

Urbanism---A Christian Challenge^{*}

Donald H. Bouma

 $R^{\rm EGARDLESS \ of \ one's \ interest \ or \ station \ in \ life,}_{\rm he \ will \ have \ to \ reckon \ with \ the \ fact \ of \ urbanism. This \ pronounced \ trend \ in \ American \ life \ has \ significant \ implications, \ since \ urbanism \ is more \ than \ a \ statistic. \ It \ is \ a \ way \ of \ life, \ and \ one \ sharply \ differentiated \ from \ the \ rural \ way.$

It is important from the standpoint of social organization and basic value systems. It challenges the Christian to rethink his position in society, to reexamine the traditionally asserted world and life view of his religion, and to determine anew what is meant by Christian social action.

Urbanism, and its twin suburbanism, have made a relentless advance on American society. Whereas in 1900 only 40 per cent of the United States population was urban, in 1950 the figure had risen to 65 per cent. Although 35 per cent was classified as rural, the rural *farm* group was only 15 per cent of the total. In 1870 over 50 per cent of our population was gainfully employed in agriculture; today the proportion has dropped to about 10 per cent.

Not only has the percentage of people living in cities increased. There has also been a marked increase in the numbers of people living in large metropolitan clusters. Further, through changes in communication and transportation, and other factors, there has been an accelerated urbanization of the remaining rural population. Urban values and styles of life are rapidly being disseminated to the rural hinterlands.

These processes are not merely present-day manifestations. They have been going on for many decades, and since they are rooted in basic social and agricultural changes, they are likely to continue for some time into the future. Although the rate of these changes may decelerate, there is little possibility of reversals occurring.

Ι

What are some of the consequences and implications of this? One important result is the growing irrelevance of both churches and religion. Tersely stated, it amounts to this: In rural areas one looks about him and sees God, or at least something beyond man; in cities one looks about him and sees man. In the pastoral community one plants and works the soil, but each growing thing is essentially a mystery which points to someone beyond man. There is a constant concern for the weather, uncontrolled by man. One may be riding a man-made tractor, but wherever his eye falls he sees nature, and he is humbled and baffled. Man is a subordinate being. The Christian prayerfully contemplates: "O God, how wonderful Thou art."

On the other hand, in the urban community man sees man and the accomplishments of man. Amazing feats surround him, but back of these are men, essentially like himself. Intricate machines are produced but there is no mystery: — "Come to the factory open house and see how it is done." The weather remains some sort of problem, but protections against it abound. Heating and air conditioning systems, made by man of course, make it possible to disregard the weather most of the time. Even tree-lined streets and shrubbery-speckled lawns point him to "a city policy on tree plantings" or the latest wrinkle in *Better Homes and Gardens*.

Growing things are there because some "man" put them there. The check is larger this week because the "man" at the plant asked me to work overtime; or the "man" gave me a raise or promotion. Man conquers space, man conquers time, man conquers the elements, men bring pleasure, and men bring pain. "O, Man, how wonderful thou art." The Christian, too, catches himself saying this, or at least feeling this way. Having caught himself, he is

CONTENTS

Urbanism — A Christian Challenge

Science and Irreligion

The Place of Mathematics in the Christian School Curriculum

^{*} A lecture sponsored by the Grand Rapids Chapter of the Calvin Alumni Association and delivered on March 31, 1955.

likely to soberly add, "Of course, these talents come from God" or "It is God who works these things through the instrumentality of His image-bearers." The point is, in urban life this is apt to come as an afterthought, and for many it comes not at all.

Churches, too, tend to fare badly in the hubbub of city life. In rural areas the church was one of only a few social institutions and was quite generally considered to be an important aspect of the community. In cities today the church is only one of many social institutions and has little influence. Major community decisions are made without reference to the thinking of church groups. Church groups become clusters to be manipulated, and not strong organizations whose opinions a decision-maker would seek.

Dr. George F. MacLeod of the church of Scotland said recently in a lecture in this country, "There was never a time since Christian history began that the church has had less effect on the conduct of secular affairs."

But, you say, what of the recent increase in religious interest and church membership? Concerning the former, religious interest, I am in no position to assess it and have no right to judge it. By it most people mean the new interest in religious-oriented novels and movies and mental health nostrums. There are few who assert that America is experiencing a deep-seated religious revival which finds expression in a committed life of gratitude.

Concerning increased church membership (it is reported to have gone from 50 per cent to 60 per cent of the Amerian people in the last 10 years), this must be noted: Church membership statistics are based not on a survey of people which finds 60 per cent of them church members, but rather on a comparison of reported denominational totals with the total population. Assuming that denominational reporting was accurate and assuming that a person is not a member of several different churches this technique would be quite accurate. There are difficulties with both assumptions. As to the first, it should be observed that one large denomination, the Christian Science group, is principially opposed to keeping or reporting membership data. Hence, estimates are used. Again, most churches have difficulty determining whom to count as members. Given the desire of most churches to look good numerically, one can imagine that the broadest kind of definitions of membership are used.

As to the second assumption, that a person is not a member of more than one church, there is another problem. There is a large increase in the mobility of the American people. Each year 20 per cent of our people move from one house to another. With this mobility there is an increase in church-changing. Many church members simply join the new church, not bothering to cancel the old membership — in fact, often continuing to contribute to the former church, which is basis enough to be continued as a member in many cases. I recently met a business man who, when questioned, asserted that he was a member of five churches, representing four denominations. "I still get mail from all of them," he said, "so I imagine I'm still considered a member."

Such persons get counted five times in the present method of measuring church membership. One may seriously question whether the reported increase in church membership is not merely an evidence of this increased mobility, combined with the absence of church discipline and the absence of roll-pruning in many churches.

Π

There are other implications of urbanization. Only brief mention can be made of some of them. The city brings anonymity. People are not well known to each other. The city makes strangers of neighbors and neighbors of strangers. It is a lonely crowd. Physical contacts are many and close, but social contacts are brief and superficial. Apartment living becomes a peculiar combination of lack of neighborliness and lack of privacy. With anonymity inevitably comes a breakdown of primary, informal social controls on the individual. "Nobody knows me here" becomes the shibboleth of liberation from standards. As a substitute there is a proliferation of laws and rules, secondary and less effective types of control. This loss of effective social control, combined with an earlier as well as concomitant decline of religious controls through obedience to Divine law, goes far to explain the anomic conditions prevailing in urban centers. "In those days there was no judge in Israel and every man did what was right in his own eyes."

With urbanism comes the intrusion of other agencies, often with conflicting and contradictory values, on the family's responsibility for child-rearing. The family itself is buffeted by numerous social forces. Although the family has shown considerable resiliency and has survived, it is a vastly different type of family than was typical at the turn of the century.

Urbanism with its emphasis on division of labor and specialization, has resulted in a differentiated

THE CALVIN FORUM is published by a board of the combined faculties of Calvin Seminary and Calvin College. Its purpose is to provide a means of intercommunication among all persons interested in the application of Calvinistic principles.

Address all editorial correspondence to Dr. Cecil De Boer, THE CALVIN FORUM, Calvin College and Seminary, Grand Rapids 6, Michigan. Address all subscription and circulation correspondence to: THE CALVIN FORUM, Calvin College and Seminary, Grand Rapids 6, Michigan.

THE CALVIN FORUM is published monthly, except from June to September, when it appears bi-monthly. Subscription price: Three Dollars per year.

Donors or underwriters for subscriptions from Japan and similar "soft-currency" areas:

Bergsma Brothers Foundation

Grand Rapids, Michigan.

Entered as second-class matter October 3, 1935, at the Post Office at Grand Rapids, Michigan under the Act of March 3, 1879.

class system with marked variation in value systems at the lower, middle, and upper class intervals.

A friend of mine, director of an institution for delinquent boys in New York state, tells this story: Up-river a short distance from the main institution was the filtration plant. Trusted boys were assigned as workers there. In their spare time they trapped small game in the nearby woods. One day the boys invited him to join them for roast squirrel. They had made a fire, skinned the squirrel and were roasting it on a shovel. In his casual conversation with them he asked whether they ever caught and roasted rabbits. One boy immediately replied, "O, no, Dr. Dybwad, you can't catch rabbits, they know right from wrong."

The innocent answer indicated the value system of the boy. Wrong was getting caught. He was in an institution because he had done wrong. Everybody from the judge down had told him that. He had been caught. When returned to society he would try to do right; he would try hard not to get caught again! Such had been his socialization. He had learned well the lessons from his lower class social system, just as so many other like him. Middle class persons, typically trained in rigid standards of morality, would have difficulty understanding and correcting his problem.

These variations are indications of the array of extremes, the spectrum of values, that urbanism has come to mean at this mid-century point in America.

Π

Prof. Riesman, University of Chicago sociologist, has won wide acclaim for his recent analysis of urban life entitled The Lonely Crowd, a study of the changing American character. He observes how people direct their lives and finds three types of direction. The tradition-directed person sets his course in terms of what has always been done. A tight web of values handed down from the past is unchallenged and need not be because of the relative slowness of change. Riesman considered the Middle Ages as a period in which the majority were tradition-directed. Few can be found today who follow this pattern of conventional conformity. Rather, in the lines of the poet, "We think our fathers fools, so wise we grow; our wiser sons, no doubt, will think us so."

Riesman's second group is the inner-directed type. Here the person directs his course in terms of inner principles implanted by his elders early in life. The individual is equipped not only for a static society, as in tradition-direction, but for a changing society. The inner principles can be applied to any new condition. He likens it to a gyroscope. Once set in motion, it continues to point the true course. North is always north, no matter what the wind, the tide, or the head of the ship. Inner direction was prevalent during the Reformation and is "only now vanishing," Riesman says.

The third group is the other-directed type, and he finds this type dominant in metropolitan America. Behavior is directed in terms of the cues we get from others. Instead of a gyroscope we have a radar which scans the social scene and plots a course accordingly. Inner standards are not as important as winning friends and influencing people. "When in Rome do as the Romans do." The goals toward which the other-directed person strives shift with the signals he gets from his contemporaries. It is only the process of striving itself and the process of paying close attention to the signals from others that remain unaltered throughout life. Education is mainly concerned with developing a sensitivity to the actions and wishes of others; the sources are many, the changes rapid.

The control for the tradition-directed is shame; for the inner-directed guilt; for the other-directed, anxiety.

Undoubtedly all of us Reformed Christians would identify ourselves, as Riesman would also label us, if he studied what we write and say, as inner-directed. We assert that our lives are directed by inner principles, implanted by the church, school, and family, under the guidance of the Holy Spirit. These principles, we contend, are fixed and do not vary with time or place, nor are they altered by public opinion or the latest fad or fashion. We are not conformed, we are transformed.

But what if Riesman, or any other, would study how we live, instead of what we write and say? Where would he put us, if he lived in Grand Rapids? Would he say that these orthodox Christian people, so numerous in this city, are an exception to the general rule in America? They are an island of innerdirection in a sea of other-direction. Or would he look and look and find only what he would find in any other city of a couple of hundred thousand people?

Let's hold up the mirror and take a look. How does Grand Rapids stand? How well are we doing? With its large contingent of orthodox Christians, this community should be found to be quite distinctive. At least 32,000 of the 180,000 people in Grand Rapids are Christian Reformed. That totals 18 per cent of the population. Beyond that total are the other Reformed groups, constituting about another 18 per cent and other orthodox Christian groups.

IV

I have taught social problems for close to ten years. I have constantly asserted that the Bible-believing Christian has the most adequate explanation for social problems and the most satisfactory plan for amelioration. Frankly this thesis is tough to prove by reference to this community. Consider some concrete situations.

First, in the matter of Negro-white relationships Grand Rapids is not significantly different from any other community, even though the colored represent only 4 per cent of the population. Churches are not inclined to accept Negro members, in spite of the abundant teachings of Scripture that "all are one in Christ Jesus." Employers are not inclined to hire Negroes any more than in other communities. Residential patterns of segregation are just as pronounced as in any other community. Grand Rapids has two Negro ghettos with lines drawn even more tightly than they were twenty years ago. It would be difficult to convince local Negroes that orthodox Christians are inner-directed and view all men in terms of Biblical standards, in terms of the image of God in man, and the worth of the individual in God's sight. The lack of significant difference would indicate other-directed behavior. Many Christians conform quite well to general community mores on this problem.

Second, in the matter of working women and working mothers Grand Rapids is not significantly different from any other community. One might expect that Christian emphases on the home, on parental responsibility for children, on "laying up treasures where moth and rust do not consume and where thieves do not break through and steal" would have some consequences in behavior. But, look at the record. In both 1953 and 1954 women constituted 31 per cent of the working force in this city. In one large but typical local factory over 50 per cent of the labor force were women. In Flint the total was 28 per cent, in Detroit 29 per cent. The state average was 29 per cent, and the national average was 30 per cent.

A national study in 1953 found that 60 per cent of the women working were married. However, a spot check of 900 women seeking employment in Kent County indicated that 87 per cent were married. Of the 1,011 women working in the local plant mentioned earlier 80 per cent were married. No local figures are available on working mothers, but national studies show that 33 per cent of the women in the labor force are mothers of dependent children. Since the percentage of married women in Grand Rapids is considerably higher than the national average, it may safely be assumed that the figure for working mothers is at least as high or higher than the national average. It is probably no wonder that 25 per cent of the tenth-graders in public schools in Grand Rapids come from broken homes.

Here again the behavior seems to be other-directed, rather than inner-directed. There is strong conformity to existing values. This is not to judge the behavior itself, but simply to indicate that its direction comes from scanning the social horizon rather than from internalized religious principles.

The third facet of this community to which I would call your attention is that of divorce. There is nothing distinctive about Grand Rapids in this matter either, except that the rate here in the last few years has been significantly higher than the national average. Nationally, the divorce rate has been falling steadily since the post-war peak of 1946, so that the figure now is about one divorce for every 4.5 marriages. However, in 1953 in Kent County there were 841 divorces and 2,619 marriages, or one divorce in 3.1 marriages. In 1954 there was a slight drop, 754 divorces and 2,545 marriages for a 1 in 3.4 rate, still considerably higher than the national average. It might further be noted that although 754 divorces were granted last year, there were over 1,450 divorce cases started in the courts. This in itself is a measure of family disorganization, whether the litigants go through with the case or not.

The peak in Kent County also came in 1946 with 1,275 divorces. It dropped to 734 in 1950, but then increased to 743 in 1951, 775 in 1952, 841 in 1953, and down to 754 in 1954. In spite of the drop after 1946, the divorce rate in this community never went down to the pre-1944 totals. Because of the slow rate of growth of this community (the city had 175,600 persons in 1952 and 174,200 in 1932), the change in the divorce rate cannot be attributed to population changes.

The values of the community are reflected in the fact that it is no tougher to get a divorce here than in any other community in the country. It may take a little longer, but it is no more difficult. Since 1927 only 15 cases have been refused divorce in Superior Court, the court which handles most of the divorces here. In the last five years there has been only one refusal.

Much more could be said about this problem, but this is sufficient to show that behavior in the matter of divorce in this community is also other-directed, rather than inner-directed. Sadly one notes that although orthodox Christians represent a considerable percentage of the population here (remember the Christian Reformed group alone was 18 per cent of the total) there is not even a *statistical* impact on the community, let alone the kind of impact that Christ called for when he talked about candles on a hill and savoring salt.

To those who might object that "at least *our* people are not getting divorces," two things: First, either the rest of the community must be far worse than most Americans to make up the difference — and I do not think anyone would seriously contend that or we are contributing to the total, too. Second, although many people in divorce courts have no orthodox church affiliation, many of them have ben reared in the churches, and one can not disown responsibility for alumni that easily.

V

Others aspects of the community might also be singled out for analysis. I have not used comparisons based on crime and delinquency for the very good reason that statistics in these areas are so completely unreliable. We know what we are counting when working with divorces, but not so with crime and particularly with delinquency. Communities count different things as crime. The better the recordkeeping, often the more crimes get tabulated and the higher the rate appears to be. The more efficient the police force the more crimes detected and criminals caught, the higher the rate appears to be. For these and other reasons comparisons based on crime and delinquency simply lead one into dark alleys.

The portraits of ourselves are not flattering. We contend that we are inner-directed but our behavior often reveals an other-direction of the kind Riesman finds typical of mid-century urban America. However, we do not claim to be typical. Our claim is to a distinctiveness, and that is our responsibility. We must continue to write it and to assert it. But we must also increase our efforts to live it. Blueprints long since drawn up must be dusted off. It is time for building programs. We have done much better than most groups in instilling religious principles as the basis for inner-directed behavior. It is the expression of these principles that is so difficult. And yet that today is our large challenge.

We have seen that processes of urbanization have increased our problems and made them more difficult. It is orthodox Christianity which, because of its inner-direction, is best able to make the transition from rural to urban life. God's Word indwelling our hearts through the work of the Holy Spirit has much to say to urban America. Situations differ, problems change, culture is in a flux, but the eternal guideposts remain the same. To follow courageously these directions is our constant challenge. Only then will the gap between ideology and behavior be narrowed. "Change and decay in all about I see. Oh, Thou who changes not, abide with me."

Science and Irreligion^{*}

HE impression that the findings of the natural sciences somehow constitute a denial of the content of religious faith, although understable, is quite erroneous. If there is any relation at all between the growth of science and the decline of religion, it is almost wholly psychological; that is to say, it has nothing to do with learning and logic. Science, as distinguished from the various secularistic interpretations of it, concerns a dimension of reality which touches only casually the plane upon which religion moves. This will appear the more evident when we consider the tentative and cautious spirit which characterizes propositions genuinely scientific (as distinguished, again, from dogmatic secularistic speculations about such propositions).

Ι

An important thing to be noted is that from the point of view of the expert in a natural science such as, for instance, physics, a contradiction in theory is no more cause for alarm than an unsolved problem or an interesting paradox. Any self-contradictory concept which can be logically defined and shown to be useful in the discovery of new facts will satisfy the essential requirements of a scientific theory. If, for example, the concept of round square would work it would be considered scientific, despite the fact that, being internally contradictory, no such thing could be presumed to exist. But because it can be defined with mathematical precision, it is theoretically permissible. If in addition it should prove an aid to dis-

Cecil De Boer

covery, a scientist would assume that for different purposes the corresponding phenomenon could be regarded now as circular, now as square, since roundness and squareness appear to be aspects of something more fundamental of which we have only partial knowledge. In fact, it is precisely that kind of reasoning which is employed by physicists today when they study the phenomenon of light. They have found that for certain purposes it is convenient to regard light as a wave phenomenon, and that for other purposes it is more convenient to deal with it as though it were a particle phenomenon. Inasmuch as it cannot logically be both at once, it is assumed that wave appearances and particle appearances represent two aspects of something not yet fully understood.

There is nothing new or revolutionary about this. Thus Descartes (1596 - 1650) in his *Discourse on Method* advised seekers after truth to assume an order, "even if a fictitious one", as a means of eventually discovering an order which would seem to be necessary. In other words, the fact that a theory is fictitious, even to the extent of involving incompatible ideas, does not bother the scientist; he hopes that following out the consequences even of a wrong theory will enable him to hit upon the right one. He doesn't suppose, for example, that electrons and atoms exist precisely as they are described, but he assumes that they are fruitful approximations which will help him to get nearer the truth.

The most interesting case in point is, of course, the theory of relativity. According to this theory, if we wish to deal with the facts of physics and astronomy systematically and accurately, we must begin with the assumption that space and time (or, rather, space-time) are functions of bodies in motion. Of

^{*} In the course of the following discussion the term "scientificism" is used in reference to those writers and lecturers on scientific and philosophic subjects who seem to assume that knowledge and truth are wholly confined to the kind of information obtained in the laboratories of the natural sciences.

course, a metaphysician of the old school would promptly "discern a problem" here. How, he would argue, can you think of bodies in motion without first thinking the space in which they move? The idea of space, in other words, seems to be much more fundamental than the idea of moving bodies; accordingly, it should function as a first principle in any sensible discussion of the nature of the physical world. To this the scientist would answer that space and time are abstractions, and that in physics we cannot hope to get anywhere unless we think in terms of the more concrete space-time. Furthermore, incredible as this may seem to the layman, and however preposterous in the sight of the old fashioned philosopher, unless we think of this or that local space-time as something determined by bodies in motion, we cannot at this stage of our knowledge of the physical world organize the facts into a comprehensive system, a system in which the parts stand to one another in a way as to make exact mathematical calculations possible.

In science, therefore, one may begin with whatever queer notion one pleases, provided such a notion can function as the basis or first principle of a system which shall be logical, comprehensive, fruitful in the discovery of new facts, and, perhaps, mathematically exact.¹ In considering the nature of scientific knowledge we may for our purposes define it as "tested knowledge derived from experience" by one or more of the various methods designed to reduce the errors of human judgment to a minimum. Scientific knowledge, therefore, may be had in any field, and just what method of investigation will bring results will depend upon the nature of the phenomena to be studied. No method, however productive of results in one well-marked group of phenomena, can be dictated as the method for investigating a different group. The notion that method constitutes science, so that the methods of physics and biology constitute the standard and provide the criteria of whether an investigation is scientific, is pure dogma. Incidentally, it is this dogma which has been largely responsible for reducing much of what goes by the name of psychology to a rather sterile affair. The laboratory psychologist of some twenty or more years ago, by indentifying "science" with the methods of physics, practically committed himself to the metaphysical position that the mental is a subtle form of the physical, thereby inadvertently slipping into a philosophical speculation under the impression that he was doing science. Having reduced scientific method to a kind of heuristic game, he ended by declaring that "behavior' was the one legitimate scientific concept for psychology, and that "science knows nothing of such a thing as mind." Accordingly, he continued to pursue his dismal investigations on the basis of the speculative position that mental states and the bodily signs of mental states are one and the same thing.

Π

As in the case of religion generally much, if not most, of the information provided by the natural sciences has almost no bearing upon the beliefs forming the content of the Christian religion. Thus physics, the most exact of the natural sciences, is also the most abstract in that it tells us the least about man and his place in the universe. Should we, in common with the exponents of scientificism, identify reality with the physical world as it is revealed to us by the physical sciences, we should have to conclude that man is a kind of surd in the universe, i.e., a "cosmic mistake," as Mr. Bertrand Russell once affirmed. When de Laplace made his notorious claim to the effect that his account of the world was so admirably scientific that it could dispense with the "hypothesis" of God's existence, he was not being wholly frank. What he should have said is that the abstract little scheme he had framed not only had no room in it for God but also no place in it for man; and that, accordingly, it could hardly be regarded as a picture of the world in which he and others were living. Inasmuch as the investigations of the physical sciences concern the simplest and most manageable aspects of the physical environment, aspects removed from their concrete contexts by a process of artificial isolation, their conclusions can have but a limited import for the more concrete interests of philosophy and religion. In other words, scientific exactness and clarity apply to but a fraction of reality and characterize but a fragment of the total field of human interest and human knowledge. Despite advances in the natural sciences, our central problems and our essential wants as human beings continue to belong to the class of things William James once called "forced options." Complete scientific detachment is still absent precisely where its presence would seem most desirable. Our important beliefs, beliefs we cannot do without and live humanly, although based upon concrete reasons, always fall short of complete theoretical certainty. We accept them because they appear on the whole to be reasonable and sane.

Considering this from a somewhat different approach we may observe that although investigators in the natural sciences have succeeded in imposing their abstract, deterministic schemes on but a fragment of nature, the very possibility of doing even that little would seem to be indicative of at least some unity between man and nature. Yet it appears extremely doubtful that the ultimate character of that unity could ever be adequately described in terms of the concepts and operations of the natural sciences. In other words, inasmuch as the scientist's

¹ The theory of relativity, like many another scientific theory, has little if any direct bearing upon the content of religious faith—except insofar as it seems to indicate that before we can really understand the physical dimension of God's creation we may have to get used to some strange thing. Faith, accordingly, could be described in one of its aspects as the process of getting used to difficult things. And that could, incidentally, be part of the meaning of the statement that the meek shall inherit the earth, they being presumably more teachable.

deterministic schemes apply only to restricted areas of reality, the belief that reality — which includes both man and nature — is ultimately a system of such schemes appears to rest upon a metaphysical preference, not upon a scientific finding. Equally warranted would be the belief, for example, that inasmuch as our own volitions can influence the course of nature to suit our purposes, therefore behind the world of nature there may conceivably be a Mind ordering the course of nature in accordance with the demands of a cosmic purpose. Whether that is indeed the case is a question which could never be settled by the methods of the natural sciences and the kind of information these methods secure. Another consideration in point here is, for example, the fact that human beings tend to think in terms of absolute beginnings, or origins. Yet no theory of origins could possibly be dealt with experimentally, nor could the concept or origins be fitted into a deterministic scheme. Accordingly, from the point of view of any one confined in his thinking to laboratory methods and laboratory results, the idea of origins must be regarded as essentially unscientific. But that would hardly settle the question of whether there are or are not events within reality corresponding to the concept of origins. Of course, a dogmatic scientificist could dodge the issue simply by proclaiming the dogma of the eternity of matter. In doing this, however, he would only be substituting one metaphysical belief for another, thus appealing, not to the testimony of science, but to a prejudice of a secularistic philosophy.

\mathbf{III}

For all that the natural sciences can tell us, therefore, reality may involve a number of other dimensions besides the space-time one with which they have been preoccupied. There is nothing in our present knowledge of the physical environment which would rule out the possibility of intelligent beings interfering for good or ill in the affairs of the human race, beings whose behavior is governed by psychological laws as "natural" as those determining the conduct of men. In fact, because of the problems raised by the physical sciences themselves our world has recently been shown to be so mysterious that anybody who would rule out this or that causal connection as impossible could do so only in consequence of an almost incredible intellectual provincialism. In short, the belief that whatever cannot be processed by the specialized methods of the natural science laboratories must be presumed to be unreal or, at least, not worth knowing, is about as scientific as would be a physician's belief that whatever cannot be detected by means of a stethoscope cannot be considered genuine data for a diagnosis.² It is difficult to

see, therefore, how a scientist could trespass upon the domain of religion except by deliberately ignoring the limits of his competence for the sake of amateurish excursions into an alien field. The secularistic doctrine, for example, that our world is indifferent to religious, moral, and other values is not a deliverance of science; and the cynic in these matters owes his attitude not to scientific expertness but to an emotional tendency toward, say, the pathetic bluster of Henley's *Invictus*.

These considerations apply equally, of course, to Christian men of science. That their religious convictions have almost nothing to do with their scientific competence should be obvious when we consider Mr. Bertrand Russell's observation that the natural sciences speak with authority on but a fragment of the universe. Furthermore, as previously noted, investigations in the fields of the natural sciences touch only incidentally, if at all, upon the history and the reality of God's search for man and man's search for God. Although it would be erroneous to suppose that God cannot be discerned in the dimension of physical causation, it is nevertheless a fact — man's limited perspective being what it is that He is more readily seen elsewhere. True, "the heavens declare the glory of God. . . . "; on the other hand, it is only "the testimony of the Lord" which is sure, "making wise the simple" (Psalms, 19).

Can the natural sciences pronounce on what is and is not possible in nature — to say nothing of reality? Of course, this question is systematically ambiguous, since the answer depends upon how widely we interpret the word nature. However, inasmuch as no kind of causal connection is intrinsically absurd, the assertion that this or that event is impossible presupposes (1) that the world investigated by the natural sciences is a closed system, and (2) that all the properties of matter and all the forms of energy are known. Since neither of these presuppositions can be established by the methods of the natural sciences, the conclusion can only be that any genuinely scientific proposition is always a matter of probability. This is but another way of saying that whenever a scientist pronounces a thing impossible, he can only mean that in terms of the concepts and operations of his specialty there is as yet no satisfactory explanation for it.

IV

Is there a significant correlation between the advances of science and the decline of religious belief? Or better, perhaps, Is there an opposition born of reason between the nature of science and the nature of religious belief? In answer to that question Professor W. T. Stace — a philosopher, by the way, who holds no brief for the Christian religion — observes the following. "Nothing in Newtonian science

 $^{^2}$ It is this same secularistic dogmatism which formerly ridiculed the idea of the transmutation of elements, and denounced hypnotism as "mesmerism" (under the naïve impression that the genuineness of a phenomenon is disproved by showing how it can be simulated). There is probably no limit to the errors that

can be believed and to the truths that can be disbelieved by the secularistic dogmatist who confines knowledge to the disclosures of the natural science laboratories.

need have caused a breakdown in religious faith.³ But the modern mind has supposed that it must. Nothing in it excludes belief in a cosmic purpose. But the modern mind has supposed that it does. Nothing in it has any tendency to prove that the world is not a moral order. Yet the modern mind has drawn from it that conclusion. All these fancied implications of science are logical muddles."4

It would seem almost self-evident that theories about how bodies celestial and terrestrial move (Copernicus, Galileo, Newton, Einstein) could have little if any bearing on the question of whether there is a God who governs the universe in accordance with a moral purpose. Assuming that the majority of the world's scientists are irreligious, the reasons for their irreligion are not likely to be very different from the reasons for the irreligion of most of the world's butchers, bakers, and candlestick makers. Human beings, including scientists and philosophers, are creatures of habit rather than creatures of reason; consequently the deciding factors involved in religious unbelief are psychological, not logical.⁵ Accordingly, if the growth of the natural sciences is a factor in contemporary irreligion, that will hardly be due to the fact that scientific disclosures tend to disprove this or that teaching of the Christian religion. What has actually taken place is that the discoveries in the natural sciences plus the astounding practical applications of them in the important fields of medicine, industry and war have opened vast areas of new interests rivaling the older cultural interests together with the religion with which they were largely associated. Human versatility is limited and new enthusiasms easily drive out older ones, especially where the new ones have succeeded in attracting an imposing array of first class minds.

Whatever the influence of the natural sciences upon the thought and action of the half-educated millions in America, the unprecedented flow of consumer goods rather than the flow of knowledge seems to have been the critical factor turning men and women from religion to the neglect of it. It is much easier, for example, to become mildly inebriated and, as a consequence, to imagine that everything is for the best in the best possible worlds than it is soberly to achieve "peace on earth to men of good will." So also, it is much easier to take modern conveniences for granted and indulge in ostentation than strenuously to seek first "the Kingdom of God and His righteousness." The fundamental causes of irreligion are today probably not much different from what they were about two thousand years ago. In the parable of the sower mention is made of such things as "stony places," "thorns," "the cares of this

world and the deceitfulness of riches." As a rule, men will not of themselves deliberately adopt a difficult way of life if it seems to offer little promise of immediate worldly returns. Not science and learning, but the worship of things and the pride of life seem to be the determining factors in the secularization of the family, of education, and, in fact, of religion itself. Jesus identified mammon, not knowledge, as the enduring enemy of the Kingdom af Heaven. Ability and learning have never been significant barriers to religious faith; and the loss of religion has rarely had anything to do with the theoretical merits of rival metaphysical views. Finally, the rejection of the Christian faith is probably always — and essentially — a pathetic retreat from the difficulties and inconveniences of a certain tone of life.6 Attuning life to an unceasing hymn of thanksgiving is not for the natural man."

- ⁶ "Demas hath forsaken me, having loved this present world " (2 Timothy 4:10).
- 7 "'I never thought much about miracles', Johnny said.
- "'It is hard to believe', Father said gently. 'But if the greatest miracle happened, of course the little ones can.
- "'I mean,' Father said, 'that Jesus Christ rose from the dead.³
 - "'You really believe that happened, sir?"
 - "'If I didn't', Father said, 'my whole life would be a lie.'
 - "'How do you know it happened?' Johnny was cautious.
- "'Because people saw it, and were scared. He talked, and walked in the streets.'

"'Maybe', Johnny said, 'maybe everybody who saw him was

"Maybe, Johnny Sara, may a series of the ser

In a great burst of false generosity Louis XI once made a solemn deed and covenant giving the entire province of Boulogne to the Virgin Mary in perpetuity. Louis reserved "all the revinue thereof" for himself. There are a great number of superficially pious people today who say, "We are living under grace and have given all that we have to God!" But you will notice that they still keep practically all of it for themselves. It seems reasonable that God would still prefer the tithe in cold cash.

> From Developing A Giving Church by W. E. Grindstaff (Fleming H, Revell Company)

CONTRIBUTORS

- DONALD BOUMA, Ph. D., is Associate Professor of Sociology at Calvin College
- CECIL DE BOER, Ph. D., is Professor of Philosophy at Calvin College
- JOHN TULS, A.M., is Associate Professor of Mathematics at Calvin College

³ This would seem to apply equally to contemporary quantum and relativity mechanics.

⁴ W. T. Stace, Religion and the Modern Mind, p. 126 (New York, J. B. Lippincott).

⁵ Oscar Wilde is credited with the observation that man is a "rational animal who always loses his temper when called upon to act in accordance with the dictates of reason".

The Place of Mathematics in the Christian School Curriculum

John Tuls

I N this modern age with its emphasis upon the Physical Sciences and Mathematics, it may appear to be superfluous to speak about the place of mathematics in the curriculum. It seems altogether obvious that mankind requires mathematical knowledge to manage the affairs of his life — for the building of skyscrapers, bridges, and superhighways, for the erection and use of observatories for continued expansion of his knowledge of the universe, for the construction of larger and more powerful airplanes, boats, and bombs for his self-preservation. And not only in these larger areas but also in the more prosaic matters of running his place of business, managing his own household, or reading the daily newspaper, mathematics seems indispensable.

Even so, it is possible, in our age, for a student to obtain a high school diploma in spite of the fact that he has been exposed to nothing but the bare minimum of mathematics. And it would cause a small revolution in college curricula if every student were required to take one year of mathematics in college. Moreover, there is the recurrent question of integrating mathematics with our Christian perspective, which is implied in the statement of the topic under discussion. Therefore, I would like to begin by stating something about the nature of mathematics, Secondly, I should like to show that it holds an important place in the school curriculum, and finally, even though I do not presume to be able to give a definitive solution to the problem of integration, I shall make a few comments about the relation of mathematics to our Christian perspective.

I

Each of us, from earliest youth, has come face to face with mathematics. Even prior to our formal education, number relationships were inescapable. In fact, we were born into a universe in which number is inherent. God created us with a capacity for mathematics, and He placed us in a world in which mathematics is in the very nature of things. Our capacity for mathematics arises from the fact that God created us as rational creatures with minds that have the capacity for abstraction, something which, so far as we know, animals do not enjoy. We enjoy the ability to distinguish between one and many, and not only that, but we can also gives names to the distinctions we make. We are also able to understand that a pair of shoes, a brace of ducks, and a duet of singers are all instances of the same classification that we call two. Experiences with trios, quartets,

baseball nines, groups of fifty, one-hundred or more widen our horizon. Along with these come instructions in the relationships between them based upon the fundamental operations upon them.

Similarly, we all experience geometry. The single dimension of length is experienced when we toddle along the floor. The fact that we can move in many directions on the floor gives us experience with the second dimension, and the cloudless sky or perhaps our first tumble down the stairway gave us our first experience with the third dimension. We cannot escape geometry; it is part and parcel of the universe we experience. There is nothing, except the use of our language for communication, which is so intimately connected with everyday life as is mathematics.

Important as the above-named concepts are, namely, those of number and form, they do not constitute the whole nor the most important aspect of mathematics. At best they make up the materials with which the mathematical intellect works. Mathematics has been defined by C. S. Peirce as "the science of necessary conclusions." Looked at from an abstract point of view, mathematics has been defined as "the science in which we do not know what we are talking about" — a definition with which many of our students would heartily agree! These definitions characterize mathematics as a mode of thinking, that is, as an abstract science of deduction. This emphasizes the logical nature of the science. As such, mathematics typifies clearly and simply those modes of thinking which are indispensable for every human being.

Without attempting a definition of *education*, I think we may say that one of its chief purposes is the development of the mental powers of the pupil. It is an important aspect of education that pupils be required to acquire an ever increasing reservoir of facts, but it is of utmost importance that our pupils be taught to think straight. They must be given opportunities to learn to grasp a given situation, to learn how to recognize the difference between relevant and irrelevant material, to learn how to reason by inference from given facts to incontrovertible conclusions, and to learn the need for testing the results of their own thinking. It is true that many people do not have much practical use for any except the most elementary arithmetical facts in their daily lives. But the same thing is true of any other subject in the curriculum that we might mention. The importance of the teaching of mathematics lies in the

fact that pupils are given opportunities for straight thinking, beginning with the very simplest examples at an early age, and continuing onward with ever increasing complexity. Such a subject, then, has a very definite and concrete contribution to make to the educational effort.

In addition to its chief purposes, namely, those of supplying a mode of thinking and of imparting knowledge of the relationships in life which involve number and form, there are concomitant values which the study of mathematics contributes to the educational program.*

1. The principle of generalization or abstraction. In this connection we think of the change in point of view for the pupil when he begins his study of algebra. At first many pupils think that each letter used represents some specific integer, and that the teacher is holding out on him as to which number corresponds to which letter. The arithmetical fact that 3 plus 4 equals 4 plus 3 is merely an instance of the general commutative law, a plus b equals b plus a, which is a postulate for our system of algebra. Other algebras can be constructed in which this commutative law does not hold. In the teaching of algebra we must have an appreciation of the fact that the child's mind is going through the transition of thinking in terms of the particular to thinking in terms of the general, and must make provision for making that transition smooth.

As an illustration of the difficulty encountered in abstraction, let us look at a few postulates of an algebraic system. Let us assume that we have a class of elements (S) and an operation (o) between the elements. Let the individual elements be called a, b, c, --etc. We set up the following postulates:

1. If the operation *o* is carried on between any two elements, then another element of the class is produced.

2. There is an identity element i such that $a \circ i$ equals a.

3. There is an inverse element for each element which we shall symbolize by a^* and such that a^* o a equals *i*.

4. $a \circ b$ equals $b \circ a$.

5. $a \circ (b \circ c)$ equals $(a \circ b) \circ c$.

The postulates for this system are the very postulates (abstractly considered) for our familiar system of positive and negative integers, with the operation o interpreted as addition, the identity element playing the role of our zero, and the inverse element being interpreted as the negative of an element.

Of course, we do not present this formal abstract system to a class of ninth graders, but these ninth graders do become familiar with the applications of these ideas. And having had a look at the abstract character of these ideas, and considering our own

* Cf. The Teaching of Mathematics by J. W. A. Young. Longmans, Green and Co., 1907. unfamiliarity with the generalization just presented, we ought to realize that our pupils, when they first meet the generalizations of the number concepts in algebra, are faced with similar unfamiliar ideas and the same uneasiness. This realization should encourage our patience when we help our pupils over this hurdle.

2. The second of the concomitant values of mathematics is the use of a concise symbolic language. This language must be developed by and for the pupil. It must be learned just as any other language must be learned. In fact, one of the reasons why mathematics is difficult for some pupils is just this, that they must learn not only the mathematical concepts but also a complete symbolic language. A danger exists, too, that a pupil becomes a mere juggler of symbols. Our aim, however, is to have the pupils handle mathematical ideas concisely and with precision.

3. Another important value of the study of mathematics is that it cultivates a respect for truth. In mathematics we insist upon calling error by its correct name irrespective of self-interest, prejudice, or appeal to the sympathies of authority. This is possible only if the teacher is scrupulously honest with his pupils. He does not palm off plausibilities as proofs but labels them for what they are.

4. Mathematics develops the habit of checking and testing our own work, and thus helps the pupil to build up confidence in his power to handle new situations. No subject is more demanding than mathematics on this score. Self-confidence is a necessary quality for pupils who wish to make real progress in their education.

5. Mathematics also aids in the development of the power of attention and concentration. Day-dreaming is fatal in mathematics; the slightest inattention can undo an hour's work. This point is the source of some of the difficulty students experience with mathematics.

6. Mathematics fosters habits of neatness and accuracy. Of course, this depends upon the insistence of the teacher that exercises be presented in a neatly arranged, logical form. Inaccuracy and slovenliness cannot be tolerated.

7. Mathematics constantly appeals to the imagination. From his earliest contacts with the integers through the development of the rational fractions, into the fields of the irrational and complex numbers; from the concept of the finite class to the concept of the infinite class; from his earliest conceptions of space of one, two, and three dimensions to the abstract concept of space of n dimensions, constant demands are made upon the pupil's imaginative powers. He learns to visualize surfaces and volumes generated by revolving curves about axes; he projects himself into space to look at the elliptic orbit of the earth as it moves about the sun; he charts the path of a projectile fired from a gun, and counts the integers from one to googolplex and beyond. 8. Mathematics has an esthetic appeal. There is real beauty in a theorem proved, beauty in the logical inter-relations of its component parts. The beauty of the simplicity of a solution, of its compactness, its completeness, and its incontrovertible result evokes the emotion of enjoyment of the beautiful and not that of the repulsion experienced when we view something ugly.

9. Mathematics is important for its applications in the sciences, both physical sciences and social sciences. It would be hard to conceive of these sciences without mathematics. The nature of mathematics is such that is crosses all fields and is basic to many of them.

10. Finally, mathematics can be studied for the sheer delight one receives from engaging in independent mental activity. This may be compared to the delight of an artist in his painting, or a musician in his composing and playing, or a philosopher in his study. For in the final analysis the goal of mathematics is the freeing of the mind for independent thinking. Truly such a subject must have a core place in the curriculum; mathematics is indispensable to the educational program.

Π

These sound educational objectives certainly have their place in the Christian school curriculum, for our Christian schools are primarily educational institutions, not Sunday schools. We have founded them on the basis of the Word of God as interpreted in our Reformed, Calvinistic perspective and have dedicated them to the service of the Kingdom of God, declaring that our purpose with respect to our children is to train them in such a way that "the man of God may be thoroughly furnished unto all good works." And this is a big order! Furthermore, we have insisted that all the subjects of the curriculum must be taught in the light of this basic assumption and in conformity with that noble purpose. We therefore have the problem of integration in all fields.

First of all, we ought to say that there are some subjects which lend themselves better than others to an integration of Christian principles within the subject matter. Mathematics is one of those subjects in which such integration does not arise out of the subject matter as such, and this makes the problem of integration difficult. May I first approach this from the negative side and say what I think does not constitute integration. It does not consist of a search of texts from the Scriptures in order to make mathematical rules secure. Such a search is futile; in fact, in at least one instance leads to dire results. I refer to I Kings 7:23 where we read of King Solomon, "and he made a molten sea, ten cubits from one brim to the other: it was round all about, and his height was five cubits: and a line of thirty cubits did compass it round about." If we try to infer the value of II from this text we would come out with the value

3, which we know to be erroneous. Obviously, this text is not intended to teach a mathematical fact.

Nor does integration consist in presenting our pupils with the pseudo-numerology we often hear, namely, that one is the number of God, three the number of man, four, of the world, seven, completeness ,and others. Nowhere, so far as I know, does the Bible ascribe such mystical qualities to the numbers concerned.

Next, integration does not consist of attaching cleverly devised moral lessons to daily class lessons in mathematics. We do not teach mathematics for the purpose of teaching moral virtues, but conversely, we teach the virtues as commands of God, and this sets the atmosphere for the better teaching of mathematics. What I am trying to say is that mathematics has a stature and dignity of its own in the creation economy. It is a revelation of the wisdom and power of God.

Consequently, mathematics is relevant to the Christian perspective. We profess our belief in the creation of the universe by Almighty God. God created man with the capacity for mathematics when He gave him a rational mind and placed him in an environment where his mind can give mathematical interpretation to the existing phenomena. Man can no more resist the cultural mandate to "subdue the earth" than he can resist breathing. In our subduing of the earth, mathematics is an essential tool given us by God to be used for His praise.

There are those teachers who would have us believe that the whole of life can be summed up in the four words: space, time, matter, and energy. It is true that these words form the basis of much of man's knowledge of the universe. Some would have us stop here, insisting that the universe contains within itself everything necessary for the explanation and interpretation of its being, and that man's only satisfaction comes from an increase of his knowledge, since knowledge alone is the key that unlocks the secrets of the world. No explanation from outside the universe, they say, is necessary to explain its origin and purpose. If God exists, He is part and parcel of the universe, and as such He is ultimately subject to the same limitations as man.

We deny that materialistic philosophy. We affirm that God is both part of the universe and is also transcendant above it, that He created it and gives it meaning. In His interpretation such terms as sin, righteousness, faith, humility, and love are defined. His definitions of these concepts gives them validity and permanence. That is why we attach such great significance to His Word; it forms the basis of our thinking.

Even though we deny materialism, we do not minimize the value of quantitative thinking for modern living. Rather we would emphasize its importance and necessity. But we insist that such thinking alone is not sufficient to solve the persistent problems of men— their relation to God, to their fellow men, and to the universe round about them. Truth, love, righteousness, faith, humility, and honesty are primary considerations. These defy explanation in terms of mathematical-scientific-quantitative thinking alone — that is in terms of space, time, matter and energy, only. God must be placed first in our thinking. Then all the various disciplines become searchings of God's revelations to mankind, both in nature and grace. There are areas in which mankind is given the widest of freedom in the fulfilment of his cultural task, and there are other areas in which his freedom to speculate is restricted by direct revelation. For example, God gave no direct revelation that two plus two are four, or that the circumference of a circle is IId. However, in the area of man's relation to God and to fellow men, in the area of man's origin and destiny, in the history of his disobedience and fall, in the divinely ordained way of salvation — in these man is bound strictly to divine revelation.

I take it that mathematics is one of those areas in which man has great freedom of action in pursuing the cultural mandate. Man is so created by God that he is both able and eager to set up rules for his mathematical thinking. And although we firmly believe in the all encompassing providence of God, it is no less true that God does not deal with us as puppets. Our cultural achievements are in a real sense our own. Pride in these achievements is certain to follow, unless one's soul is changed by the Spirit of God Who then leads us to praise Him both for His mighty works of grace and for His matchless acts of creation and providence.

Some of these ideas must be put across to our pupils. This can be done both directly and incidentally. Directly, this can be accomplished by means of prepared talks during chapel exercises and other devotional periods. Incidental occasions may and do arise. No one can predict when these will arise, but an alert teacher will take such cues as they occur. A warning may be in place; in my opinion these asides should not be too frequent, lest they lose their effectiveness.

IV

I should like to conclude by giving an example of an attempt at integration by means of a chapel talk and use for the example a situation in plane geometry. Most of us can recall the fact that before we could proceed into the beauties of geometric reasoning, we were required to lay down a few basic assumptions, called postulates and axioms. The postulates were statements like these: (1) Through two points one and only one straight line can be drawn; (2) The shortest distance between two points is the straight line segment joining them. The axioms were statements like these: (1) If equals are added to or subtracted from equals, the results are equal; (2) A quantity may be substituted for its equal. And others. Out of these basic assumptions grew the

whole body of geometric science. Step by logical step we proceeded from the simple to the more complex, each step of the way giving us power to solve the more complex problems. Viewing geometry in retrospect, we see it as a unified whole, held together by careful deduction and the principle of noncontradiction, and proceeding inevitably from the basic assumptions.

Among the postulates listed in the first text-book in geometry (called the *Elements* and compiled by Euclid) was one which in the course of history has come to be known as the famous "fifth postulate." It is the postulate about parallel lines, namely, "through a given outside point there can be only one parallel to a given line." As early as the second century A.D. it was thought that this postulate was implied by those preceeding it, and that hence it was not properly a postulate but a theorem to be proved. Many unsuccessful attempts were made by the Greeks and later by the Hindus and Arabs to prove this postulate. As late as the 17th and 18th centuries mathematicians tried to prove it and failed. In the 19th century two men, a Hungarian, Bolyai, and a Russian, Lobachevski, independently worked on the problem, attacking it from a different angle. Both arrived at the same result, namely, that the fifth postulate was independent of the others; hence it could not be proved, and therefore was properly an assumption.

Lobachevski removed Euclid's parallel postulate and replaced it with a denial of this postulate. On the basis of his new assumptions he proceeded to develop his geometry. What resulted was a new, wholly selfconsistent geometry which we know today as a "non-Euclidean" geometry. Of course, this geometry is different from the geometry we once knew in high school! Many of the theorems of our Euclidean system have no place at all in the new system, and viceversa. That this is so is not surprising, for nothing that is not implied in the postulates of a system can be produced in that system.

Our basic assumptions are the foundation upon which we build our thinking. The removal of one postulate from our system changes the system radically. In fact its removal, if it be truly a postulate, implies that the item involved cannot possibly be produced in the new system. That is why it is so important that we obey the demand of God that we make Him basic to our living and thinking. The fact that natural man would rule God out of his life does not mean that he cannot build up a consistent system of thinking. But since it begins without God, it is bound to end without Him. The tragedy of the scoffer is this, that one day he will reap the reward of his consistency when his basic assumption shall be removed from under him and he will be forced to acknowledge God — in hell.

Thanks be to God that He gives us an escape from that perilous condition, to which we are all prone, and that through His love and grace He enables us to accept Him by faith. This is precisely the difference between a Christian and a man of the world. The promise of God is that if we will obey Him we shall be with Him and enjoy Him forever. That is, if we begin with God, we shall end with Him. Is this a

vicious circle? No! To begin with God and end with Him — that is a glorious circle. A vicious circle begins without God and ends without Him, for "man cannot live by bread alone but by every word that proceedeth out of the mouth of God."



REACTION TO DR. DU TOIT'S LETTER

Grand Rapids, Michigan 18 August, 1955

Dr. Cecil De Boer, Editor, The Calvin Forum, Calvin College, Grand Rapids 6, Michigan. Dear Dr. De Boer:

HE correspondence printed by the Forum is usually **7** to be distinguished by its sobriety. I cannot recall a facetious word ever having appeared in it. However, the August-September number contains what seems to be a trans-Atlantic leg-pull whose import has an underlying seriousness to it that demands far more sober treatment. I refer to the letter from S. du Toit, of South Africa, which surely cannot be a serious piece of work. The letter has lineal kinship, with the genius removed, with the more bitter of Swift's satires, particularly the Modest Proposal (to solve the Irish over-population problem by slaving and eating tender Irish children). When I read that the "share market" is a reliable index to the interior peace of a country notorious for its methodical deracination of colored peoples ("... a large police force had to be on duty when the operation started. Nothing extraordinary happened. In fact the natives sang heartily . . . ") I immediately suspect that an inhuman policy of some kind is in effect. And yet the letter proceeds, with admirable litotes, to relate the story of Strydom's accession to office and the slum clearance by force as if they were normal, democratic, Christian events in a well-ordered world. Despite the possible Time-Life exaggeration of the facts on South Africa which most of us bring to our reading of its affairs, a reasonable judgment on those affairs is that they are the product of a desperate extension of untenable "principles" to an insoluble problem; even the sober New York Times, which gives good coverage of the South African situation, fails to leave the impression of a willed order and peace in Johannesburg. I can only conclude, then, that your correspondent is attempting to pass off a satire, and that perhaps this is his only way of getting a cry of pain past the censor.

Could you, perhaps, clarify this matter-tell us if, as I suspect, Mr. du Toit is pulling our leg, and wishes us to feel with the many Christians in South Africa whose sensibilities are outraged by the polices of the Malan-Strydom school?

Sincerely,

George G. Harper, Jr.

* * *

EDITORIAL NOTE: (Excerpts from J. M. Roberts of the Associated Press in the *Grand Rapids Herald*, August 25, 1955). "One of the most telling Communist propaganda points in Asia is based on racism. The handling, or failure to handle, the Negro problem in the United States is one of the first things mentioned when you ask an Asiatic why they cannot more thor-

oughly understand the difference between the communist and democratic propaganda approaches.

"This stems . . . from constant reiteration on the statement that the United States tolerates a situation in which some of its citizens are second or third class.

"The other day (Gaganvihari Lallushai) Mehta (India's ambassador to Washington) stopped at Houston's airport for lunch. The dining room supervisor asked him to move to a small privite dining room.

"A Houston resident remembered the Texas law requiring racial segregation in restaurants. He thought Mehta was mistaken for a Negro. He told a newspaper. "Mehta received an apology from the . . . Mayor of Houston.

The Mayor said Houston didn't discriminate against anybody, presumably shifting all the blame to the State of Texas. "But the incident has had its impact. You can bet the Com-munists won't drop it."

* * ж

Of course, what happens in America is no excuse for what happens in South Africa. But, then, there is an old saying about people who "live in glass houses." (EDITORS.)

A CORRECTION

Dear Dr. De Boer:

•HORTLY after the appearance of the August-September issue of this paper a kind, anonymous reader sent me a postcard with this statement: "It is not Berkhouwer, but Berkouwer." My copy of the review of De triomph der genade in de theologie van Karl Barth shows that this correction was rightly addressed to me and not to the proof-reader. My thanks to the reader and my apologies to Dr. Berkouwer and the reading public.

Thank you.

Carl Kromminga.

We have greater light, but what are we doing with it? We have more speed, but where is it carrying us? The method of news transmission is hundreds of times faster than it was a century ago, but what is the news that is being carried over these facilities? We have multiplied horsepower into atomic power, but in what state has this discovery of power left the world? The nations which were successful in perfecting it now recoil in horror from it. The other nations have nightmares day and night because of it. We thought that we were making progress. We made material things our god, but, behold, we have awakened to the realization that our home-made gods are not powerful enough to save us, but powerful enough to destroy us in short order. Thus many are beginning to retreat from the god they have made and to lift their eyes to the God who made them. Maybe we are approaching the time when men will fear their own gods and serve the true and living God.

> From How FIRM A FOUNDATION by R. C. Campbell (Fleming H. Revell Company)

Book Reviews

Romein, Tunis, Education and Responsibility. (Lexington: University of Kentucky Press; 1955). 210 pp. \$3.50.

R. TUNIS ROMEIN is a native of Illinois and was brought up in the Reformed Church of America. He attended Wheaton College. Thereafter he joined the staff of Lees Junior College in Jackson, Kentucky, which is supported by the Synod of Kentucky of the Presbyterian Church, U.S. During the Second World War he was in the United States Army; in the course of this period he spent considerable time in the Far East, and he met an army nurse who is now Mrs. Romein. After his discharge he returned to academic work, and when occasion offered he took up graduate study in the College of Education of the University of Kentucky, completing his program for the doctorate in education in 1953 while on leave from Mitchell College in Statesville, North Carolina, in which he has now held a position for eight or nine years. Just now he has accepted appointment to a position in Erskine College in Due West, South Carolina, an institution of the Associate Reformed Presbyterian Church where he will be teaching courses in philosophy and education.

The decision of the University of Kentucky Press to publish his revision of his doctoral dissertation is an honor to Dr. Romein. As might be expected, the book bears some of the marks of a young man's book. One of these marks is the fact that many passages are written at very high temperatures. The author is certainly justified in feeling very strongly about some of the issues and theories discussed; but sometimes the effect of his emotions on the reader is to obscure the train of thought. As the title shows, the book is concerned with the influence on character, on human conduct, of the application of this or that educational program. It is obvious that matters soon become vital and personal and that there is ground for anxiety.

I recommend the book to readers of this journal, and this on two counts especially. (1) The book provides a careful outline of three important theories of education advanced by American educationists today. These are pragmatism (or progressivism), a radical extension of pragmatism which Dr. Romein calls 'educational reconstructionism,' and the contemporary expression of classical humanism. Romein's presentation of the logic of these three powerful theories, of their doctrinal foundations and their programs for teaching practice, achieves the double aim of locating the landmarks in the contemporary scene in educational thought, and of providing material for reflection on which a student of American problems can base just comparisons of the contending movements.

(2) Further, Romein strives to indicate how the Christian ought to face the present situation. There are three features of this effort to which I would like to call attention. (a) The author tries to underline the fact that non-Christian theories about the aims and program of education cannot be formulated without introducing doctrines which contradict certain articles of the Christian faith. The pragmatist (e.g. John Dewey) and the reconstructionist (e.g. Professor Theodore Brameld) are not so intellectually drowsy as to interest themselves chiefly in the instrumentalities of the teaching enterprise; their advice on practice rests on intellectual commitments bearing on topics in the field of ultimate belief. Romein performs the important service of exploring these commitments, showing what the pragmatist or humanist asserts about man and nature, or about nature, man, and God. As he says, each of the rival theories is a 'philosophy' or a 'faith,' on which is based prescriptions for how to bring up young people.

(b) On the other hand, however, Dr. Romein sets himself the task of exploring what the Christian faith has to offer the American educational system as a whole; and this means in particular the public schools (including colleges and universities). As members of American society, Christians in this country have a responsibility for the conduct of its institutions; they may not withdraw from the task of bearing witness and exerting influence. They should do everything they can to keep alive the memory of the debt of American institutions to the Christian faith which provided most of the principles of American education; they should do all they can to make clear that the adoption of certain current educational theories is tantamount to abandoning Christian principles. Romein is not ignorant of the programs of those Christian groups which have established their own separate schools. He offers arguments in favor of protecting their rights, but in addition he is concerned to augment a Christian sense of responsibility for the public institutions. Here his thesis is particularly important. It is always easy (and tempting) for Christians to withdraw from a task which is common to all the citizens. He is convinced, and rightly so, that the Christian should be the last man to embrace an attitude of despair about the existing situation. There are many devoted Christians on the staffs of American public institutions; surely their labors are not without effect. Surely there are Christians who are justified in taking as their special vocation the task of teaching in the public institutions. Furthermore, it would be helpful if Christians reflected more often on the fact that their own bad habits have contributed to the growth of the opinion among the American public that religion is best kept out of the schools. Nevertheless, the existing situation is serious and threatening; it calls for a reconsideration and revision of current applications of the principle of separation of church and state. These applications are such as to press for a removal of religious instruction from the schools. This tends on one side to encourage the preposterous notion that religion is unimportant, and on the other to operate as an invitation to introduce some form of secular gospel to replace Christianity. Dr. Romein understands these matters very well and in facing them he tries to make suggestions based on Christian thought which are applicable to the present state of things. For his willingness to think and write on what can be done now to improve educational practice in American public schools, I commend the author highly.

(c) Dr. Romein has sought for a sustained and large scale Reformed interpretation of Christian doctrine bearing on human nature, on man's relation to God, and most particularly on Christian principles of education. We may be grateful for his effort. As I said earlier, however, the book shows traces of youthfulness, and I might add that the author has had to struggle against the handicap of a late start in his attempt to think through educational principles to their foundations. His search for a powerful contemporary statement of Reformed thought led him to Emil Brunner; and to Brunner and his like the book is heavily indebted. Now Brunner is obviously a Christian writer from whom the student of contemporary life can profit enormously; yet I wish that Romein had had occasion to make himself as familiar with older and more classic minds as he has with Brunner and Reinhold Niebuhr.

Romein's review and interpretation of pragmatism and reconstructionism are competent and useful. Similarly with his criticisms. He makes it perfectly plain that the proponents of these theories are advocating a world view, a surrogate for theology, and that their programs for education are shaped to fit their doctrine. In this way, by having alternatives clearly sketched and articulated, we can make a choice with our eyes open. My one complaint about Romein's criticism of these two theories is that it is not strong enough. In particular, he had a splendid opportunity to employ the weapons of irony. Dewey's campaign against absolutes was a rhetorical maneuver merely; he introduces plenty of absolutes and dogmas to suit his own liking. Over and over Dewey disposes of views not his own by applying emotive epithets to them, such as 'obsolete,' 'outmoded,' 'unintelligent.' The pragamatists' habit of praising tolerance rarely moves the pragmatist to

welcome the views of non-pragmatists. The pragmatist appeal to evolutionary fact and to experience (blessed word!) in his search for moral standards contains a (Western) moralist's selection of facts to be approved and recommended and a (Western) moralist's directing of experience so that it will be 'proper' and 'guided.' His emphasis on sympathy and on fair treatment of all persons is derived from his training in the Western Christian tradition, not from the naturalistic dogmas which he advocates. As for the reconstructionist: while rightly accusing pragmatists of having no means to deal with crisis, he performs the feat of trying to do two opposed things at once, viz., approving the collectivist trend because it is inevitable, and equating man's distinctive nature with the capacity of manipulating the social environment. While vigorously repudiating the doctrine of original sin, he claims that evil is inseparable from civilization. And while protesting strongly that he is democratic, even to the point of fashioning a religion to promote democracy, he proposes methods of indoctrination which would operate through social pressure to ensure conformity with the group.

A final word on Romein's treatment of humanism. He describes this theory in language which surely is prevalent and traditional. But there is special need to guard oneself against being misled at this point. The humanist gains prestige for his position by speaking as if he is the friend of reason, as if what he asserts and recommends has reason on its side. (And I surmise that the neo-orthodox theologians go too far in imitating the humanist use of language, conceding that the dogmas of the classical humanist are eminently rational. This concession leads them to use highly confusing language and to the extravagances of paradox.) This humanist maneuver is wholly misleading. If the world is as Dewey describes it, then reason has not been offended — it is on his side — whereas if Christianity tells the truth about God and man, there is no room left for worrying whether reason has not been satisfied. Reason is not a definite quantity, so to speak. It is a spokesman for just one doctrine. When Dr. Romein reviews some of the basic views of people whom he calls humanists, it is quite apparent that these views are rivals with naturalistic or Christian views about topics in the field of religion. Let me supply an example or two not directly relevant to Romein's discussion. Plato's speculations of hypotheses about God as the Artificer shaping the finite world from independent material, about the rational part of the soul as pre-existent and moving through a cycle of births, about salvation as successful departure (perhaps 'for keeps') from the physical scene in which it is, as it were, an alien who has by bad luck fallen into the body, and about the cyclic repetitiveness of cultures and civilizations — these are not 'rational' or 'philosophic' in distinction from Buddhist or Christian views. Humanists tend to overlook that Plato borrowed such themes from the Greek mystery re-

THE CALVIN FORUM

Calvin College and Seminary Grand Rapids 6, Michigan

EDITORIAL COMMITTEE

DONALD BOUMA	John Kromminga
JOHN BRATT	ARTHUR OTTEN
John Daling	HENRY SCHULTZE
John De Beer	EARL STRIKWERDA
Lester De Koster	JOHN TIMMERMAN
Thedford Dirkse	John Van Bruggen
LAMBERT FLOKSTRA	JOHN VANDEN BERG

ligions; they characterize them as 'philosophic' and treat them as endowed with special authority. In these matters Plato is a theologian and has no advantage over Augustine or Calvin. His 'philosophy' is in great part theology, and it causes only confusion not to make this plain. What is involved here is the troublesome question about what philosophy is; this question is more complicated now than formerly because, while Plato and Aristotle are known to all as philosophers, much of their writing deals with topics which are now the proper subject matter of physics, psychology, political science, etc. In deference to the philosopher, we are likely to think that Plato's or Aristotle's theology holds a title to a rational authority which the theology of Luther does not hold. To think so is to be mistaken; further, it is to place the whole problem of faith and reason in the wrong light. This problem arises within Plato's work in a manner comparable to how it arises within Augustine's. Romein is right when he says, as he does frequently, that American educators are being solicited by various faiths. Had he seen more clearly what this implies, he would have been less impressed by the humanist's claim that his is the party of reason.

Dr. Romein had occasion to study the invaluable writings of Mr. T. S. Eliot on education. I propose to end by quoting a few lines from The Idea of a Christian Society which put forward a judgment with which Romein's essay agrees. "It is my contention that we have today a culture which is mainly negative, but which, so far as it is positive, is still Christian. I do not think that it can remain negative. because a negative culture has ceased to be efficient in a world where economic as well as spirituual forces are proving the efficiency of cultures which, even when pagan, are positive; and I believe that the choice before us is between the formation of a new Christian culture, and the acceptance of a pagan one. Both involve radical changes; but I believe that the majority of us, if we could be faced immediately with all the changes which will only be accomplished in

several generations, would prefer Christianity." (p. 10).

Jesse De Boer Dept. of Philosophy University of Kentucky

HEDEN, ZOO GIJ ZIJNE STEM HOORT, Bijbelsch Dagboek, (Kampen, The Netherlands: Kok; 1954). 372 pp. Fl. 4.75.

HEARTILY recommend this volume of Biblical meditations by twelve leading ministers of the

Reformed Churches of the Netherlands. These meditations are sound but not commonplace. Their approach is up-to-date and stimulating. For all who can read Dutch this volume offers spiritual food for thought at its best.

MARTIN MONSMA.

There are thousands of men who have never read the New Testament, and who therefore haven't the foggiest notion of what it teaches about sin. But in their everyday relationships they live and move and have their being on an assumption of its existence.

You ask a banker to loan you money, and right off you start him thinking about the sin question. He may know nothing of the origin of evil, but he knows how to call up the credit department. You take out some life insurance, and the company will have a question or two to ask you at this point. On the street corner you run into a uniformed policeman. Who is he? What is he doing there? He is silent witness to the reality of sin. Why do you lock your door at night? Why is it that at this very moment the key to your automobile is in your pocket? The makers of automobiles are not theologically trained, but they are theologically conditioned. They may never have read the Book, but they have read human nature and are under no illusions about the facts.

Why is it that when you get a little money you head straight for the bank where, every night, they swing shut a ten-inch steel door on the bank vault, leave a light burning over it, and employ a watchman to see that it is kept burning? Whether or not you believe in theological doctrines, for your own self-protection you are obliged to believe what the New Testament teaches about human nature. It is all very well to talk in sheltered classrooms about the "nothingness of evil," "the absence of light," and Rousseau's "original goodness." They are very lovely theories, but out in the world we cannot act on them. Out there we are realists. Out there we are New Testament believers; we accept the verdict of the gloomy theologians on the question of human sin.

Sin is no ghost that the priests have conjured up, no creation of minds made morbid by the fear of God. Sin is the most realistic fact with which humanity is compelled to deal. When men set up a city government, they have to think of the sin question. When men draw up a constitution for a nation, they have to think of the sin question. Human nature being what it is, they must have checks and balances, protections and restrictions. Sin is real, and everyday, whatever may be our fancy theories, we live by that sound assumption.

> From Horns and Halos In Human Nature by J. Wallace Hamilton (Fleming H. Revell Company)