love has neither biblical nor empirical support. If this is indeed the case, then why should such a man and woman hesitate to affirm their mutual commitment publicly—i.e., "get married"? Is it not eminently likely that a refusal to give assent to such public commitment is really an indication that such commitment is not given? And if such commitment is indeed not given, it makes little sense to continue to justify sexual relations on the hypothetical grounds that a meaningful relationship is involved.

Advocates of a sexual revolution respond, not so much by denying these statements, as by proposing that they miss the mark by assuming that meaningful, celebrative sexual relations must be limited to one man and one woman in some kind of permanent relationship. They argue instead that it is possible for some individuals to have *sufficiently* meaningful relationships with members of the opposite sex to justify sexual relationships with several partners at a time, and that groups of men and women can mutually agree to share sex among several partners between them. There is little point in debating that such arrangements can indeed be made; the questions are "Empirically, *how* meaningful are they?" and "Theologically, are they consistent with a holy God's pattern for his creatures?"

The first of these questions appears to be a prime candidate for answering on experimental grounds. Such multiple relationships are or are not possible based on love—except, of course, that our empirical investigation is severely hampered by difficulty in objectively defining and identifying a satisfactory relationship. Because a satisfactory relationship is claimed does not make it actual. If the requirements for a satisfactory sexual relationship are to be identified with our term, "a lifelong commitment in love," then the biblical revelation is fairly clear in providing a strongly negative answer. A positive answer to the question would follow only if God had made men and women so that total lifelong commitments in love could be made at one time by one man to many women, or at one time by one woman to many men. But the biblical revelation—and whatever empirical data are known to me—seem to indicate that the assumption that relationships of sufficient depth to justify sexual relationships can exist

Law is the guide to what it means to love, and love is the fulfilling of the law.

outside the one man/one woman marital relationship is based on an illusion, contrary to the created structure of interpersonal sexual relationships.

The claim that sexual exclusiveness between one man and one woman who have become "one flesh" in a lifelong commitment of love, and who are seeking to live out in their lives a representation of Christ and the church, is the result of human selfishness and is incompatible with the requirements of loving one's neighbor—as is sometimes done—seems to me to be a gross misreading of the biblical revelation. The Bible constantly treats marital infidelity as an analogy to spiritual apostasy for precisely the same reason; as man is to love only God with heart and soul and mind above all else in life—because this is the only way to fulfil the creation purpose for man, so a man and a woman in a lifelong commitment of love are to keep each only for the other—again because this is the only way to fulfil the creation purpose for man and woman. If men and woman and sex and human nature were all differently constructed, different possibilities might be available. But we are designed to live in the world that God has made, and he has loved us enough to reveal to us what this entails. As discussed earlier,³⁰ freedom is never achieved by neglecting reality. Jesus tells us, "If you continue in my word, you are truly my disciples, and you will know the truth, and the truth will make you free." (John 8:31,32) How often the first phrase of this conditional promise is omitted! Out of the exclusiveness of the marriage relationship comes the additional strength by which man-and-woman now go out together to be God's servants in the world.

"Is-Ought" Fallacy Again

The basic arguments of advocates of a sexual revolution can be seen to be examples of the is-ought fallacy, in which scientific evidence for what *is*, is unjustifiably assumed to have the authority to dictate what *ought to be*. Consider the following quotations as examples.

Is sex not already far on the way to becoming "autonomous," and hence not even a sensible topic for Christian ethics any longer?²²

To be true to our Lord we should try to "feed" the sexually hungry, not give them the Bible *only*. But this might violate the seventh commandment. Given the new circumstances, maybe such acts could be legitimized.²²

The empirical data are that today a high percentage of concerned, loving, active Christians have had wholly positive experience with pre-marital sex; some equally with pre-marital abstinence. Both are options for Christians today.²²

This Man is also acquisitive, power-driven, creative, inventive, and he was made in the Creator's image; he is co-creator now. He will and must flex his muscles, and try his wings. He will, for absolutely certain sure, use his new sexual affluence. Our problem is to solve the simultaneous equation: Given sinfulness and sexual affluence, what patterns are best? (Do not respond by giving solutions for pre-1950 sexual poverty.)²²

The evolutionary thrust of history leaves us no doubt as to the outcome. The Church will sooner or later accede to Society's patterns and *then* find the rationale to justify co-marital, loving (including sexuality) with persons other than the spouse. . . . The question is: shouldn't the Church lead the way?²²

In 1973 more than half the U.S. population felt that premarital sex was no longer immoral—a 500% change in two decades. Some of these data are like Jesus' reference to the "Clouds no larger than a man's hand." They are early warnings before the event itself.²²

In each case cited, changing patterns in society are taken as norms for Christian living. It should be remembered that among the same commandments as "You shall not commit adultery," is also "You shall not kill," and "You shall not steal." We have abundant empirical data that more people are killing and stealing than ever before; yet we feel that it is not appropriate to recommend that the Church lead the way to liberalized views on killing and stealing. It will be found in the end that "You shall not commit adultery" is no more flexible than these other commandments. To violate any one is to violate the structure of human living, and to violate the structure of human living is to set the stage for less-human living.

Strikingly absent from the views of advocates of a sexual revolution is the realization that the lifestyle of men and women committed to God in Jesus Christ must be considered as necessarily intrinsically different from the lifestyle of men and women not committed to Jesus Christ. What men and women do, who do not have a personal relationship with God in Christ, means absolutely nothing as far as what men and women in Christ *should* do.³³

Summary

Human sexuality may not be everything, but it is an extremely important facet of human life and society. A society's attitude toward sex is a significant index of its overall health, along with its attitude toward social justice, racial equality, and concern for the poor and suffering. It is an error to suppose that a society's attitude toward itself and toward its problems can be totally separated from its attitude toward the appropriate interpretation of sexual relationships. Certainly the biblical revelation recognizes the centrality of sexuality, places sexual relationships between man and woman within the context of the good creation, and lays the foundation for viewing a lifelong commitment of love between a man and a woman as the basis for sexual intimacy. The view of Christian marriage between two persons united in Christ and in love for one another is that this relationship is to be analogous to the relationship between Christ and his Church; the high potentialities of marriage are thus set forth together with the realization of the impossibility of their full attainment in a non-Christian context.

Those who advocate a sexual revolution on supposedly Christian grounds have three principal arguments. (1) "Modern advances in scientific understanding make traditional approaches to sexual ethics untenable." But such "advances in understanding" derive as much, if not more, from the presuppositions of the interpreter as from the data themselves. (2) "The Bible has ceased to be a reliable guide to sexual ethics." But

what is at stake is the invocation of "biblical scholarship" which again can be presupposition dominated, and a general rejection of the historical view of the authority and reliability of the Bible without any real justification. (3) "An authentic Christian concern for love rather than law requires setting aside old legalistic restrictions against extra-marital sexual relationships." Such arguments involve a failure to discriminate between the moral and ceremonial or civil laws of the Old Testament, a misunderstanding of Jesus when he sets the spirit of the law above human legalistic additions and misinterpretations of the law, and a misunderstanding of Paul when he argues for salvation by grace rather than by works that seek to earn righteousness by obeying the law. A resolution is achieved by seeing the law as setting forth general principles which show what it means truly to love.

Understanding and appreciation for sexuality within the context of a sustained and committed love relationship, and the continued practice of acts and lifestyle that contradict this, are mutually exclusive activities.

Every attempt to advocate a movement toward "open sex" on the basis of empirical scientific studies, data or experience, invariably involves a direct invocation of the "is-ought" fallacy. In such cases a skillful blend of the *is* with the *would* is advanced as the *should*. Based on a type of "ethics by democracy", this approach totally ignores the intrinsic difference between Christian and non-Christian living. If all the world should come to consider "you shall not commit adultery" as a meaningless and outdated concept, hopefully there will remain small pockets of Christians, who by their devotion to Christ and his word, their appreciation of the potentialities of Christian marriage, their development of a home with Christ as the center, and their training of their children, will continue the lifestyle appropriate for human beings created in the image of God.

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- ³⁰R. H. Bube, "Science Isn't Nothing," *Journal ASA* 28, 82 (1976).
- ³¹R. and D. Roy, *op. cit.*, p. 72.
- ³²R. Roy, *op. cit.*, p. 81. Reference is probably intended to be to Luke 12:54, although the language is that of I Kings 18:44.
- ³³Other sexual issues, such as homosexuality, which are not treated explicitly in this installment, can be explicated using the principles that are set forth here. That a person should find himself or herself with a sexual preference for the same sex is the consequence of our existence in an imperfect and sin-afflicted world. That a person so oriented should choose to express this tragic distortion of sexuality

yet, in spite of the importance of the doctor's principles, they are never examined nor formally discussed. Barr is an unabashed partisan of every woman's right to an abortion. Little mention is made in his text of opposing viewpoints. He discusses none of the moral issues commonly raised under the heading of abortion. He writes for about fifty percent of the American population which believes that fetal life is God's gift only when the woman who has conceived chooses to bear it.

Daniel Callahan once referred to the "Orwellian" terminology of pro-abortionists. In this book, abortion is always the "procedure." The foetus is both an "accident of nature" and one of the "destructive consequences" of sexual intercourse.

Unsupported numerical statements abound. For example, one in four hundred women needs to call a doctor after an abortion; one in twenty women rejects the idea of birth control; one in five hundred pregnancies can be traced to males who claimed to have had vasectomies but did not. Rhythm is briefly discussed and then dismissed. No mention is made of natural family planning which is a refinement of the rhythm method with a highly proven degree of effectiveness.

Objective language is not the authors' strongpoint. Those opposed to abortion are said to "intimidate" the hospital because of "physician resistance and other nonsense." Their challenge of the FDA critique of birth control pills and saccharin(!) is unsupported. Their own support of the pill is enthusiastic; only another physician can say if their support is over-enthusiastic in the light of recent revelations about the effects of the pill upon some women.

The book is aimed at a popular audience, does not deal in depth with any serious issues, and ultimately only pits the authors' authority against those who would disagree with them. The book is a partisan, sometimes facile presentation of a controversial topic. Case studies of pregnant women from childhood to almost sixty are as moving a testimony as the slides of aborted fetuses. However neither the studies nor the slides do more than inflame passions of those already convinced.

The abortion controversy deserves and needs authors who can weigh and balance the rights of mothers and fathers against the lives they conceive. Barr and Abelow have not written such a book.

Reviewed by William J. Sullivan S.T.D., Associate Professor, Religious Studies Department, St. John Fisher College, Rochester, N. Y., 14618.

THE STERILIZATION CONTROVERSY: A NEW CRISIS FOR THE CATHOLIC HOSPITAL? by John P. Boyle, New York: Paulist Press, 1977, 101 pp., \$3.50.

Catholic hospitals are in a quandary. At the same time that the Roman Catholic Church forbids sterilizations, communities served by Catholic hospitals request them, the government—which supplies monetary support—often demands them, and many ambivalent staff physicians are willing to perform them. Catholic hospitals seem to be forced to choose between secularizing to satisfy government and community or reaffirming their Catholic morality and risking legal snarls and social alienation. Believing that Catholic hospitals need not make such a drastic choice,

Professor Boyle seeks an alternative which is very Catholic and yet acceptable to the secular society.

Boyle says that though all conduct is at least tinged with evil, moral acts may be performed if the resulting good outweighs the evil. Preventing a pregnancy that would jeopardize a mother's life, for example, is a good which overbalances surgical risks and the denial of conception. On the other hand, government supported sterilizations to reduce the number of welfare recipients are primarily evil. Boyle supports his situational acceptance of sterilizations with an interpretation of Aquinas' natural law theology and the writings of many contemporary Catholic theologians.

Although Boyle finds fault with Rome's categorical prohibition of sterilizations, he does not belittle Church teachings. Boyle insists that the individual or the particular institution should seek prophetic guidance from the Church before making ethical decisions.

Responsibility is the focus of Boyle's answer for Catholic hospitals. The individual hospital needs a shared purpose with specific policies designed to serve a particular community. For instance, a Catholic hospital which is isolated from other hospitals may decide to perform sterilizations under certain circumstances, while another Catholic facility, located near other hospitals, may decide against sterilizations altogether. Boyle maintains that in this way Catholic hospitals can retain their Catholic identity while effectively ministering to the needs of their communities.

A more suitable title for Boyle's book would be *Sterilization and the Catholic Hospital Crisis*. According to Boyle, the crisis is the Catholic hospital's loss of identity and purpose; sterilization merely exposes the institution's predicament. This obfuscation hardly devalues Boyle's book, however; Boyle offers a thoughtful statement which the Catholic hospital should not ignore.

Reviewed by John P. Ferré, student, The Divinity School, The University of Chicago, Chicago, Illinois.

THE TAO OF PHYSICS by Fritjof Capra, Shambhala Publications, Boulder, Colorado, 1975. 330 pages, paperback.

With the increasing realization that science, and especially mechanistic classical physics, cannot answer all questions of importance, there has been an increasing interest in the relations between the scientific approach and religious world views. It would be a mistake, however, to assume that this always means an interest in the Judeo-Christian tradition. In this book Capra, a high energy physicist, argues forcefully that the picture of the world which modern physics gives has many features in common with the ideas of eastern religions. The western tradition in general, and Christianity in particular, are given little attention.

The whole range of modern physics, including quantum mechanics, field theory, general relativity, cosmology and current models in particle theory, is covered in a non-mathematical fashion, though with a wealth of illustrations. Much of the book could be recommended simply as an up-to-date popular treatment of these topics. The discussions of the fundamentals of Hinduism, Buddhism and Taoism are also quite worthwhile.

In addition, Capra certainly makes many good points

about the similarities between modern physics and eastern religions. In particular, the willingness of, for example, Zen Buddhism to include apparently contradictory aspects of reality has to remind a physicist of the wave-particle duality and the idea of complementarity found in quantum theory, and the dance of Shiva is at least an excellent symbol of the continual creation and annihilation of particles which is always taking place at the most fundamental level of physics.

But there are basic problems with Capra's thesis. No convincing reason is given for the fact that modern physics, like classical physics, did not, after all, develop in the East. It simply will not do, for example, to make a virtue of the fact that the Indians and Chinese were not ensnared like the Greeks by the supposed perfection of circular orbits, without also pointing out that they never came close to Kepler's laws.

One would assume from Capra's book that Christianity has nothing to contribute to the world view of modern physics. In part, this is because Christian mysticism is ignored. A more serious error is the assumption that the inspiration of Newtonian physics represents the best that the Christian tradition could do. But one can argue quite convincingly that the kind of common-sense unitarian theology which is associated with Newton's work actually was a consequence of an abandonment of much of the subtlety and complexity of New Testament and patristic thought.

The Tao of Physics is good as far as it goes, but it hardly presents the whole story. One feature which Christian writers on science and religion should attempt to imitate is the positive approach to the subject. Capra feels no need to defend eastern religions, and so can devote his efforts to an attempt to show how they can contribute something definite in the confrontation with science.

Reviewed by George L. Murphy, Department of Physics, Luther College, Decorah, Iowa 52101.

There is a growing intellectual movement which seeks to unite modern science with Eastern mysticism. With the assertion that Western philosophy has been dominated by Newtonian determinism, it finds the thought forms of Buddhism and Hinduism more congruent with quantum mechanics and relativity. This movement is epitomized by the participation of Nobel Prize-winning scientists in symposia organized by proponents of various forms of Eastern religion, e.g. Ilya Prigogine, 1977 Nobel laureate in Chemistry, participated in a conference organized by Maharishi Mahesh Yogi of Transcendental Meditation, and Eugene Wigner, 1963 Nobel laureate in Physics, participated in a conference on "Science and the Spirit" put on by the Sufi Order of the West.

The Tao of Physics is an important part of this movement. It has been widely read by physicists (it was reviewed in *Physics Today*, the monthly publication of the American Physical Society). I have also come across many people outside of science who have read it, almost everyone that I know who has any interest in Eastern religion.

In this book Dr. Capra describes the parallels he sees between modern physics and Eastern mysticism. In the beginning of the book he outlines his method. Both physics and mysticism rest on experience. The physicist uses mathematical models of his experience (i.e., his experi-

ments) and the mystic verbal models. The mathematical models of the physicist can then be roughly translated into verbal descriptions, and it is these verbalizations that are compared to the verbalizations of the mystic.

In the first part of the book Capra gives a brief description of modern physics, with emphasis on quantum mechanics. He particularly comments on the field nature of much of physics, the wave-particle duality, and the ephemeral nature of many of the particles encountered in high-energy physics. He concludes that modern physics describes the world as a dynamic whole which includes the observer in an essential way.

In the second part of the book the author gives a summary of some of the main currents in Eastern thought, including Hinduism, Buddhism, Taoism and Zen. In the third part, which is the meat of the book, he draws detailed comparisons between some aspects of modern physics and some aspects of Eastern thought.

His method is best illustrated by several examples. In modern quantum field theory, the "vacuum" or state of lowest energy is not empty, but consists of particles constantly appearing and disappearing (this actually has observable consequences!) Capra compares this to the Dance of Shiva in Hindu mythology, who is continually creating and destroying the world. In the "bootstrap" theory of elementary particles created by physicist Geoffrey Chew no sub-atomic particles are more fundamental than others, but each can be regarded as being composed of the others. Capra compares this to the picture of reality given in the Buddhist scripture, the *Avatamsaka Sutra*, by the metaphor of Indra's net. A vast network of pearls hangs over the palace of the god Indra, arranged so that if you look at one pearl you see all of the others reflected in it.

It is easy to find fault with this book. Capra concentrates on those aspects of physics which are congenial to the

Books Received and Available for Review

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

- Anderson & Stransky (editors), *Mission Trends No. 4 (Liberation Theologies)*, Paulist
- Anderson, N., *The Mystery of the Incarnation*, Inter Varsity
- Barreau, *The Religious Impulse*, Paulist
- Baus, *The Social Imperative*, Paulist
- Bracken, *What are They Saying About the Trinity?* Paulist
- Brown, *The Community of the Beloved Disciple*, Paulist
- Jegan & Wilber, *Growth With Equity: Strategies for Meeting Human Needs*, Paulist
- Komar, *Life Without Pain*, Berkley
- Livingston, *The Master of Light: A Biography of Albert A. Michelson*, Chicago
- Martin, *The Birth of Christ Recalculated!* Foundations for Biblical Research
- McNulty & Wakin, *Should you ever Feel Guilty?*, Paulist
- Milne, *We Belong Together*, (The Meaning of Fellowship), Inter Varsity
- White, *The Golden Cow* (Materialism in the Twentieth-Century Church), Inter Varsity
- Wilson, *Total Mind Power*, Berkley
- Wojtyla, *The Acting Person*, Reidel (Translation of the book by the man who is now Pope John Paul II)

Eastern viewpoint and ignores or underplays other aspects, perhaps not so congenial. For example, the theory of relativity is used as an example of the way in which our concepts of space and time have to be drastically altered. On the other hand, since relativity (both the special and general theories) also deals with those things which are unchanged when viewed by different observers, one could draw conclusions about the *absolute* nature of reality, which would not be congenial to Capra's arguments. Capra also leans heavily on the bootstrap model of elementary particles. Recent advances in particle physics, however, show that there may well be fundamental constituents of the elementary particles, the quarks. This again does not fit in well with Capra's viewpoint.

On a more fundamental level, what is Capra trying to show? Is it that the mystic and the physicist see the same thing? Is the spiritual world of the mystic the *same* as the physical world of the physicist? In his epilogue Capra does not make this claim, but argues rather that both viewpoints are necessary for a balanced world-view (a point which he has been making lately in public talks in connection with the "right brain-left brain" hypothesis). But this distinction is not always maintained clearly throughout the book.

After all these arguments I have to admit that Capra makes a compelling case for *some* connection between Eastern mysticism and modern physics. As a Christian, this leaves me with many questions. What Capra's world view lacks, as do the scientific and Eastern disciplines he compares, is a convincing basis for morality. What ethics he does conclude with (since everything is one, we should treat each other and the world well) is unconvincing. Our biblical tradition stresses the *moral* nature of the spiritual realm ("If any man will do his will, he shall know of the doctrine"). Is there spiritual knowledge which is non-moral in character (as there certainly is physical knowledge)? And what is its relationship to the knowledge of God in Christ Jesus? It seems to me that this is a profound problem in comparative religion (and therefore in evangelism) that we will face more and more in the days ahead.

Reviewed by Fred Kuttner, Physics Department, University of California, Santa Cruz, California, 95064.

SIGNS OF THE TIMES by Linus J. Dowell, Gennao Anothan Publications, College Station, Texas 77844, 1977. viii — 88 pp. Paperback.

If you are looking for a compendium of the important biblical signs pointing to, or given by, Jesus, the last half of this book is for you. If, by some chance, you wish to read about how Christ was foretold by the constellations and stars, the first half of *Signs of the Times* is for you. Otherwise, it isn't.

It is difficult to argue with the second part, as it is mostly Scripture, except for a few quibbles about Dowell's signs. I am not certain that Jacob's ladder, or the Showbread, or the cereal offering, were really typical of Christ. I wonder why Dowell didn't include Jephthah's daughter.

The first part, certainly, is more controversial. Begging the question of whether or not the stars, or the constellations, are signs of Christ, another question is whether this is cause or effect. That is, did God place the constellations, and cause the stars to be named, to foretell Christ, or did

early man have enough foreknowledge to cause him to interpret and name according to what God had revealed? To be specific—is Virgo a God-made picture of a virgin, or a man-named group of stars that could just as well have been named something else? Dowell (p. 83) puts forth the former view. Yet (p. 14), I found the curious statement that "One of the reasons it is believed that the constellations were designed is the fact that the arrangement of the stars do not form the figures they represent. . ." Does this mean that God is an imperfect designer, or that man was the designer? I am not certain.

Dowell's heart seems to be in the right place. He wants to magnify Christ. However, the first half of the book has some serious flaws, as well as some minor typos. The serious ones include a *very* incomplete bibliography—noted several important cited sources that were not in it. Another flaw is interpreting the evidence to suit his purposes. He reminds me of von Däniken. Dowell is not even above finagling with Scripture, if it suits his purpose. I hope this latter is innocent. For example, Luke 3 gives the genealogy of Joseph, but Dowell says it is of Mary. (p. 42) The worst example of one-sided presentation is the equating of the living creatures of Ezekiel 1:10 with the constellations the sun is located in during the equinoxes and the solstices. (p. 15)

To accomplish this feat, Dowell must:

- a. Change Scorpio into an Eagle, citing an authority not listed in the bibliography for evidence that Abraham knew it as such. (This in spite of the fact that he just finished using Scorpio as a scorpion for a lesson.)
- b. Use Leo, Taurus and Aquarius, "modern" Zodiacal signs, in spite of stating on the previous page that the modern signs are not as meaningful, citing yet another unnamed authority.
- c. Ignore the discrepancy between Ezekiel's creatures, where the lion and calf are opposite, and the sky, where the sun is supposed to be in Taurus in the spring and Leo in the summer.
- d. Not use the KJV, which uses "calf," but a modern version, which uses "bull," in spite of his preference for the KJV.

A third flaw is that Dowell makes too little reference to the negative aspects of stargazing. (See October, 1970 *Eternity* for an expose of astrology, including the falsehood of its astronomical foundations.)

It is true that God placed the stars in the heavens for signs and for seasons (Gen. 1:14). It is true that at least some of the constellations may be signs of Christ. (Hercules about to strike the head of the Dragon, for example.) However, I am not certain that such a doctrine is enhanced by this type of defense.

Reviewed by Martin LaBar, Central Wesleyan College, Central, South Carolina 29630.

MODIFYING MAN: IMPLICATIONS AND ETHICS Edited by Craig W. Ellison. Washington, D.C., University Press of America, 1977. ix — 294 pp.

Modifying Man is a report of the International Conference on Human Engineering and the Future of Man, held at Wheaton College, July 21-24, 1974. The American Scientific Affiliation, and several other evangelical organizations, were sponsors. Contributors, however, included not only evangelicals but others. There were six position papers, each followed by two or three responses, of which the latter were all by evangelicals, with an opening and a closing paper. Since I cannot comment on all 22 papers, I

shall list them: Overview by Craig W. Ellison; "Control Technology, Values and the Future" by Daniel Callahan, with responses by David F. Allen and Richard L. Spencer; "Biblical Perspectives on Human Engineering" by Donald M. MacKay with responses by Robert L. Herrman and James H. Olthuis; "Genetic Intervention and Values: Are all Men Created Equal?" by Robert L. Sinsheimer, with responses by V. Elving Anderson and Bernard Ramm; "Brain Control: Scientific, Ethical and Political Considerations" by Elliot S. Valenstein, with responses by William P. Wilson and Paul D. Feinberg; "Behavior Control, Values and Future" by Perry London, with responses by Rodger K. Bufford, Allen Verhey and Paul Clement; "Public Policy and Human Engineering" by Mark O. Hatfield, with responses by John Scanzoni, John A. Olthuis and Carl F.H. Henry; and Summary by Donald M. MacKay. There is also a summary report, with recommendations for action and principles on which to base them.

Callahan's summary seems to me to state our present status rather accurately:

... I have stressed questions, only hinting here and there at possible answers. Certainly our society as a whole has no answers to those questions ... I think there are no ready and obvious answers in sight ... the Western philosophical and religious tradition ... provides ... many basic insights. (p. 48)

The clearest example of a disagreement between an evangelical and a non-evangelical in the book is found in Spencer's response. He takes Callahan to task for emphasizing biological quality, rather than spiritual, and for equating physical immortality with omnipotence. What Spencer, a pastor with a Ph.D. in ethics from Princeton, says, would probably meet with nearly unanimous approval by readers of this *Journal*. However, substituting spiritual values for biological does not necessarily give us answers that are any more satisfactory.

As might be expected, MacKay is especially worth reading. He tries to establish a biblical basis for considering how, (and if) to apply technology. The theme of his article is that "new knowledge creates new sins, both of commission and of omission." (p. 88) He would thus steer carefully between the Scylla of manipulation for the wrong reason, or even in the wrong manner, and the Charybdis of thinking with pagans that nature is, by definition, better off without technology. MacKay points out that C.S. Lewis had an anti-technological bias, with its roots in Stoicism, and that "significantly, ... he did not adduce biblical support for this attitude." (p. 75)

His answer to the question: have we any business changing the way things are? is not only yes, but that God commands it of us. However, we should always be careful, not only because we are fallen and sinful, but because we are fallen and finite.

MacKay not only has a strong biblical sense, but a sense of history. This is often sorely lacking, as we seem to be worried about the new, but take for granted that the old is all right. Thus, he points out that the Dust Bowl may have resulted from human sinfulness (greed), but it could just as well have been produced by the human finiteness (ignorance of possible consequences) of people with the best of motives. In fact, he says problems with DDT are a case of the latter.

Not only does he have historical sense, but also common sense! He points out that we do not need to examine electrical implantation techniques, or mind-changing drugs, to

find an area where manipulating not just nature, but man himself, has ethical implication. He speaks of education, and, yes, even parenthood. His view is that we have clear responsibility, in the fear of God, to manipulate, (thus avoiding a sin of omission) but that we must try to do it for the right reasons, and in the right manner, so as to avoid sins of commission. He then claims that we have the same responsibility even in brain control, and, maybe, in genetic engineering.

As Sinsheimer says, we have come to a point at which, if we wish, we soon will need no longer accept our genetic endowment as given and ... can expect increasingly to have the means to intervene in the human gene pool in a conscious manner, if we choose to do so. (p. 113)

He then asks two important questions:

Is it ethical to do genetic experiments on humans? Is controlling our genetic destiny any different than controlling our environmental destiny? (Which, of course, we have increasingly done for centuries.)

In response to the first question, he has no pat answers, but, perhaps surprisingly, relates it to the second. We are *already* doing genetic experiments, and genetic experiments which result, occasionally, in the production of monsters, human, but abnormal, some miscarried, some deformed for life. These results are, of course, the products of those genetic experiments called human reproduction!

I, like Sinsheimer, have no sure answers. Sinsheimer does suggest some guidelines, with which Ramm agrees:

1. *Go slowly in genetic experimentation. Ramm points out the rapidity with which we have come from Becquerel, Roentgen and Einstein to the specter of fusion warfare.*
3. *Make individuality of value.*
3. *Seek advances in general welfare, rather than aiming for specific talents or abilities.*

I am certainly not an expert in brain control, so it came as a surprise that Valenstein took over half of his paper to delineate our ignorance in the area. He is not sure we could ever control man's brain with electrical stimuli, even if we were fully convinced it was the right thing to do. As a result, a main thrust of his paper is to criticize some actual and proposed experiments in the area for an insufficient basis in knowledge. Such experimentation is certainly open to ethical challenge.

Then Valenstein, not content with pooh-pooing the potential for exact control of human behavior by electrical stimulation, attacks ethicists! He points out two instances where, for supposedly moral reasons, questions about the morality of experiments have been raised, that have had a negative effect on potentially valuable experimentation. One of these was the claim (false, says Valenstein) that a Mississippi doctor was preferentially carrying out psychosurgery on blacks. Another is the claim (again false) that electroconvulsive shock treatment leads to anatomically detectable brain damage. Says Valenstein:

There is no justification for a condition that forces only the researcher to defend himself while leaving the self-appointed defenders of patients' rights, who often have an equally great impact on patient care, completely uncriticized. (p. 163)

I quote one passage from Feinberg's response:

Does society have the right to develop biochemical and surgical techniques that will prevent the possibility of unacceptable behavior?

No, they do not. To do so would be to usurp the place of God. (p. 185)

I am not certain that I agree, but the statement merits thought.

London points out that we worry too much about new problems, and not enough about old ones. He says we should think about some of the moral implications of conditioning, which has a much greater present effect in controlling human behavior than drugs, surgery or electrical impulses. His paper also is notable for his discussion of deviance, including homosexuality, in the light of how primitive *versus* advanced societies view deviance.

Hatfield and Scanzoni in reply, deal specifically with the role of the evangelical community in response to human control issues. Scanzoni says that

if an evangelical somehow gets an advanced degree . . . we try to point him/her to a Christian college where, unfortunately, the teaching and administrative load is so great that seldom can serious, frontier research . . . be undertaken. (pp. 251-2)

On the other hand, he affirms that Christians have done their job so well over the years that our job is being done by others. We have been the salt of the earth, so much that we may actually have little to contribute that is really unique.

Like some of the respondents, I have selected my ground in this review. I believe that *Modifying Man* belongs on the shelf of every academic library in the English speaking world, and that it should be ready by members of this Affiliation. It is a book that will not age rapidly, since the issues considered, like the poor, are likely to be with us, in one form or another, always.

Reviewed by Martin LaBar, Central Wesleyan College, Central, South Carolina 29630.

PRESERVING THE PERSON: A LOOK AT THE HUMAN SCIENCES by C. Stephen Evans, InterVarsity Press, Downers Grove, IL 60515. Paperback, 175 pages, (1977) \$4.95

This book is a philosophical work with a practical goal. The central problem addressed is the apparent conflict between the conception of man as personal and hence responsible, and the depersonalized philosophy which Evans sees as implicit in much theorizing and research in the "human sciences." Evans' philosophical task consists of presenting six different approaches ("ideal types") to the problem of reconciliation between personalism and the human sciences. However, Evans feels that the analysis is more than simply theoretical since, "recognizable aspects of these responses can be identified among many thoughtful people, including scientists themselves." (p. 91). He holds that, when developed in detailed and coherent ways, each of these positions can represent a legitimate Christian view, though none of them would be uniquely Christian.

The six ideal types are organized into three sets of two types each. First, there are *Reinterpreters* who accept both "scientism" ("the truth which science gives us is both ultimate and complete," p. 88) and the "unity of science thesis" (there is properly only one scientific method, and it "consists of giving deterministic causal explanations which

are empirically testable," p. 90). Within this framework, Compatibilists believe that the image of the personal is compatible with mechanism, while Capitulators hold that that image can be modified (without losing anything essential) to produce the desired compatibility. *Limiters of Science* reject at least part of "scientism"; Territorialists feel that science does not tell us the whole truth about reality (science applies only to certain "territories" of reality), and Perspectivalists are convinced that scientific truth is not ultimate (science is limited by its perspective; it cannot discover everything that is true, even if it might possibly have something to say about everything). Finally, *Humanizers of Science* reject the "unity of science thesis," arguing that the scientific method described above is not appropriate for the human sciences (the Particularists) or that the method is not necessarily appropriate even for the natural sciences (the Generalists).

Based on a sketch of some of the difficulties of each position, Evans shares his own opinion as to the best approach to reconciling the personal and the scientific views of man, a combination of the Perspectivist Limiter of Science and the Particularist Humanizer of Science positions. However, his writing is not explicitly guided by a dogmatic concern to convince us of his own opinion. Rather, he has a practical goal:

What I have hoped to do is to help those engaged in carrying out this integration gain a greater self-consciousness about their approach, a greater understanding of the issues and their significance, and a clearer perception of what alternatives there may be. (p. 157).

In my opinion, Evans has done something to accomplish this goal, but unfortunately he has left undone much that is relevant and even near-crucial to the full-bodied attainment of this goal.

In setting himself a philosophical task of identifying "ideal types," Evans has skimmed on important details connecting his discussion with the human sciences and human scientists as they are today. In particular, concerning individuals, only one contemporary social scientist is discussed in any detail (Donald MacKay). The following will show the extent and nature of this problem as it relates to each of his ideal types.

Evans discusses no examples of Christian *Capitulators* in the social sciences, except to point out that such an individual would of necessity place a strong emphasis on the "creative sovereignty of God." Under *Compatibilists*, Calvinism, and particularly the Westminster Confession, is specifically referred to, but again, no social scientists are discussed. Concerning the *Territorialists*, only the classical example of Descartes' mind-body dualism is outlined, and again, no social scientists are discussed. Finally, two social science representatives appear, both evangelicals: Donald MacKay and Malcolm Jeeves are both presented as *Perspectivalists*. Special focus is given to MacKay's complementarity viewpoint and to his arguments that *even if* the activity of man's brain were completely mechanistic and determined, still the only sensible (logically correct) thing a man could say about *himself* as he tries to make the decision is "I have a decision to make" (He would be logically incorrect to believe the prediction of a super-scientist who knew exactly his brain state.) As Evans points out, it is not entirely clear what one ought to make of this logical demonstration. But regardless, MacKay is a good example of an evangelical who as a brain researcher holds

to a Perspectivist position. Under the *Particularist* approach to humanizing science, the only social scientists mentioned are the sociologist Max Weber, Abraham Maslow and the "third force" in psychology, and Rollo May and existential psychology. The latter two are hardly more than mentioned. Much more time is spent discussing philosophers viewed as Particularists: Collingwood, Winch, Husserl, and Schutz. Finally, the *Generalists* are represented only by Polanyi, Toulmin, and Kuhn, of whom only the first was a social scientist. For a person who feels that "aspects of these (six) responses can be identified among many thoughtful . . . scientists," Evans has given the reader very little to go on.

The general criticism stated above can be seen in other ways that relate directly to the *substance* of the various human sciences. *First*, the extent to which Evans uses dated theoretical views in his presentation of the "threat of mechanism" is startling. In addition to brain research and relevant philosophical positions, separate chapters are given to the following threats to personalism: Freud, behaviorism (*a la* Watson and Skinner), and sociology (*a la* Durkheim). Has nothing happened in psychology since Freud, Watson and Skinner? Has nothing happened in sociology since Durkheim and Weber? Surely the more recent developments in these areas are relevant to the topic of this book. To what extent are the philosophical presuppositions which Evans outlines characteristic of researchers and theorists active today? Evans provides us with no relevant data. Given this, the thoughtful reader (though perhaps not the casual one) is left wondering how strong and pervasive the attack on personalism really is. *Second*, even though Evans gives clear warnings (pp. 35, 45, 59, 67) that his review of the "threat of mechanism" is "consciously one-sided," "sketchy," and gives only some "general tendencies represented by these particular individuals," nevertheless I am bothered by the limited and stereotyped way that he presents the theoretical views of important social scientists. For example, he admits that there is no single Freudian view, yet he goes on to discuss "Freud's view of the person" as if it was/is unitary (pp. 36ff). Similarly, Skinner's views (and his responses to criticisms of behaviorism such as are summarized in *About Behaviorism*) are given short shrift. In other words, instead of a careful and dispassionate analysis of these areas and researchers, Evans' presentation looks somewhat polemical.

A more balanced account should focus on what scientists do and why, rather than simply on philosophical presuppositions that might underlie such action. Many working scientists are basically problem solvers rather than philosophers, and for a good reason. Theories are designed and tested against the world which God has made. If a particular mechanistic approach is discovered to be adequate, then it will be applied, for good or for ill. An example might be the potential discovery of chemical brain mechanisms responsible for the occurrence of schizophrenia. This kind of discovery should not frighten God's people, as it simply represents an instance of developing and refining the dominance over God's world that He gave to man in Genesis 1:28. We tend to be frightened, often-times, because we do not understand adequately what science *cannot* do. For example, Skinner's extrapolations in *Walden Two* and some other places are no more than that—extrapolations. Behavioristic science has not demonstrated that such extreme control of human behavior is

possible through contingency management, though behavioristic *philosophy* might believe that it is. In an important sense, the science should come before the philosophy. If the science shows that such extreme control is possible, then it must be dealt with regardless of the philosophy. On the other hand, if the facts of the world are otherwise than the philosophy suggests, then the corresponding science will not be successful and no problem will remain.

Many evangelicals would perhaps do well to consider more seriously the exciting and positive possibilities inherent in seemingly mechanistic approaches. It is clear that a strict determinism presents epistemological and moral difficulties (see Ch. 6) and such difficulties should be examined closely. However, it should be remembered that, from a Christian perspective, such difficulties need not be worked through anew: as Evans points out, a more thoroughgoing Calvinism would become more attractive. Whether such changes would be good or bad depends ultimately not on what we prefer but on whether the more mechanistic approach is *true*. In the human sciences, this mandates in-depth involvement with the present and currently being-discovered facts, something evangelicals have not been noted for.

In the human sciences, it would be better for Christians to spend more time becoming familiar with the present facts and working out the details of a Christian approach to those facts rather than expending their energy battling philosophies that might turn out to be inadequate when tested against the reality of the world God has made. This implies that we must know in depth the present facts. Evans' book does not help us much in accomplishing this goal in the human sciences. I myself benefited from reading this book; it certainly serves as a valuable tool for organizing philosophies in the human sciences. However, much toward the goal of organization was accomplished in his earlier *Christian Scholars Review* paper (CSR, 1976, VI, 97-113). It is unfortunate that, when he expanded it to book length Evans chose a polemic (albeit a mild one) for personalism rather than a dispassionate and in-depth analysis of the relationship between personalism and the human sciences.

Reviewed by Steven P. McNeel, Bethel College, St. Paul, Minnesota.

Speaking as a Christian who is also an academic psychologist, I will say immediately that this is a book whose appearance I welcome heartily. As implied by the book's title, Evans (a Yale Ph.D. in philosophy now teaching at Wheaton College) takes on the question as to whether the essentially mechanistic image of human beings that emerges from the "human sciences" (particularly brain physiology, psychology, and sociology) is at all reconcilable with the traditional—and biblical—vision of the person as a free soul who at least partially transcends environmental influences and is therefore morally accountable for actions performed. Concern with this question is hardly unique; indeed, it is an enduring old chestnut which is constantly being re-warmed in the pages of the *Journal ASA*—not to mention in the entire history of philosophy. But Evans, while not a natural or social scientist himself has done as a unique service in illuminating the history, complexity, and Christian implications of this question in a way that

probably none of the rest of us (badly, if at all, trained in philosophy and rank amateurs as biblical theologians) could as adequately do. Some of the unique features of this volume that commend its reading to the Christian/scientific community are the following.

Evans constructs and elucidates a very useful taxonomy of characteristic "Christian" approaches to resolving the mechanistic with the personalistic view of humanity. In doing so, he warns against the over-confident claim on the part of anyone to have developed *the* Christian resolution of these two views. Each of the six approaches he describes could be, according to the author, the basis for a coherent Christian position, and while he himself acknowledges his preference for one (or rather, a combination) of these, he in no way absolutizes this preference as being the correct one for all Christians.

The author also gives us an overview of the philosophical and historical roots of the personalistic/mechanistic dilemma, tracing the emergence of scientism (i.e., the view that science can pronounce truthfully and exhaustively on all aspects of reality) from J.S. Mill and Auguste Comte through to 20th-century logical positivism and beyond to Kuhn and his contemporaries, and also traces the mind-body problem from Descartes through to modern brain science and cybernetics. While this overview is undoubtedly simple from the standpoint of the professional philosopher, it is of tremendous value in orienting social and natural scientists (and I count myself among these) whose academic training has been ahistoric—if not downright *anti*-historic—with regard to these issues.

Evans is neither naively scientistic nor defensively personalistic in his approach to the preservation of the person. He freely acknowledges the strengths and usefulness of the mechanistic model, reminding readers that

the fact that the acceptance of a scientific view of man would be painful is no argument against it . . . To the extent that these scientists offer us truth about the human condition, nothing will be gained by denying or ignoring that truth. (p. 69)

But he also shows how the espousal of a purely mechanistic view of humanity repeatedly leads to inescapable self-contradictions or antinomies. How can scientists, faced with ethical decisions regarding the use of their powers consistently view themselves as amoral machines? How can sociologists (or brain scientists, or Freudians, or Skinnerians) use their knowledge to prescribe improvements for society at the same time they declare all "values" and "prescriptions" to be merely the relative products of mechanistic forces such as social conditioning, physiology, early family history, or environmental contingencies? How can the scientist accept a mechanistic account of his own scientific activity without, by the same token, conceding that this work cannot be scientific because, if merely mechanistic, then it is not rational in character? And how are we to explain the constant tendency on the part of self-styled mechanists to regard only their past, regretted actions and beliefs as determined, while their present convictions (including the belief in determinism) are seen as freely and rationally arrived at? The conclusion, writes Evans, is that "Personalism seems to be in trouble, but we (i.e., Christian and non-Christian humanists alike) are in trouble if personalism is not viable." (p. 87)

According to Evans' taxonomy, Christians in the human sciences have tended to resolve the mechanistic and personalistic accounts of humanity in one of three ways,

that choice being determined by the response to two theses regarding *scientism* (1a: "Science gives us the truth about all aspects of reality," and 1b: "Science gives us the *ultimate* truth about all aspects of reality it deals with), and also by the response to two statements regarding the *unity of science* (2a: "There is one method which all genuine sciences employ," and 2b: "This is the method of the natural sciences, and consists of giving deterministic, causal explanations which are empirically testable.") Those whom Evans calls "*Reinterpreters of the Personal*" accept all four statements; "*Limiters of Science*" accept both statements about the unity of science, but reject one or the other statement concerning scientism, while those Evans calls "*Humanizers of Science*" reject not only the theses about scientism, but one or both these concerning the unity of science.

Each of these three types subdivides into two others. Among "Reinterpreters," Evans finds both "Capitulators" and "Compatibilists." The former accept a thorough-going mechanistic model of humanity, and tend to justify it scripturally by leaning heavily on biblical passages stressing the sovereignty of God over all of reality, including human choices, to the relative neglect of other passages which imply and expect free choice on the part of those to whom God addresses Himself. "Compatibilists" (whom Evans also calls "soft determinists") try to have their cake and eat it, saying that human beings are *both* free and determined, in a way too mysterious to be grasped by merely human understanding. Evans maintains that this is neither an equivocal nor a lazy position provided it is the result of a sincere intellectual struggle. He concludes his discussion of these two types, however, by saying that no Christian can really be a "pure Reinterpreter" (and, indeed, few claim to be) inasmuch as a purely mechanistic account of reality can at most suggest *how* God operates, but never *to what end, or why*.

Among the "Limiters of Science" (with whom most north American Christians number themselves, according to Evans) there are "Territorialists" and "Perspectivalists." The former, rejecting thesis 1a, are essentially dualists, who acknowledge the right of science to investigate and declare mechanical the workings of man's *physical* side, but not the mental or spiritual aspects, which are declared to be impenetrable by the scientific method. "Perspectivalists," on the other hand, accept statement 1a, but reject 1b, saying, in effect, "Though the scientist may have something to say about everything, he does not tell the *whole* story about *some* things — indeed, perhaps not about *any* thing" (p. 105). This, by implication, stresses the need for *other* perspectives on reality than that of science. Evans outlines the positions of Malcolm Jeeves and Donald MacKay as being representatives of this position, and ends up endorsing their approach quite strongly, but also rightly points out that, for both types of "Limiters," there remains the problem of how to put the fragmented, multiperspectivalized Humpty Dumpty of humanity back together again. Talk of different "dimensions" or "categories" inevitably does violence to the unitary reality of persons which is evident both in Scripture and naive experience, and neither the Territorialist nor Perspectivalist approach has been able to do justice to this.

The most radical attempts to grapple with the mechanistic/personalistic dilemma come from Evans' third type of integrators, the "Humanizers of Science," who question not only the *limits* of science but also the scope and nature

of its *method*. Among these, the "Particularists" have no quarrel with the use of the hypothetico-deductive method in the study of sub-human reality, but maintain that the study of human activity requires that we understand persons not as *objects*, but from their own subjective stance as *agents*. It is not enough merely to record behavior; we must also penetrate the subjective *meaning* of that behavior, for "If we ignore the framework of meaning in terms of which the persons under study understand their behavior, we risk studying a fantasy world which does not exist" (p. 127). Such a methodology is not seen as a return to the introspectionism of pre-behaviorist psychology because "frameworks of meaning" are *not* totally private, but rather acquired in a social context shared with others and are hence capable of intersubjective verifiability. The writings of Wilhelm Dilthey, Max Weber, R.G. Collingwood, and Peter Winch are cited as reinforcing such a viewpoint—although the names of Christian thinkers are conspicuous by their absence; it would seem that most are among the more conservative Perspectivalists. Even more radical than the Particularists are those Evans calls "Generalists": these do not even admit the validity of the positivist account of *natural* science methodology. Representatives such as Michael Polanyi, Thomas Kuhn, Stephen Toulmin, and Paul Feyerabend, point out that *all* observations of reality are contaminated by one's paradigm, and that "the choice of paradigm cannot be settled by an appeal to observation of facts, because choice of paradigm largely settles the kind of facts perceivable" (p. 136). On this view, the whole enterprise of traditional "objective" science is exposed as a highly subjective undertaking—so much so that some thinkers (Feyerabend is one) now claim that the scientific ideal of objective truth is totally impossible.

Evans finally expresses his own preference for a Perspectival position combined with that of a "moderate Humanizer" who admits the possibility of a place for mechanistic explanations of *some* aspects of human behavior. Such a combination of approaches, he argues, does most justice to four essential concepts—namely, the *creatureliness* of the person before God, the *transcendence* of the person over the mechanistic, the *unity* of the person, and, in addition, the *integrity* of science.

In sum, this is a tremendously helpful little book for all who are concerned to dialogue with fellow Christians and with others in the sciences in order to clarify differences and similarities of approach. It also provides an excellent orientation to many standard references in the history and philosophy of science for those who wish to dig deeper into these areas. It would make an excellent undergraduate text for a variety of courses in the social sciences, whether at a Christian or secular college. On all these grounds it can be recommended as a valuable addition to the library of the Christian scholar.

Reviewed by Mary Stewart Van Leeuwen, Department of Psychology, York University, Toronto, Canada.

STRANGE PHENOMENA, Vol. G-2, A Source Book of Unusual Natural Phenomena by William R. Corliss, Compiler. Glen Arm, Md. 21057, The Sourcebook Project. 1974. \$6.95

There are ten source books plus two handbooks in this project. A third Handbook in Astronomy will be published in March 1979. The compiler has also written 16 full-length books plus articles and booklets. The present book, G-2, is in the Geophysics Series. Other series are Astronomy, Geology, Archaeology, Biology and Psychology. Previous reviewers have said that they are "fascinating reading," and "dependable eye-witness accounts."

Corliss is one of those strange breed of men who is not only attracted by the anomalies found in the natural world but who is willing to spend the time to gather them and publish them for the edification of others. This is, it seems to me from my own experience, a very useful endeavor. In asking about how many hybrids there were in nature (as I was, at that time, engaged in assessing the various speciation forces and their importance), I was greeted with blank stares. No one knew. For a period of some 20 years, I then gathered these references and was astonished to learn that there were at least (since I could not cover all the literature) 27,000 hybrids. I therefore concluded that recombination was an important factor, something which can be stated only by someone who knows.

In the looseleaf book under consideration, there is, on page G2-57-60 several articles on the manna of the Bible (lichens, tree exudates, etc.) which might be of interest since this information is hard to come by. Manna is in the Geophysics series because manna came "down from the sky."

Certainly every library should have this set of books and the members of the American Scientific Affiliation, in various disciplines as they are, might care for certain volumes relating to their speciality.

Reviewed by Irving W. Knobloch, Department of Botany & Plant Pathology, Michigan State University, East Lansing, Michigan.

CLOSE ENCOUNTERS - A Better Explanation by Clifford Wilson and John Weldon, published by Master Books, a division of Creation Life Publishers, San Diego, California, 1978, 368 pages, \$2.95 in paper.

Dr. Wilson and Mr. Weldon have joined efforts to produce a volume offering an alternate explanation for the numerous sightings of UFOs and contacts with earth people by their occupants. The book concerns itself only with close encounters of the third kind (CE III), a category that was popularized by the movie of the same name and involves occupants of the UFO. The authors are believers in the reality of the many sightings and contacts as documented in their earlier separately authored books. The first few chapters of this book review the literature and the theories concerning UFOs and contactees. The later chapters detail their better explanation.

They detail and elaborate an ignored or overlooked aspect of many messages transmitted by the UFO extra-

terrestrials, namely, that their teachings are anti-Christian, pro-occult and Eastern mystic in world view and in specifics. Wilson and Weldon ascribe this orientation to demonic sources. Chapter 12 is a warning against involvement in innocent occult activities because they can so easily lead into bondage to the extraterrestrials. Three case histories of people who have toyed with UFOology and nearly become enslaved to it are given in Chapter 14. In Appendix C, the authors analyze three books dealing with the theory that all supernatural elements in the Bible are a result of flying saucers or their inhabitants, including Ezekiel's vision.

The book presents much detail about UFOs that was new to this reviewer, a nominal follower of these events, and information about their anti-Christian teachings and emphases was enlightening.

Reviewed by Robert Carlstrom, Columbia, Maryland 21045.

THE GENESIS RECORD by Henry M. Morris, Baker Book House, Grand Rapids, Michigan, 1976, 716 pp.

This commentary on the book of Genesis is a monumental work from the fertile pen of a man who has a rare combination of characteristics which together have made him God's man for this task. Dr. Morris is a scientist, has deep spiritual insight, and a capacity to write in a way which not only holds the attention, but which has inspired thousands to go on and study further for themselves the themes on which he writes. In the case of the book of Genesis, such a work was really needed, as the usual work by theologians tends either to make blunders, or to be shallow in many of the areas where Genesis touches on science. Dr. Morris instead writes with a penetrating and thought-provoking insight that is fresh and interesting.

In the Introduction he sets out clearly his position. He believes the entire book of Genesis, including the first eleven chapters, to be inspired of God. He supports this with the fact there are at least 200 allusions to Genesis in the New Testament, over 100 of these to the first eleven chapters; that every one of the NT authors refers to Genesis 1-11, and that Christ Himself quotes or refers to this often challenged portion of Scripture at least six times. Since these references in the NT consider Genesis as historically true and authoritative, the inspiration of the NT stands or falls with Genesis.

He refutes the documentary hypothesis that Genesis and the rest of the Pentateuch were compiled from later documents and attributed to Moses so that they would be accepted as authoritative. He shows briefly that in the points in which the documentary theory was testable historically, it has been proven false by archeological discoveries, which instead confirm the historical statements of the Bible.

In the second chapter, which deals with the creation of the world, Dr. Morris points out that the Bible's statement that, "In the beginning God created", is the only explanation of the origin of matter, as all other philosophies start with matter (or energy) as pre-

existent and then deal with its evolution. He then begins a narrative commentary which deals with every verse of Genesis.

Not all will agree with all of his interpretations, but this is perhaps true of any commentary. Some of his controversial interpretations are: His idea that there was no death before Adam sinned; that most fossils are a result of the flood; that creation was recent and that it was accomplished in six literal 24-hour days.

While on the one hand Dr. Morris bends over backwards to avoid excessive typology, on the other he comes out with some strange speculations that are at the same time one of the strengths and one of the weaknesses of his work. They are a strength, because the reader becomes actively involved in agreeing or disagreeing with him and thinking through the implications, but at the same time a weakness particularly for those who want to read a commentary uncritically accepting all its interpretations. An example is his description of the creation of Eve. He states,

In any case, God put Adam into a 'deep sleep' and, while Adam slept, performed a marvelous surgical operation. Since this sleep was not necessary to prevent pain (as yet, there was no knowledge of pain or suffering in the world), there must have been some profound spiritual picture in the action. . . .

It is difficult for me to accept the statement that pain was not yet in existence. Since pain is given to protect us from continuing to hurt ourselves, I would expect the nerves to have been created completely functional from the beginning. In Genesis 3:16 at the Fall, God says that He will multiply Eve's pain in child bearing, inferring the possibility of pain before the Fall also.

In this case, Morris' reason is evidently to make it fit with his theory that there was no death, even among animal life before the fall. From my point of view, tempered by living 12 years in Italy, where the dominant theology is built on logical reasoning, and seeing how far from biblical truth we can be taken by doctrine built in this way, I feel that this sort of thing in the long run weakens rather than strengthens his work.

Moving from the account of creation to the area of God's relation to man in the rest of Genesis, I was not expecting too much, feeling that since Dr. Morris is a scientist, his interest and area of ability to make a real contribution would lie mostly in the chapters dealing with creation. I was therefore happily surprised to find not only good interpretation, but also a succession of heart-gripping applications of God's word to my own life, which for me made the book an excellent devotional aid. In fact, while I almost never use anything other than original study of the Bible for my own quiet time, I found myself daily picking up Morris' book for this purpose. It has each passage written out, and then followed by comments given with real spiritual insight that warms the heart and helps the life.

This part however, is also interspersed with occasional speculations which stimulated me to alternately positive and negative reactions, but at least kept the book lively.

I can almost guarantee that there will be a number of things you will disagree with in Morris' commentary, some of them radically perhaps, but I can hardly see

how any reader of this journal can get along without it.

Reviewed by Thomas F. Heinze, 2405 1st Street, Tillamook, Oregon 97141.

THE PROBLEM OF EVOLUTION: A Study of the Philosophical Repercussions of Evolutionary Science by John N. Deely and Raymond J. Nogar, New York: Appleton-Century-Crofts, 1973, 470 pp., \$13.50.

This work basically is naturalistic with some Roman Catholic inclination especially in contributions by the late junior author, who had been a priest and mentor of the senior author. Two premises are held: (1) that the living world developed by evolution and (2) that the concept of natural selection and disclosures of modern genetics have rendered untenable contrary explanations of evolution. Man, considered to be part of the phylogenetic continuity and "evolution become conscious of itself", is engaged in various noetic and ontological extinctions such as represented by this book.

The volume is divided into: I. Historical Perspectives (cosmological, biological, psycho-social), 82 pages; II. Contemporary Discussions, 320 pages; and III. Bibliography, 32 pages; these being followed by a 7-page "Retrospect" and a 25-page Index. There are many footnotes. The extensive second section has, in addition to contributions by Deely and Nogar, reprints from T. Dobzhansky, L. A. White, J. Steward, D. Bidney, M. J. Adler, F. J. Ayala, J. Dewey, B. M. Ashley, C. H. Waddington, A. M. Dubarle, P. T. de Chardin, J. Huxley, and L. Eiseley. In this miscellany papers range from evolutionary humanism with its rejection of the supernatural (Huxley) to a theo- and Christocentric repudiation of humanism (Nogar). The bibliography is divided into six sections; and among the host of evolutionary publications here I spotted two (D. Murray and P. A. Zimmerman) which tend to be anti-evolutionary, but these were not discussed in the text.

"The problem of evolution" to the authors is not whether to reject macroevolution on a scientific or philosophic basis (although some of the problems are mentioned), but how to incorporate into our family of thoughts the evolutionary baby now on our doorstep (or already crawling inside the door). For these authors evolution is epigenetic, random and opportunistic; and the ascent of evolutionary science is the greatest dialectical epistemological advance of modern times. They say:

The decisive difference between the classical and contemporary world-view turns out to be neither a preference for typically distinct explanatory modes nor a mere transformation in the physical image of the universe, but rather a *datum*, an element of experience for which no logical construction can be substituted and upon which all the logical constructions of the science of nature finally rest, the realization, specifically, that nothing in the universe is exempt from radical transformation. (pp. 52-53)

There is nothing in the known evidence to warrant the assumption that evolution is the expression or product of a single, harmonious plan or law, rather than of a multitude of lines of causality in a universe full of chance and accident. This may seem to be an obvious

point, but obvious or not, its importance cannot be overstressed. (p. 10)

Near the end of the book effort is made to brighten the bleakness of an existential pessimism by announcing man's current responsibility.

Whatever shape our world may take in the next generation or in the next ten generations, for post-Darwinian man there will be no escape from responsibility. With man evolution has passed from a drift to a conscious destiny. We now know that it is we who are responsible for shaping the future. We have passed from drift to choice; and even if our choice shall be to continue drifting, it remains our choice. (p. 401)

I for one do not find this especially challenging; for we would be somewhat like a ship at sea with neither reason for being there nor port of origin or destiny; and if we so choose, we can move the rudder. But, in addition to questioning the authors' position regarding man (and animal) origins, I feel that the authors are not able satisfactorily to demonstrate that man could escape his deterministic framework to gain freedom necessary to affect the future causal sequence of events. Therefore, while he may in fact be able to move the rudder, he would have no reason to believe that he actually could be able to steer the ship.

While reading the book, I wondered if the senior author, Deely, actually shares the same vital faith in Christ and God's biblical revelation that the junior author evidences; or is our God merely gratuitous in his evolutionism? Is Deely the first generation fruit of a theologian's evolutionistic indoctrination? I should prefer to believe that Deely writes as he does hoping that with candid scholarship he may attract naturalistics who are outside the fold. But I wonder! As Nogar says on p. 397: "Creatureliness can be hopeful, expectant of promise, only so long as the Creator remains in sight."

Reviewed by Wayne Frair, The King's College, Briarcliff Manor, New York 10510.

THE CREATION EVOLUTION CONTROVERSY by Randy J. Wysong, D.V.M., Inquiry Press, P.O. Box 1766 East Lansing, Michigan, 48823, 1976, 455 pages. Pb. \$7.95, HB \$15.00.

The author, Randy Wysong, has his Doctor's Degree in Veterinary Medicine from Michigan State University. He has been in private practice for a number of years and teaches a college course on origins. This book is the result of the information he has used in his course.

Ever since the modern theory of evolution by natural selection was proposed by Herbert Spencer and Charles Darwin, debate has raged as to which theory, creationism or evolution, more fully explains the facts. The debate, which tends to be characterized by a high degree of emotionalism on both sides, peaked in the '20's with the Scopes trial, and was relatively dormant in the '30's and '40's. The formation of several Creationist movements in the early '60's and re-examination of some of the difficulties with the evolutionary posi-

tion, has produced a strong resurgence of this debate. Evidence of this debate can be seen in the flourishing of a large number of creationistic organizations, most of them having their inception only a few years ago.

Today there are literally hundreds of books published espousing the various "creationist" positions, but unfortunately there is a tendency for a dichotomy of views to crystallize as probably never before. Many of the more vocal creationists advertise their position as being the most scientifically correct concept, and the evolutionary position as a "plot," foolish and suicidal. Many evolutionists, on the other hand, tend to characterize the creationist as uninformed, unaware, ignorant and uneducated, feeling the evolutionary position is the only "scientifically" correct position. Tragically, often people on both sides never study in depth the "other" side. Many do not have an intellectual understanding of "the other side", realizing one can hold to the "other side", and at the same time be intelligent and informed. Wysong's, *The Creation-Evolution Controversy*, is an honest attempt to put forth both sides in a logical, understanding manner so the reader can understand both positions, regardless of the position he opts for. In reality, Wysong points out, most of us are somewhere between "atheistic evolution" and "instant divine fiat creation," and few are at the extremes. While the position Wysong takes is clearly for creationism, the evolutionary position is, in most cases, adequately and fairly presented.

Importantly, the book begins with a discussion of methodology, i.e., the scientific method and other "methods of knowing." This background material is necessary for us to understand the controversy adequately. Unfortunately, many of those with definite opinions are not familiar with the nuances of the scientific method and the methods used to evaluate the sources of data. Importantly, in this area emotions strongly influence many of our views, and the first step to eliminate emotional distortions (and the irrationalities which result) is a clear differentiation of verifiable data from suppositions based upon emotions, desires, and even defense mechanisms. Wysong attempts to do this.

A difference between Wysong's discussion and many others is his commendable use of reasoning and semi-formal logic. Complex suppositions are broken down into the basic problem, the data are presented on each side, and then conclusions are postulated. The effort to incorporate a large amount of "pure reasoning" is somewhat unusual in discussions of this kind. While reasoning of some type, of course, is included in all discussions, the reasoning is more of a flow of ideas designed to reach a predetermined conclusion, and not a dialogue flow where the problem is broken down into its basic parts, data are referred to and alternatives are discussed, and then evidence is summarized. Although evolutionary theories are most always based on scholarly erudition, there is typically a lack of serious considerations of various alternative viewpoints.

The discussion of biochemistry illustrates this technique. Briefly, there are two main amino acid enantiomers (amino acids which are alike atomically but are different mechanically), the L and D forms. Although amino acids can exist in both forms, all proteins derived from living organisms, with insignificant excep-

tations, are composed only of the L forms. Yet when amino acids are synthesized in the laboratory for commercial use, or when they are formed under conditions which theoretically duplicate the conditions found in the early earth, there is always a 50-50% mixture of D and L forms. Creationists would use this to support the contention that amino acids were not formed randomly. Evolutionists would argue that the L and D forms exist randomly, but natural selection has selected the D forms. But since both the D and L forms function in the life process in identical ways, i.e., there is no evidence that the organism can differentiate L or D forms, and if there is no difference between the two compounds chemically, the selection advantage of "L" forms is unclear. On the other hand, the design argument does not provide an answer as to why "L" forms were preferred to "D" forms. Why should purposeful design prefer "L" forms if there is no reason to select this over the other design? If there is no advantage to "L" forms the choice of one of two equally attractive alternatives would be indicated. Chance, though, would select 50-50, not 100-0 as the design argument would predict.

The format of the book is first to define terms and then present the needed background material. A specific area, such as thermodynamics, is selected and discussed; then the evidence for evolution is presented, and lastly the evidence for creation. A complete discussion of the topics reviewed could take volumes considering the fact that over 18,000 books have been published in this area. The author is therefore forced to skim only the highlights of the chemical and mechanical principles and laws relative to the origin of plant and animal life.

A large number of photographs, drawings, charts, and diagrams clarify the discussion. This, plus the fact that the author has taken pains to discuss complex scientific ideas in a clear, readable fashion, enables the book to be utilized with profit by laymen and scientists alike.

Wysong uses an impressive array of information from biochemistry, anatomy, history, geology and philosophy to discuss the creation-evolution controversy. This book is an excellent review for those who want to look at both sides of the controversy. Tragically, though, few evolutionists will seriously explore the merits of the position called creationism, and probably few creationists will seriously explore, even in an effort to understand the evidence, the reasoning behind the various modern evolutionary theories purported to explain the existence of the Universe.

Because the book has amassed a wide variety of information about creationism, including hundreds of references, many from secular sources and reputable journals, the book is a good general review of the evolution-creation controversy for both the beginning and advanced student. As Wysong was a committed evolutionist during most of his undergraduate and graduate studies, he understands the evolutionary position and is able to present it, in many cases, quite accurately, even though when the book was written the writer opted for the creationist position.

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ROCKS, RELICS, AND BIBLICAL RELIABILITY by Clifford A. Wilson, Christian Free University Curriculum, Grand Rapids, Michigan: Zondervan Publishing House, 1977, 141 pp.

One comes to a review of this book with mixed emotions. Evangelical Christians welcome such a scholarly presentation of archaeological research supporting the reliability of the Biblical text. But the Gospel depends on faith, not concrete proof. The author of the book of Hebrews states in chapter eleven, verse six:

For whoever would draw near to God must believe that He exists and that He rewards those who seek Him (RSV).

While it is based upon the biblical message, in the final analysis conversion is an existential experience, a leap of faith into the arms of God. Believers accept the Bible as true, the eternal Word of God, and in turn rejoice over all scientific corroboration of its contents. But they do not require it. One is reminded of Jesus' remark to Thomas, the one who demanded visible proof:

Have you believed because you have seen Me? Blessed are those who have not seen and believe (John 20:29, RSV).

In line with the purpose of the Probe Ministries, the organization responsible for this curriculum series, these books covering the various academic disciplines provide an evangelical alternative for college and university students. To meet this objective the book being reviewed is eminently qualified. It provides fascinating reading, is scholarly and devout.

The author begins with some worthy observations:

Let it be immediately said that we do not suggest that archaeology "proves" the Bible. The Bible is primarily a book of spiritual assertions, and as such its "proof" is beyond history.

We do not have the original manuscripts of the Bible, and it is good that we do not. Because mankind is constantly idolizing religious relics, doubtless the manuscripts of the Bible would be worshipped if they were in existence. The noteworthy thing is that the copies we have are remarkably preserved and amazingly accurate. The amazing accuracy of the texts used in translation can be illustrated by the findings from the Dead Sea Scrolls. . . . not one single doctrine of the Bible has been altered following the discovery of these scrolls.

The author discusses at length the records of Babylonia and Assyria, their myths and legends, creation and flood stories, ages of ancient people, and compares them with Genesis 1-11. He states that "this is an area of Scripture that consistently turns out to be historical after all."

Referring to the Genesis 2:5-6 account, he suggests the "water-vapor blanket" theory of A. E. Ringwood, submitted in January 1970 to the Lunar Science conference at Houston, Texas. This would, he feels, explain the Flood, long-lived men protected by water-vapor from ultraviolet rays, the sudden death of animals in non-tropical areas with large quantities of undigested food in their stomachs, etc.

The Genesis 11 account of the Tower of Babel is no longer looked upon as being without foundation, states the author. Considerable amount of evidence suggests that at one time men did speak one language, and their later divergencies had their origin in the general area of Sumer, the biblical Shinar.

In concluding his discussion of Genesis 1-11, he makes a significant comment:

The fact is, many seemingly mythological records must be taken seriously after all. As we compare the Biblical with the nonbiblical accounts, we find that these records of early Genesis are far more acceptable than seemed possible a century ago. Tablet after tablet has been recovered, and we are able to see similarities to many Bible documents. It is significant, too, that the Bible records have a habit of proving superior to the distorted and often grotesque records of the same events as they are known from the libraries of Israel's neighbors.

The story of the destruction of Sodom and Gomorrah has been explained. Earthquake activity is indicated, with various layers of the earth disrupted and hurled high into the air. Bitumen is plentiful there, with the obvious picture of fiery bituminous pitch (brimstone) raining down from heaven.

The author also deals with the now generally discredited "documentary hypothesis" of the Pentateuch. He refers to the researches of George Mendenhall of the University of Michigan, supporting the unity of the books and the Mosaic authorship, the early dating of these writings and their superiority over other legal codes of the same period.

He suggests geological activity as making possible the crossing of the Jordan River by Joshua and the Hebrew people, as well as the walls of Jericho falling down to effect its destruction by the army of Israel. In this regard he makes a cogent observation:

Sometimes the miracles of the Bible are miracles of synchronization, or timing. If God is in control of the forces of nature, He can cause those forces to be brought together at the right moment of time to fulfill His purposes.

However, there is a caution that should be observed, convincing as the above quotation seems to be. The very definition of a miracle is something that occurs "outside" known laws of nature. In the biblical sense it is a supernatural intervention of God. This reviewer is reminded of the third grade boy who had just listened to his Sunday School teacher explain the escape from Egypt of the Israelites by crossing the Sea of Reeds, where the water is usually only twelve inches deep. "Golly!" the boy exclaimed. "What a miracle! God drowned the Egyptians, chariots and all, in only one foot of muddy water!"

The author spends considerable time dealing with the Dead Sea Scrolls. Parts of every book of the Old Testament have been found, except Esther. The Bedouin people had found many writings long before 1947, but had burned them because of the fragrant aroma they gave off. This may explain why Esther is missing, plus parts of the other books as well. The Deutero-Isaiah theory, which few scholars hold today, has been disproven by these scrolls, and their early biblical date affirmed.

The author describes a modern archaeologist as working with a Bible in one hand and a trowel in the other. He concludes the book with his conviction "that the Bible is not only the ancient world's most reliable history textbook; it is God's revelation of Himself in Jesus Christ!"

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STUDENT ESSAYS ON SCIENCE AND CREATION, VOLUME 1 by Dennis A. Wagner, editor, Coleta, California: Creation Society of Santa Barbara, 1976, 150 pp.

While much of this book review may appear negative, it is the conviction of the writer that both practitioners and teachers of science need to become familiar with the type of mind set and pre-determined rationalization that characterize a considerable segment of the evangelical Christian community. Thus, it would be of value to read this treatise whatever one's convictions may be.

This review is written by one who does not himself accept the evolutionary hypothesis, whatever validity that may merit. But he would not want to support his views with the reasoning and quasi-scientific data found in this book!

A quotation apropos to this discussion is that of the German theologian Dietrich Bonhoeffer: "Do not try to make the Bible relevant. Its relevance is axiomatic. . . . Do not defend God's Word but testify to it. . . . Trust to the Word. It is a ship loaded to the very limits of her capacity."

Two books which present a better defense of the creationist position are Harold Hill's, *From God to You by Way of the Zoo* (1976) and *Modern Science and the Genesis Record*, by Harry Rimmer (1973).

The book being reviewed is more philosophical than scientific. "Two glaring weaknesses are evident at once. No mention is made of theistic evolution. Biblical creationism vs. atheistic, or "chance," evolutionism hold the stage. Thus, it does not speak to the many evangelical Christians who are in the former category.

Secondly, three of the four authors are undergraduate students, the other holds a B.S. degree in engineering. The Creationist Society of Santa Barbara was founded and is run by college students, mainly of that institution. They have had no chance for mature graduate research. However, as it has been stated earlier, many "born again" Christians attempt to bolster their faith by this kind of intellectual gymnastics.

Most people find objectivity difficult. So do these authors. They come to the discussion with pre-conceived conclusions. Creationism is true; the evolutionary hypothesis false. The confrontation is made, and all data must be selective and bent to prove their position. Of course, the reverse is evident all too often. Scientists come to the discussion with pro-evolutionist convictions, and cannot see the other side at all.

A statement is made near the beginning of the book which is worthy of quoting, though the authors do not seem to remember it after that.

Thus we conclude that neither creation nor evolution can be considered scientific theories, in the true sense. They are both unobservable, unrepeatable and unfalsifiable. Creation and evolution are postulates, working hypotheses by which we can interpret data. They are systems of thought, not scientific facts in themselves, and therefore equally scientific (or unscientific). . . . Belief in the theory of evolution is thus *exactly parallel* to belief in special creation—both are concepts which believers know to be true, but neither, up to the present, has been capable of proof.

The authors quote D.M.S. Watson who describes evolution as,

. . . a theory universally accepted not because it can be proved by logical coherent evidence to be true, but because the only alternative, special creation, is clearly incredible.

This gets to the core of the whole problem. The motive behind nontheistic evolution is, in the mind of this reviewer, to leave God out—not involved, not necessary, non-existent. Many evangelical Christians have adopted this secular view and in turn adapted it to their biblical interpretation. It is futile to engage in any debate. Salvation depends on an acceptance of Jesus Christ, as Son of God and Savior, and his literal resurrection from the grave. Important as a correct interpretation of the biblical record may be to the evangelical believer it is not a pre-requisite for the Atonement.

The authors contend that creationism should be taught along with evolution in the public schools. It would indeed need an instructor holding that point of view. If taught by a non-theistic evolutionist it would result in a ludicrous situation. At times the authors are guilty of faulty exegesis of quoted Scripture passages, with which they attempt to prove their arguments. This, coupled with the associated derived specious reasoning does not help their cause. Frequently they engage in ridicule of some professors at the University of California at Santa Barbara, which the authors attend. This hardly is a plus item.

They suggest that if the views of creationists were to prevail they would urge the continuance of research into evolution to see if any new evidences or proofs could be found. Such a high degree of tolerance is difficult to believe as a real possibility.

One of the most glaring weaknesses of the whole book is the oft stated belief, even the foundation of their creationism position, that the universe was created in six twenty-four hour days, about 10,000 years ago. Even the Scofield Bible does not make that claim, nor do many well known fundamentalist biblical scholars. It seems wholly extraneous to their cause. No consideration is made of the "day-age" theory, the "gap" theory, or the "chaos" theory, held by many evangelical Christians. The authors do not discuss the "local flood" theory, but insist on a general deluge occurring less than 6000 years ago.

A few observations in closing. One's views on evolution depend on the attitude one takes to the study of the Bible—interpretation, understanding of hermeneutics, lower and higher criticism of the text, even a working knowledge of Greek and Hebrew. In either case creationist or theistic evolution theories demand "faith."

One's commitment to Christ, and his evangelical status, are *not* at stake. One or the other theory is wrong. But its adherents are not any less Christian. One group has made an erroneous interpretation of the Scripture both hold to be the true and eternal Word of God. The only untenable and unChristian view is that of the non-theistic evolutionist. He needs the concern and prayers of us all!

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Science and Miracle: Another Approach

Recently I sat down one evening to read the December 1978 issue of the *Journal ASA* and found its three articles on Science vs. Miracle interesting and stimulating. But at the same time, I could not help feeling that really they had serious difficulties, for none of them seemed to deal with the question from a specifically Christian point of view. For people writing in the *Journal* on this subject this seemed to be rather strange. Hence this article.

John Montgomery stressed at the beginning of his article that he felt that miracle, particularly the resurrection of Jesus Christ, was a sound evidence of the Christian position. This theme he has reiterated in a great number of places over the past years. Yet I was astonished to read on in the article and discover that his whole argument was purely rationalistic in an endeavour to convince the unbeliever that miracles proved the Gospel. Approaching the whole question with his particular presuppositions, which he does not seem to recognize as being presuppositions, he maintains

"that the more willing we are to allow empirical evidence of the unique and non-analogous to stand, modifying our general conceptions of regularity accordingly, the better scientists and philosophers we become. And the more willing we are as Christians to employ the biblical and classic miracle apologetic, the more effectively we can give reason to our dark age of secularism for the hope that is within us."

So, presumably, on the basis of an empirical proof of the truth of miracle, we can convince the unbeliever who will then be persuaded to accept the Gospel.

When I turned to Stephen Wykstra's reply to Montgomery I hoped that he would produce an article which did not have nearly so much of Bishop Butler in it. I found that he did criticize Montgomery's position effectively, but when it came to looking for something positive I was disappointed. Although he did not like what Montgomery had to say about Flew's book, he seemed to follow much the same scientific-philosophical method without producing anything really positive in the way of a *Christian* argument over against Flew and his cohorts.

The Basingers' article I found much more helpful for they sought to define what a miracle is. But here again I discovered not a biblical, but a philosophical discussion which sounded all very nice, but really produced nothing. They ended up with what they called a miracle, but which in theological terms would simply be providence. This they called "the 'weaker' concept of miracle" which they think "is sufficient for an intellectually defensible and experientially satisfying theistic belief system."

As on who has taught in secular universities for nigh-on to forty years, I am afraid that I cannot see any of these articles having much effect upon my unbelieving colleagues, whether in the arts, social science or scientific departments. Their response generally would be, if they were polite: "So what?" If they were not polite, they would term the arguments not merely irrelevant, but wrong. I know for I have tried such argumentation, but it does not work.

One reason is that although (as the Basingers point out) a miracle is a non-explicable phenomenon, the average scientist will simply say, "Give us time and we shall explain it." Behind this assurance they have a good deal to support them. When the Black Death hit Europe in the mid-fourteenth century everybody thought the Plague was the result of magic and witchcraft, for there was no logical explanation for the way it acted. It was not until the nineteenth century that the explanation was finally shown to be the bubonic bacteria in the flea which was carried on the back of the Chinese rat. The history of science gives us great numbers of similar experiences. Therefore, when we present something to the scientist which we call a miracle, his answer almost inevitably will be, "Just give me time and I shall have the explanation." The inexplicable event never really brings conviction of divine intervention in history.

Even if it did, there is another loophole for the unbeliever who does not wish to be convinced: chance. As Sir James Jeans states in the opening pages of *The Mysterious Universe*, everything which happens is ultimately by accident - even all the books in the British Museum, presumably including Jeans' *Mysterious Universe* - so even if Montgomery proves scientifically that Christ rose on the third day, it would really signify only another accident. As Jeans puts it, if only time lasts long enough every possible accident will happen. Proving a miracle really has no compelling impact on the thinking of one whose presuppositions are all geared to the acceptance of an ultimately chance universe.

Because of these two attitudes to the matter of miracle, the non-Christian's approach is virtually impregnable if we attempt to argue with him on his own ground. For then we are approaching him and accepting his basic presupposition of the basic normalcy of the human intellect and the validity of the scientific method for all matters relating to a law or chance controlled physical universe. He can then either say "Wait and we shall have an explanation," or he can interpret everything we put forward to prove a miracle as simply a matter of accident in a completely accidental world. On a purely empirical basis I do not think that the Christian can convince anyone of the apologetic value of a miracle, for the Christian in attempting to do so has surrendered the fort to the enemy by assuming a common ground of argument.

This is why, as a Christian, I object to the methods employed in all three articles. While they presumably accept the authority and the infallibility of the Bible, they do not turn to it for their view of the nature and purpose of a miracle. Instead they try to identify what a miracle is from some philosophical-scientific basis which ends up as simply something which will cause wonderment and awe, or an inexplicable happening. Consequently they have no basis for using miracles as an instrument of apologetics. In fact, a follower of Zoroaster would have as much right to say that his religion is proven by this reasoning. The biblical view of miracle is very different.

At the same time, as pointed out in connection with the non-Christian reaction to their reasoning, the authors of the articles seem to hold that an empirical proof for miracles can be produced which will convict the non-Christian of the truth of the Christian Gospel. But the Bible states specifically that this is not the case. This was the whole point of Paul's argument with the Corinthians as set forth in the first two chapters of his first letter. Merely proving that something inexplicable has happened means nothing, for it could have happened merely by chance or it may be explicable after more research. This is why Paul could say "But the natural man does not receive the things of the Spirit of God for they are foolishness to him, and he is not able to know them because they are judged spiritually." (1 Cor. 2:14)

To deal with the problem of miracle and science, therefore, we must go first of all to the Bible itself to understand the nature of a miracle. Here we see the miracle, whether in the Old or the New Testament, as an act of God, whether it is the rolling back of the Red Sea for the Israelites or the raising of Christ from the dead. But it is more. It is an act of God without, above or even contrary to means, i.e., secondary causes. It is special direct action by the divine power to accomplish God's purpose and counsel. Therefore, while man may be able to observe the result, *he cannot by any empirical means* actually prove that this is a miracle, for in the

very nature of the case God's actions are not subject to empirical investigation, as for instance we would conduct an experiment in a laboratory. God's actions are beyond the scope of both our minds and our instruments.

We may use the term "miracle" loosely as do the Basingers when they give as an example a student receiving \$500 from a relative who has had the idea of sending this money to the student who has prayed for it. But is that truly a miracle? Is it not really a special providence, even though we cannot explain it empirically at this point? It is quite possible that there are certain psychological secondary causes which the Spirit could put in motion.

This in turn raises the question of the purpose of a miracle, which the writers of the articles really do not touch. As we look at the Scriptures we see that miracles are always for the purpose of accomplishing God's purpose of judgment and redemption in history, not just for meeting the needs or wishes of some individual. And God uses miracles as a means of revealing his justice and his grace to his people by his action. Therefore, a miracle is not just a bare event in history, but is pregnant with meaning and significance to those who have the ability and understanding to see. One cannot speak of such an event in purely historical terms, for although it takes place in history and is observed by man in history, it has meaning far beyond itself; one might say that it has eternal meaning.

Yet that a miracle is indeed a miracle and that it has this eternal meaning is by no means obvious. This comes out in the reasoning in the articles in question, for the question of determining that a miracle is truly a miracle and not just some event for which man has no immediate explanation or which is a product of chance, can be known only as God himself makes the miraculous character of the event known. This means that a miracle and its interpretation is grasped by the human observer only through divine revelation, i.e., only when God says it is a miracle with a certain significance. This revelation comes through the Holy Spirit speaking in the Scriptures of the Old and New Testament.

Some may object to this statement, but for the Christian where else does one find God's revelation of himself and of his actions? Only in the Bible do we learn when and how God acts in history. True, we can guess at events which take place in history outside the range of biblical interpretation, but do we have any proof that some inexplicable event is in fact God's direct, miraculous operation? I do not think so. It would seem clear then, that to the Christian the only true miracles of which we can have a certain knowledge are those which are recorded for us in the Scriptures, which also give us their interpretation. From the bare fact of Christ's resurrection, can we by philosophical deduction conclude that "he was raised for our justification"? I do not think so. We know this because of the interpretation of his resurrection which he himself gave and which the apostolic writers, such as Paul in I Corinthians 15, set forth. To know and to understand a miracle, therefore, it is necessary to go back to the Scriptures as our source of information.

This means, however, that we must start with the inspiration and authority of Scripture, not with miracles. If we believe that the Bible is the Word of God, then we can accept miracles without any difficulty. But if we do not, all the philosophizing in the world will never bring the conviction that miracles do happen. Man will always produce some other explanation of the event, or simply deny it, because his presuppositions tell him that a miracle cannot happen, even as the Jewish authorities, despite all the evidence and testimony to the contrary, denied that Christ had risen from the dead. (Matt. 28:11ff) Thus, when Christians seek to use miracles to prove to non-Christians that Christianity is true, they are in fact getting nowhere, for "a man convinced against his will is of the same opinion still."

Since the non-Christian, or the natural man of I Cor. 2:14, will not accept the authority of the Scriptures, how can he be brought to believe that the testimony of the Scriptures is true? In the seventeenth and eighteenth centuries the tendency was to say that we can prove that they are inspired and therefore authoritative, and there is much the same attitude among many evangelicals today. But as Calvin pointed out in the sixteenth century, the Bible itself states that no one is going to believe the testimony of the Scriptures apart

from, and without, the internal testimony of the Holy Spirit. (John 3:5ff, 6:6ff; I Cor. 1:21ff). Only when one has become a new creature in Christ through regeneration, will he accept the teaching of the Scriptures, for only then will all things become new (2 Cor. 5:17). Then and then alone will he see and accept the validity of the evidence for the resurrection of Christ, and for any other miracle recorded in the Scriptures. Therefore, only as the Holy Spirit opens the eyes of the spiritually blind will philosophical and scientific arguments make any sense.

From this point of view, then, the argument over the relation of miracle to science is really irrelevant. The non-Christian will not accept the idea of miracle as something which has valid meaning, as Christ pointed out in referring to the idea of Abraham being sent to speak to the brothers of Dives in the parable. (Luke 16:30, 31). They will not believe even if one rises from the dead, and we can see how true this was in the reaction of the authorities to the Easter resurrection. To the Christian, however, there should be no problem. If Christ is Lord over all creation, as Paul states in Colossians 1:15ff, why should there be any difficulty? As Calvin, who had much to do with the development of the idea of natural law pointed out, if all such law is the secret working of the Holy Spirit in creation, why should the idea of miracle be in any way in conflict with science? Science is based upon the usual, uniform way in which creation operates, but if God wills to interfere or act without following this uniform way of operation, what will prevent him? As Lord of creation he can do what he wills in this regard without upsetting the general and normal way in which nature moves. Moreover, if he also gives us in the Scriptures an explanation of the fact that he has acted in this way and why, is that not sufficient?

But what good are miracles in an apologetic framework if they are limited to Scripture and require the sight-giving action of the Holy Spirit? In the seventeenth and eighteenth century, particularly before Hume, men tended to accept the Scriptures as being true historically, and so would listen to the arguments based upon them. With the rise of Humeian and Kantian scepticism coupled with biblical higher criticism and materialistic evolutionism, this acceptance has gone. In this more sophisticated (?) age quite frankly I do not think that the citing of evidence for miracles really has all that much effect, with two exceptions. First of all, it strengthens the faith of the Christian, giving greater confidence that the Bible is indeed the Word of God and that Christ is our living risen Savior. Secondly, as we present the evidence to the non-Christian we must trust that God in his grace will open the eyes of the blind that they may see that the evidence is convincing, convincing enough to bring them to faith in Jesus Christ as Savior and Lord. But to those who remain blind miracles will have no effect, for like the Athenians on Mars Hill when they heard of the resurrection of the dead, they will mock the whole doctrine. (Acts. 17:32).

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Science and Progress

That humankind has changed cannot be questioned, but the degree and direction of that change are open for debate. We would like to believe that we have made progress, taken a definitive step forward, but have we? We have traveled for millenia by camel, horseback, horsedrawn cart or chariot, and in many instances, by foot. Only in recent history, has our mode of travel "advanced." Today, instead of chariots pulled by horses, we drive and ride in chariots of other kinds. A god called gasoline fuels our machines of transportation, and we consider ourselves highly sophisticated for having harnessed this deity's power. But have travel modes really changed for the better? Has progress indeed been made? It is true that we travel faster, but the price we have paid for speed is almost immeasurable. Our clean air is fast disappearing; death and disability due to jet age travel is of monumental proportion; the world's supplies of petroleum are fast being exhausted in the service of convenient, quick business and pleasure travel for a relatively small number of the world's peoples.

Often, when scientists and philosophers of science write on the subject of progress, they state that our lot has improved greatly, especially since the rise of modern science. This improvement is usually defined in terms of longer lives, more relaxed life styles, less disease, and more power (both individual and societal). But are there qualities inherent in longer life, more relaxed life styles, less disease, and more power which clearly establish them as improvements? The answer must be no, for one can show that longer lives and less disease for some contribute to shorter lives and more disease for others. The chronically ill and elderly of our societies are now living long lives, and are thus helping to reduce the food supply for the more healthy and productive segments of society. The answer must be no also, because it can be easily demonstrated that more power and more relaxed life styles have been as detrimental as they have been helpful. The gluttony and all-around over-indulgence of a leisure society leaves scars in the forms of obesity, alcoholism, and drug addiction. The power and freedom which come to us as individuals and societies through modern technologies may soon be entities of the past, as they are contributing to air and land pollution, waste, and overall degradation.

André Cournand sets forth a clear statement on progress in a recent issue of *Science*. He says in an article entitled "The Code of the Scientist and its Relationship to Ethics":

"... we live in a time in which the industrial countries are experiencing unparalleled technological development, in large part the fruit of science. However, the benefits of new technologies are distributed in a grossly unbalanced manner, not only within individualized industrialized countries, but also among all the nations of the world. Overcrowding and environmental degradation are already significantly reducing the quality of life in the developed nations and give stark evidence of their inability to confront the problems of the future and its planning. Excess population and famine are on the increase in some regions, while in others there are those who enjoy material goods and leisure as never before. In a word, our inability to regulate the processes of cultural and technological development poses a grave threat to our ability to achieve a decent and humane future."¹

Dr. Cournand does not define *decent* and *humane*, but he obviously feels that decency and humanity have something to do with a more equal distribution of the benefits produced by science and technology. Somehow, as modern scientific beings, we believe that our upward mobility in technology will be matched by upward mobility in moral and ethical matters. But as has often been pointed out, our scientific and technological advances have not been followed by improved behavior patterns.

As Christians, we must recognize that the "inability to distribute the benefits of technology" of which Dr. Cournand speaks, is not an inability at all, but a conscious, deliberate and in many cases, a maliciously chosen course of action. Our so-called inability is really a deep-seated selfishness, a desire for self satisfaction at all costs. The Bible - the book which guides our lives and sets our standards for progress - says that progress is not possible apart from man's acknowledgment of the Creator of the universe. Only as we seek to right our standing before our Maker will it become possible for us to change for the better.

Christ, in John 6:38, says that He came to earth not to do His own will, but to do the will of His Father. Whatever discomfort and inconvenience that might have caused Him personally, His mind was set toward fulfilling the will of God from His youngest years. Paul, in Romans 12:1,2 tells us that as Christians, our highest calling is, also, to do the will of the Father in Heaven. If we are to prove the good, acceptable and perfect will of God, we must be able to decipher that will. For this purpose, God has given us the Bible, which He tells us in II Tim. 3:16,17 is God-breathed, and is "profitable for doctrine, for reproof, for correction, for instruction in righteousness: that the man of God may be perfect, thoroughly furnished unto all good works."

Progress, then, for the Christian, must always be defined in light of God's word. Are we, because of our advanced education and technology, really any more progressive in God's sense of the term than was our forebearer Adam and his descendants? Can we really boast (before God) of the accomplishments of modern man? No,

we cannot! It is true that gadgets, politics, government, cities, medicine etc. are more confusing and complex today, but this does not imply progress. And should we deem it proper to boast in the confusion and complexity we often mistakenly call progress, let us beware; for a moment's objective review will reveal the folly in such boasting. Despite 100 years of modern science, education and the "age of aquarius," we have more murder, rape, theft and general skulduggery than at any time in our history. And, though the Western world has luxuries only dreamed of by the majority of the world's peoples, suicide, drug abuse, and general depression run rampant. The United Nations and other peacemaking bodies and individuals practice detente with all the pomp and circumstance moderns can muster, but peace is nowhere to be seen. Why, if we have advanced so, do we have such unsolvable problems? Faith in, and love of, our own power to do is fruitless, says God (I John 2:15-17) and will bring destruction, for all our progress will someday burn up as wood, hay, and stubble. Festo Kivengere states, in his contribution to *At the Edge of Hope*:

"Progress, what a charming word; it carries a fascinating attraction - a hope for the better! It is a beckoning ideal motivating action for improvement and forward movement. But progress to what? To where? If progress loses its goal, it becomes its own goal and loses its control and balance, consuming itself by boring repetition. It is the transcendent dimension - "in Christ" - that gives progress a human face and a meaningful direction. Progress is saved from dehumanization only as it is directed toward him from whom comes the light shining in the darkness of our history. Progress must be kept under the control of God's love."²

A larger house or church, a better car, a more important job by the world's standards - these, then, cannot be considered progress for the Christian. Twentieth century humankind's obsession for the latest and most convenient gadget or toy and the resulting wasteful obsolescence of, in many cases, perfectly adequate predecessors, must not be our way as followers of Christ. What exactly is progress for the Christian? We have said that it is doing the will of God as that will is revealed in Scripture. How can we make progress according to God's word and will?

1. *Share the gospel.* The Bible says in II Peter 3:9b that the Lord is "not willing that any should perish, but that all should come to repentance." Truly, God wills the salvation of souls, according to all that we read in Scripture. Progress, for us, then, must be partially accomplished by the planting of the seeds of the salvation message in the hearts of our fellows. A recent *Christianity Today* carries an article entitled "Preaching with Power and Purpose." In it Lloyd Perry of Trinity Evangelical Divinity School writes:

"The preacher should measure his ministry in terms of eternity rather than time. Like the prophets, he may sigh anxiously, but he will not despair, for he knows that in God's good time the challenge will be worth it all. The stamp of success may never appear in time, but it will in eternity."³

2. *Share the benefits of bountiful economies, science and technology with a needy world.* As Christians, we often thank God for prospering us, with little recognition that much of what we call prosperity is really selfish gluttony and over-indulgence at the expense of the rest of the world's peoples. As followers of Christ in the western world, we have, in many cases, swallowed hook, line and sinker, the message that happiness and progress come in fancy houses and clothes, expensive cars and entertainments, sumptuous dining, and fat bank accounts. Nothing could be farther from the will of God for us. Progress, in this case, may in fact be defined as regress in the eyes of secular man. Our *ultimate* trust for the future is to be not in man's ability to progress through science and technology, but in God's providence and goodness (Matt. 6:24b-33). Collecting large amounts of bounty is not right, God tells us in this passage; and in other parts of Scripture such as Deut. 24:12, Ps. 41:1, Pr. 19:17, and Matt. 19:21, He makes it clear that what would have gone into private storage were we left to our own devices, should go to supply the needs of the rest of His creation.

Learning to make do on this earth for the purpose of giving more away, rather than constantly trying to get ahead, may be regress in the eyes of the non-Christian onlooker, but in God's eyes it is truly progress. It is laying up treasure in Heaven rather than on earth, and this again, is God's will for His faithful.

3. *Get to know God.* In a day when progress is measured by the standards of complexity, sophistication and power, a main goal of the Christian must be to know, in the most intimate sense, the author and sustainer of all that is. As Richard Bube reminds us in *The Human Quest*:

"If God were to 'turn Himself off,' everything would cease to exist! Without God there are no laws, no world, no us; . . . Not only do we rely upon God as the Creator at the beginning, as the source of order and purpose in the world, as the personal Father who gives meaning to love and depth to personal relationships; we rely upon God for our very existence."⁴

When we have grasped what Bube says here, we can begin to put human progress in its proper perspective. Only because a wise and all powerful God allows it do we think, exist, understand and know anything at all. We have been granted a degree of mastery, progress, and power in this world, but it has meaning only when we recognize that it is a space and time gift from a gracious Creator. To know this God, the source of every good and perfect gift, is indeed progress for the Christian.

Where science, technology, and their resultant "progress" will take us in these uncertain days, is not clear, although there have been predictions ranging from war and annihilation by the pessimistic, to a new breed of superbeings by the humanistic optimist. What we know for certain is that though "progress" has made life easier and more fulfilling in some respects, it has made it harder, more painful, and more complicated in others. Though we can treat the physical symptoms of V.D., we cannot solve the host of problems which may arise simultaneously with it - i.e. the unwanted child, the psychological pain and guilt. Though efficient machinery for production of term papers and sophisticated information retrieval systems are available to today's students, cheating (perhaps by copying, or paying someone else to do your work), stealing of books and journals has reached epidemic proportions; the saddest part is that in our modern progressive society, most teachers have no criterion by which to judge the behavior of their prodigy, though they somehow feel that cheating and stealing behavior is wrong.

As part of the Christian community, you and I must divorce ourselves from the 20th century American dream that tells us we must be constantly progressing toward bigger and better at the expense of others, and realize that a non-theistic, scientismic world view provides no basis for definable or directional change - progress must simply equal change. The ideas of progress and regress, right and wrong, good and evil, forward and backward, barbaric and civilized, have only the most nebulous and relative definitions unless grounded in the God who made Heaven and earth, the Lord Jehovah of Judaeo-Christianity.

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¹Cournand, André. "The Code of the Scientist and its Relationship to Ethics." *Science*, Nov. 18, 1977, vol. 198 pp. 699-705.

²Kivengere, Festo. *At the Edge of Hope*. New York: Seabury Press, 1978.

³Perry, Lloyd. "Preaching with Power and Purpose." *Christianity Today*, Feb. 2, 1979, pp. 517-519.

⁴Bube, Richard H. *The Human Quest*. Waco, Texas, Word Books, 1971. Used by permission of Word Books, Waco, Texas.

Deception in Social Psychological Research: A Reply to Koteskey

In *Journal ASA*, March 1979, a communication by Ronald L. Koteskey exhorted Christian psychologists to abandon the use of deception in their psychological research. Although Koteskey's conclusion that deception is lying, and therefore unacceptable, cannot be faulted on theological grounds, I believe that his characterization of the use of deception is, at times, inaccurate. This paper is an attempt to clarify several important points that Koteskey either omitted or, in my opinion, misperceived.

1. Koteskey never formally presents the rationale behind the use of deception in social psychological research. Deception is basically used to more closely approximate a "real world" situation. Koteskey implies just the opposite: that deception creates artificiality, suspicion and bias. Most social psychologists would submit that deception is, in many cases, a good "real world" approximation. Just as the subjects are unaware of the experimenters motives, we are often unaware of the motives of the persons around us with whom we are interacting.

2. Koteskey characterizes the social psychologist as a devious individual who sits in his laboratory constantly developing techniques to be used in duping unsuspecting subjects. Nothing could be further from the truth. The conscientious social psychologist uses deception only as a last resort when, in his/her opinion, the phenomenon cannot be studied with subjects who are aware of the experimental hypothesis. In fact, one of the most highly respected

textbooks on research methods in social psychology (Carlsmith, Ellsworth, and Aronson, 1976) suggests that the experimenter confronted with the choice between deception and a less preferable method, should probably elect to utilize the latter, provided it is still adequate.

3. Koteskey's emphasis on the data that show up to an 80% deception rate in certain areas of social psychological research was an accurate account of the state of affairs in the '60's. I would be reluctant to generalize the same finding to the present. Over the last ten years psychologists have become increasingly sensitive to the rights of human research participants. As evidence of this, the American Psychological Association published a number of guidelines in 1973 regarding the ethical principles to be upheld when conducting research with human participants. While deception is an acceptable technique within these guidelines, the increased emphasis on ethical considerations is certainly a step in the right direction. Another point that I believe potentially outdates Koteskey's implication of increasingly deceptive research, is the changing nature of social psychology as a discipline over the past 10-12 years. The increasing emphasis on rational information-processing in social psychology has often eliminated the need for deception.

4. While Koteskey's article is fundamentally correct with respect to the finding that subjects approach the experiment with suspicion, he leaves the reader with incomplete information about the nature of the suspicion. Koteskey allows the reader to conclude that a subject's behavior is *systematically* altered by suspicion. Unfortunately, there is very little data upon which to make such a firm judgment. For behavior to be *systematically* altered, subjects would (in most experiments) have to guess the experimenters hypothesis correctly. This is a highly unlikely occurrence. A more tenable explanation is put forth by Kelman (1968) and Carlsmith, Ellsworth, and Aronson (1976). They suggest that the subjects' suspicion could be classified as *generalized suspicion*. While this viewpoint acknowledges the suspiciousness of subjects, it does not suggest that there are necessarily systematic biases in the data. Rather, it suggests that suspicion increases the subjects' "trying to guess the hypothesis" behavior. However, since it is untenable to believe that all of the subjects are correctly guessing the hypothesis, it is assumed that many hypotheses are generated. As a result, we do not get systematic biases, but rather we get an increase in our error variance. Therefore, the literature of social psychology is not filled with artifactual data due to subject suspicion, but rather we have probably failed to reject the null hypothesis when it was untenable, i.e., we may have missed effects that really exist. This admittedly forces us into a very conservative framework, but it also seems to present a more accurate picture of social psychological research than the one implied by Koteskey.

I would like to briefly relate my own experience with subject suspicion in research. Most of my research involves having subjects fill out post-experimental questionnaires or have a verbal interview to assess suspicion. Subjects in my research often express suspicion, but it tends to be of a generalized nature, i.e., they often believe that there is something going on that is not obvious. However, rarely can they be very specific about it. Furthermore, comparisons between those who express suspicion and those who do not, has never revealed significant differences.

5. I take exception with Koteskey's comment that deception in research can never lead to truth. I submit that the *truth* as he describes it, is different from the *truth* that psychologists are seeking. There can essentially be two ways of looking at the term *truth*: subjectively and objectively. Hindus, Moslems, and Christians all claim to be seeking and attaining truth, but we find little similarity in their methods utilized to obtain the "ultimate" or even in what the "ultimate" is. They are, in a sense, looking at truth subjectively. Psychologists, on the other hand, attempt to deal with truth objectively, as do other scientists. That is, we are looking for lawful relationships just as the chemist or medical research looks for lawful relationships. Unlike the religions mentioned earlier, truth to the psychologist (as an ultimate goal) refers to indisputable, objective data. An example should suffice to illustrate my point. Often in medical research, placebo groups are included. These people receive an injection or pill, but are not informed about the innocuous nature of the treatment. They are being deceived. Does this automatically doom the results of this research? Would we say that the data collected in this research were not the truth? We would probably be unlikely to make such a judgment. Why then, does Koteskey reason that deception in psychological experiments yields untruth. I can conclude only that he is referring to subjective truth, since the use of deception is obviously not within his own personal framework.

6. Finally, Koteskey seems to ally himself with the notion that simulations, naturalistic observations, and unobtrusive measures are preferable to the use of deception. Unfortunately, he fails to consider the possible ethical considerations involved in using some of these techniques. For example, research in the field where we might use naturalistic observation, often denies the subjects the right to give their informed consent. Since these persons are unknowingly participating in research, they are in a sense being deceived. While this can be ethical within the framework set up by the American Psychological Association, it obviously is inconsistent with Koteskey's expressed viewpoint.

In summary, I am not advocating that Christian psychologists adopt deception as a means of doing research. That is a decision that individual psychologists must struggle with. I do agree with Koteskey's statement that methods of research and testing must be improved. However, to totally dismiss the findings of research because deception was used is, I believe, an inaccurate formulation.

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Carlsmith, J. M., Ellsworth, P. C., & Aronson, E. *Methods of research in social psychology*. Reading, Mass.: Addison-Wesley, 1976.

Kelman, H. C. *A time to speak: On human values and social research*. San Francisco: Jossey-Bass, 1968.

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Letters



Much Enjoyed

Just a note to let you know how much I enjoyed the March 1979 issue of *Journal ASA*. The articles on mass evangelism and "Truth: Biblical and Mathematical" were especially outstanding and personally profitable for me.

I believe I have yet to see a poorly written and/or edited article in the *Journal*. Keep up the good work.

Susan Watts Walker
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One-Sided View on Homosexuality

The March, 1979 *Journal ASA* interviews entitled, "Christian Answers on Homosexuality" presented a very one-sided view of Christian perspectives on homosexuality.

The view that homosexuality may be a healthy alternative, perfectly in accordance with God's will, was omitted. In order for this to be a Christian view, we must recognize that Paul's exposure to homosexuality was probably very limited. In the first century, the only visible manifestations of homosexuality were promiscuity and wild orgies. If this were the extent of Paul's knowledge of heterosexuality, he would probably have condemned it, too. Paul was not aware of stable homosexual love relationships that take place out-of-closet today.

We heterosexual Christians are extremely audacious when we assert that because it is sometimes possible to change a homosexual, this means homosexuals should want to change. If it is possible for one to change his/her sexual orientation, then it is certainly possible for a heterosexual to change into a homosexual. How eager would we "straights" be to convert to a religion that taught that we should all want to be homosexuals? We are even more audacious when we assert that if a homosexual finds he cannot change, he should "accept lifelong sexual abstinence." If this does not work, perhaps we should advocate castration as a third alternative.

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Bad Philosophy and Bad Theology

At least one statement contained in "The Significance of Being Human," *Journal ASA*, March 1979, demands response: "It therefore follows that, at least in principle, if a scientist were to assemble non-living matter in *exactly* the same way that it is assembled in a living human being, he would then have produced a genuine living human being, a person for whom Christ died." Not so, for several reasons.

Even in principle it would not follow, unless the philosophical principle of dualism were false and the principle of materialistic monism were true, a possibility which no Bible-believing Christian can accept. Furthermore, such a being, even if it were a self-conscious organism, would not be a person for whom Christ died, for Christ died only for the race of Adam, for He "took hold" of the seed of Abraham, not of angels or of others races or kinds of beings (Hebrews 2:16).

Thus it seems to me that the idea you have propounded constitutes both bad philosophy and bad theology.

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Let's Hear More on Second Law

How significant a letter was included in the March 1979 issue of *Journal ASA*! The plea from Michael McCabe deserves much more than your brief editorial reply.

The Second Law controversy needs to be resolved. And what better place than in the *Journal ASA*?

I heartily agree that the issue is not *simple*. Your comment, however suggests that we should avoid the issue because it may be "a fairly painful educational venture." But isn't this part of the fabric of education and truth-seeking?

Sure it may be painful! Let's see some dialog on the Second Law in the pages of *Journal ASA*—even if it hurts a bit.

Keep up the good work!

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This articulate personal self-awareness is something that presumably develops in early infancy through our normal interactions with parents and others. . . . It originates, as far as we know, in the experience of being treated-as-a-person by those who are already persons. The question when a human organism becomes a person is thus logically distinct from the question when it becomes conscious. . . . there would be no need to deny that the transition resulted from a continuous quantitative change in the physical factors that made it possible, in order to affirm that the conscious human person is qualitatively different from the unconscious human body. . . . Once the central nervous system can no longer sustain the flicker of self-reflecting activity that embodies conscious personal experience, its remaining activity, however elaborate and prolonged, is not that of a 'living soul' in the biblical sense, still less that of a 'human spirit.'

Donald M. MacKay
Human Science and Human Dignity, Hodder and Stoughton, London, 1979, pp. 100, 101

Founded in 1941 out of a concern for the relationship between science and Christian faith, the **American Scientific Affiliation** is an association of men and women who have made a personal commitment of themselves and their lives to Jesus Christ as Lord and Savior, and who have made a personal commitment of themselves and their lives to a scientific description of the world. The purpose of the Affiliation is to explore any and every area relating Christian faith and science. The *Journal ASA* is one of the means by which the results of such exploration are made known for the benefit and criticism of the Christian community and of the scientific community.

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