

JOURNAL OF THE AMERICAN SCIENTIFIC AFFILIATION



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

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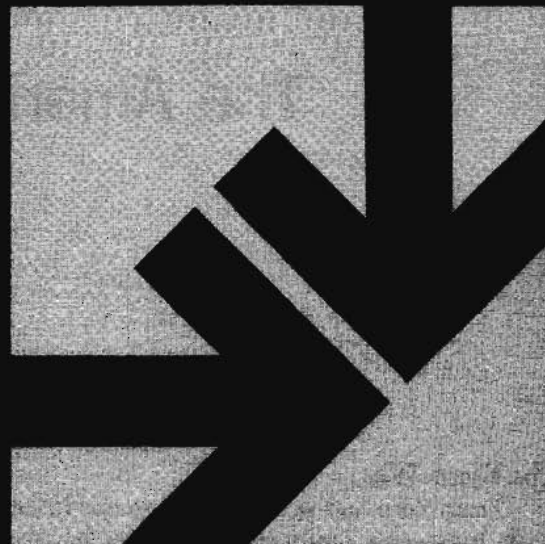
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JOURNAL OF THE AMERICAN SCIENTIFIC AFFILIATION



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The Voices of the Poor



No food, no meat, no milk—and the children go to bed hungry. Sometimes they cry.

There are days without any food four or five at a time

the parents go hungry and the child may live on powdered milk for a week at a time when we just “make do” and mix whatever we have with water and the end of the month when food stamps run out, commodities run out, the Headstart doctor refers to this as a time of “discomfort”; to a school teacher from South Carolina it means taking teenagers home suffering from hunger pains

or times when we have a little something because you get food from “the white lady” you work for or you eat what you can while you have it because you want to know what a full belly feels like

or you buy the cheapest meat you can, neck bones and that kind of stuff and have it a couple of times a month

And always there are the days without milk for the children

No fresh milk?

No Sir

No milk for the children?

No Sir

Do they get milk? The small ones?

No

No milk at all?

No

Ain't no one of them has milk every day. They lucky to have it twice a month.

And there are days without meat, or vegetables or fruit.

And days with only one meal or two—or three and they aren't really meals

*And the children go to bed hungry.
Sometimes they cry.*

Sometimes they ask me for something

I am not able to buy milk or food or nothing

But when they do eat, they eat the same food, day in and day out—black eyed peas, grits, flour, maybe fatback, sometimes potatoes, beans, and where we visited homes and looked in the kitchen, the shelves were empty—

and the refrigerator if there was one, was empty
And the sick do without medicine

No food, no meat, no milk—and the children go to bed hungry.

Sometimes they cry.

Reprinted from “A Report by the Citizens’ Board of Inquiry into Hunger and Malnutrition in the United States.”

National Council of Negro Women, Inc.
884 Third Avenue
New York, N. Y. 10022

The Americanization of Sambo

WILLIAM PANNELL*

Tom Skinner Crusades, Inc.
Brooklyn, New York

The Same War

"Four score and seven years ago our fathers brought forth upon this continent. . ." The beginning of an old and revered document of American history. But listen to these words again, and notice their contemporaneity: ". . . a nation conceived in liberty and dedicated to the proposition that all men are created equal."

"Now we are engaged in a great civil war, testing whether that nation or any nation so conceived, and so dedicated, can long endure." What strikes me is that in a frightful sense we are still fighting that same war. The combatants are different, the weapons have changed, and the field is no longer North and South. But we are being tested and the issue remains exactly the same as in Lincoln's day, namely, whether that nation . . . "so conceived . . . can long endure."

There have been several voices raised in recent years calling us to the recognition of our grave position. Gary Wills called a recent book *The Second Civil War* and made this assertion: "Our crime is not that America is white, but that we do not even know it is. The Negro does. He knows it every time a policeman passes. That is when power speaks to him. Suburbs supply mercenaries to the inner city. The white army of occupation is maintained. That is what this country wants; but it does not want to know that it wants it. The white man does not think of his country as white; but he is very careful to keep it that way."

An even more prescient statement comes from LeRone T. Bennett, Jr., in his book *The Negro Mood*: "This is an important moment in the history of the Commonwealth. There stretch out before us two roads and two roads only. America must now become America or something else, a Fourth Reich perhaps, or a Fourth Reich of the spirit. To put the matter bluntly, we must become what we say we are, or give in to the secret dream that blights our hearts."

Sterling Tucker, of the Urban League, described the American mood recently as "sick and tired, tired and sick; tired of being sick and tired." But being "tired of being sick and tired" leaves a society like ours vulnerable. We become impatient, frenzied, frustrated. We yearn for quick if not easy solutions to war, racism, and poverty. We tend to lose the significance of events when grievous social ills are laid bare with objectionable language.

*The Rev. William Pannell, evangelist and author, was a former staff director with Youth for Christ, International. He was a featured speaker at the 1969 ASA Convention at Gordon College. This paper is based on a speech given before the Evangelical Press Association in Grand Rapids in May 1969.

Real Pornography

Let me illustrate. A recent issue of *Christianity Today* reported an evangelical conference under the caption, "NAE Hits at Pornography." What they were really talking about in a broader sense was "The Moral Crisis in America." That's fine, but the real pornography today, the profanity that is truly objectionable from a biblical standpoint, has to do with poverty amid unparalleled riches and the animosities of the affluent believers toward the poor; monetary or fiscal irregularities that reward the rich through tax loopholes and subsidies and penalize the poor in the name of welfare and a balanced budget; cries for law and order in the face of long-standing abuses heaped on the oppressed in the name of the law; the criminal retreat of evangelical churches from the inner cities; the request of a certain fundamentalist university to arm its guards with submachine guns; the hypocrisy of evangelical forces who engage in social work abroad but who resist such ministries at home; the super-patriotism of believers who seem not to understand that God is not an American; the suffocating "sounds of silence" coming from those good people who allow evil to triumph by their refusal to act justly toward their neighbors.

I submit to you that this is obscenity and it stinks in the nostrils of a holy and compassionate God. And yet these issues are studiously overlooked by major sections of the Christian church.

Need for Self-Image

What are the issues behind all the liberal rhetoric and the conservative reaction? The first is the black man's (and indeed all men's) need for a proper self-image. I don't remember what grade it was, or how old I was, or how I reacted to the exposure, but one day I met *Little Black Sambo*, in all of his black innocence. I don't even recall what the story line was, but I do know that he is still with us—all of us, black and white alike. He has grown up, of course; sometimes he is visible and sometimes he is invisible. To white men he is most invisible when he is physically present.

He has been called colored, ducky, and Negro, and when he responds to these words he is acceptable if not assimilated. It is when he insists on being Afro-American or black that he suddenly becomes a threat; he ceases in our minds to be an American. When America hears "black power," there is an altogether different reaction than if Stokely had merely shouted, "Negro power."

Some of us had to search all our lives for the

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The real pornography today, the profanity that is truly objectionable from a biblical standpoint, has to do with poverty amid unparalleled riches and the animosities of the affluent believer toward the poor. . . . I submit to you that this is obscenity and it stinks in the nostrils of a holy and compassionate God.

meaning of our existence in a white world, only to discover that the worst thing about being Sambo is that by the time you passed through the educational system you had a white mind. The church and Christian literature did very little to alter this image, for the church's imagery and vocabulary are weighted against anything black. A children's book has a "black scowl" creep over the face of Cain; a children's worker lectures from a wordless book to black children and black is the symbol for sin. White, of course, stands for purity and salvation.

Margaret Burroughs, ponders this fact of life in poignant words:

"What shall I tell my children who are black
Of what it means to be a captive in this black skin?
What shall I tell my dear ones, fruit of my womb,
Of how beautiful they are, when everywhere they turn
They are faced with abhorrence of everything that is black.
The night is black and so is the bogeyman.
Villains are black with black hearts.
A black cow gives no milk, a black hen lays no eggs.
Bad news comes bordered in black, mourning clothes black;
Storm clouds black, black is evil
And evil is black, and devil's food is black . . .
What shall I tell my dear ones raised in a white world
A place where white has been made to represent
All that is good and pure and fine and decent,
Where clouds are white and dolls, and heaven
Surely is a white, white place with angels
Robed in white, and cotton candy and ice cream
And milk and ruffled Sunday dresses
And dream houses and long, sleek Cadillacs
And angels' food is white . . . all, all white."

I think my reaction to this was about the same as yours. It is a bit overstated. After all, the most exotic and exquisite orchid is black, and no woman would be caught dead without a basic black dress in her wardrobe. But the point is well-taken.

I am not unaware that this quest for an identity is fundamental to the security of all men, but in a country where color is so important to one's social values, this is an acute issue for black Americans.

Question of Community

A second issue confronting black men today, and shared by all men everywhere is the question of community. If identity deals with "Who am I?" the question of community deals with "Who is my neighbor?" The Kerner Report declares us dangerously close to the ultimate and irrevocable polarization—black and white, separate and unequal. The difference now is that at a time when white America seems willing to integrate, the black American seems uninterested. He feels, and rightly so, that he must consolidate his own community, get himself together, before integration can take place among equals. As long as the idea

of integration was predicated on the assumption of white cultural superiority and the black man had to make all the adjustments, it was a false concept. Coupled with this is the profound lack of faith in the white community, and added to this a recognition that white society seems to be disintegrating—thus integration would be something like fighting over the last berth on the Titanic.

But the hard facts are that this society cannot long endure if there is no reconciliation, and there is a difference here between reconciliation and integration. There must be fostered a community mood—a mind-set that accepts the existentialist notion that "to be is to belong to someone."

We need to remember the social dimensions of the Gospel. The evangelical is too individualistic about his salvation: "Christ is a personal Savior," "you can change society by changing men," etc. What God holds out for men is an answer to social alienation as well as personal guilt towards God. There is a brotherhood of man quite apart from Christ as Lord; the problem is a lack of power to flesh it out. But to become a disciple would not mean that this brotherhood is therefore null and void. We have virtually ceased to talk about what scriptural fellowship implies in principle to the man on the street.

Perhaps of greater importance is the need to convey the strategic and psychological necessity of separateness as the prelude to viable and redemptive community among men. Factually speaking, the whole concept is more of a dream than a reality for any ethnic group. Why should you expect black men at last to integrate when Polish and Italian people don't?

Black Power

The real issue, of course, is power. This is the current American dilemma. The use of power is the key to the emergence of every ethnic group in American history. One need only consider the American Indian to realize what powerlessness can mean in a power-oriented society, or how powerlessness can be perpetuated when white men representing the power structure administer Indian affairs.

The ghetto is another example. Black people, aware of the factors, are seeking to develop the economic and political power to be truly self-determinative. Of course, you know all this, but the spectre of black people controlling their own institutions, making decisions in areas directly affecting themselves; insisting that traditional institutions be accountable to black citizens is really threatening. Power must be shared; the master must become a brother and partner.

The black community is becoming aware that hallowed institutions are not easily susceptible to change. Nathan Wright, Jr., puts it this way:

"Any element in a society that survives long enough to evolve into an institution does so by its ability to satisfy

The real issue is power. This is the current American dilemma . . . Power must be shared; the master must become a brother and a partner.

certain needs of the society or by its compatibility with the established patterns of social relationships. In turn those who control these institutions have an interest in preserving order and the stability of society as a whole. It is important to understand this point because it is often lightly assumed that our schools and churches—along with other social institutions—are natural agencies of social change. They are not. They are designed to uphold the existing order. Only when this point is acknowledged may we begin to understand the

mounting failure of all our institutions to keep pace with the needs of our rapidly changing society" (*Let's Work Together*, page 53).

Significant black leaders—and white leaders as well—understand this. So do our young people, especially at the college level. The issue in all these areas is power, control, the sharing of power.

BLACK POWER: WHAT DOES IT MEAN?



Identity

Black Power is both an affirmation of identity and a search for identity. It is strictly an American phenomenon, growing inevitably out of the history of the black man in America. For more than 300 years black people have found themselves surrounded by an alien culture hostile to all assertions of black individuality or black pride. Only white pride has been held up as the ideal. Black people, having been cut off from fruitful contacts with their African homelands, have been forced by all of the cultural, political, social, and religious institutions surrounding them to conform to the white ideal. But the goal is never attainable with dignity, and Black Power is the final discovery of this fact.

Black Power is not a rejection of the white ideal, but a rejection of all attempts to force the white ideal on black people as the only expression of black intelligence. White people may and should continue to pursue their ideal, but not with the idea that it is the only ideal for all people. Black Power is not so much a negation of white power as it is an affirmation of the worth and dignity of the black man without reference to the white ideal. Black Power has its own intrinsic value, a value not derived from its likeness or lack of likeness to the white ideal. The white ideal may recognize the intrinsic value of Black Power, but it can never create that value.

Dignity and Worth

Black Power is first of all the assertion of the dignity and worth of the black man as the creature of God. Such dignity and worth have been denied for many centuries by those who aspire to the white ideal. The worth and dignity were always there, but were ignored, often even by the black man. They are now, rightly, being reaffirmed without negating the right of others to their own ideal. But opposition to its expression is as strong as ever. To this very day powerful forces are at work to snuff out Black Power as something that has no right to exist. Certainly black people have a right to exist. Then Black Power has an equal right to exist.

Economic Potential

Economically, Black Power is the discovery of the economic potential of black people and the development of that potential in ways that will enable black people to enjoy its benefits. But more than that, it is the discovery and development of the earth's eco-

nomie resources in order to make life more pleasant for all of its inhabitants. Now and in the past, economic Black Power has been very real, but it has been made to serve the ends of others while black people reap the least of its benefits.

Only black people can correct this economic imbalance. No one else can do it for them. And no other ideology is more suitable to accomplish the task than the ideology of Black Power. Indeed black people are so thoroughly exploited that any attempt they make to correct the situation is met with loud cries of condemnation coupled with moves toward greater exploitation. And those who reap the most from the exploitation tend to cry the loudest.

Political Structures

Politically, Black Power is the development of political structures which will help free black people from economic exploitation, and which will also help create a political atmosphere that will enhance the normal growth of Black Power. Democratic processes must be given preference, but only in the light of the sacrificing of democratic processes by White Power whenever such action serves as a check on Black Power. By such sacrifices White Power forfeits its right to require black people to follow slavishly democratic processes which whites do not so follow. To follow the democratic process in America will inevitably mean the growth of Black Power, for black people are a part of the nation and are entitled by birth and citizenship to the exercise of power. Yet whenever black people achieve a position of power, White Power seeks to destroy them, first by legal means, and, if that fails, then by illegal means. By doing so, White Power gives the lie to its often spoken commitment to democratic processes, and loses its moral right to require *anyone* to observe democratic processes.

Black Power in its truest expression is never an assertion of one man's superiority over another. This has been the magnificent flaw of White Power, and the path of wisdom is always to avoid the flaws of others.

The failure to seat Adam Clayton Powell and the removal of his seniority is a case in point. Black people followed the democratic process in electing their representative, but White Power denied a whole congressional district its right to be represented in Congress by the representative of their choice. Only political Black Power on a national scale could have assured the normal functioning of the democratic process in that instance. It is inevitable that economic Black Power must find political expression, just as the roots of a plant produce the stem and the flower.

Social Organization

Socially, Black Power is the cohesion of like-minded individuals and organizations around the ideals of Black Power. It is quite right for people of like mind to come together and work together for common goals. White Power has always forced a kind of social togetherness on black people, and has always reacted with fear when black people voluntarily unite. Away with such social manipulations of black people. Unite we must and unite we will.

But does social unity require social separation? To follow the White Ideal is to say "yes," for the White Ideal is notoriously separatist. Complaints from blacks about the dangers of separation are understandable, but not from whites, for whites have been at home with social separatism for hundreds of years, and still are. Social separateness is a racist ideology. Black Power is not racist, but it is an affirmation of the worth and dignity of black people. It is by no means separatist, but it cannot include those who are unable to affirm the soul and spirit of Black Power. One's race or nation is no bar to such affirmation. Those with a history of negating the worth and dignity of the black man will find it most difficult to make the affirmation, but the affirmation is a must for people who recognize the image of God in man. Such an affirmation makes a white person no less than a man, and a black person no more than a man.

Aesthetic Feeling

Aesthetically, Black Power is that deep, warm feeling that wells up in the bosom of Solomon's beloved when she said, "I am black and comely, O daughters of Jerusalem, as the tents of Kedar; as the curtains of Solomon." It is the negation of black as fearful and evil, and the affirmation of black as friendly, warm, loving, and tender. Only circumstances make people rough, not their color. The beauty of black is as ancient as history, though it was only recently discovered by culturally isolated Afro-Americans. The effects of this discovery will last perhaps for a few years and then we will settle down to the task of simply being human.

Unfortunately the opponents of Black Power have used every conceivable means to bring it to an end. Their chief weapon is to depict it as an ideology of violence. Sometimes violence among blacks is provoked simply to encourage the idea that Black Power is violent. What is always overlooked is that black violence is put down only by the application of more effective white violence. The black violence is depicted

as evil; the white violence as virtue. The miracle of America is that black people have managed to survive the violence of white people. And the game of whites provoking blacks to wrath still goes on in America. A recent example was the stationing of thousands of police provocateurs in Ocean Hill-Brownsville in the fall of 1968. Though true Black Power is not non-violent, neither does it rush into violence without wisdom.

The Christian Heritage

For a man to affirm his own worth is a basic element of the Judaeo-Christian heritage. To despise one's self is to violate the command of God to love one's neighbor as one's self. For whoever does not love himself cannot have a proper love for his neighbor. To teach someone not to have a good and wholesome estimate of himself is sinful. To seek to hinder a person from affirming his own worth and dignity is sinful. It may appear that the affirmation of Black Power carries with it an aura of superiority over others. But Black Power in its truest expression is never an assertion of one man's superiority over another. This has been the magnificent flaw of White Power, and the path of wisdom is always to avoid the flaws of others.

The affirmation of the worth and dignity of black people is not an option which a Christian may accept or reject. The verdict has already been rendered and it is not in the power of a Christian to change the verdict. The dignity that black people bear is derived from their Creator and it is not in the province of man to debate it, but only to recognize it.

When God made man in his image and declared his handiwork "good," He put an end to speculations about the worth of man. We did not create that worth. It was created by God and given its value by God. All efforts to reach the fullness of that value within the framework of God's laws are not only our privilege but our duty.

Nor is it to be doubted that we are duty bound to affirm the dignity of all people of whatever color, race, or nation. But black people in America have been denied too long the recognition of their worth and dignity. The time has come for it to be affirmed without partiality and without apology.

C. Herbert Oliver

Pastor, Westminster-Bethany United Presbyterian Church
Brooklyn, New York

Reprinted from the *Church Herald*, official magazine of the Reformed Church in America.

Exhibits? Oh, yes—over there between the trail bike rental shop and the pizza house. Nice exhibit, made out of plastic. Glass top, metal stand. Big sign near it, full of bullet holes and carved initials now, tells of the wonderful wild area that used to be. Says something about the canyons being an exhibit—but one made by God, not man. No plastic, steel, glass, asphalt. No cans, bottles, bridges, trail bikes, picnic tables, garbage. Just silence. Globemallow. Cottonwood. Reflecting pools. A wild land at peace with itself, at peace with those who understand its needs. A living wilderness, a natural cathedral—now dead and desecrated.

Jack E. McClellan, "Death of the Escalante"
Sierra Club Bulletin, December 1969, p. 9

A Protestant Affirmation on the Control of Human Reproduction*

CHRISTIAN MEDICAL SOCIETY

INTRODUCTION

The Document entitled "A Protestant Affirmation on the Control of Human Reproduction" emerged as the written consensus of twenty-five evangelical scholars who participated in an interdenominational consultation known as "A Protestant Symposium on the Control of Human Reproduction." The Symposium convened from August 27 to 31, 1968. The consultation was interdisciplinary. Scholars in theology, medicine, law and sociology deliberated together during the greater part of the sessions. Unidisciplinary committees on theology and medicine also functioned independently and drafted sections of the Affirmation for submission to the final plenary sessions.

The theological committee wrote Part I, *Theological Basis*. The medical committee prepared Part II, *Principles of the Christian Physician* and Part III, *Guidelines for Professional Practice*. All these parts were adopted in plenary session with minor modifications resulting in part from sociological and legal considerations. A development worthy of mention was the remarkable agreement between the *Theological Basis* and the *Principles of the Christian Physician* when each part was drafted independently by two of the major disciplines represented at the Symposium. Rather than merge Part I and Part II, it was decided to leave each intact as a subsection of the Affirmation in order to emphasize the extent of agreement which had been achieved.

This document does not claim to be "The Protestant view . . .", but is "A Protestant Affirmation. . . ." The scholars at the symposium represented the conservative or evangelical position within Protestantism. While there was considerable diversity in denominational background and professional discipline among the authors of the Affirmation, they shared a common acceptance of the Bible as the final authority on moral issues.

A PROTESTANT AFFIRMATION

I. THEOLOGICAL BASIS

Prologue

We affirm that ultimate values come from God through biblical revelation rather than from the human situation alone. For some questions the Scriptures provide specific answers. For example, the Bible affirms that marriage is sacred, and prohibits sexual intercourse outside that relationship. On other issues the Bible speaks primarily through principles such as the sacredness and value of human life, and the need to act in love for God and man. Where specific answers are lacking Christians acting under the authority of Scripture may differ from one another in the conclusions they reach because different weight may be given to different principles.

The Christian is obligated to understand as fully as possible the problems that confront him and to enunciate clearly the biblical principles underlying his efforts to resolve them. He recognizes that the will of God may

become known to him more fully through discussion and interaction with men of like faith. Therefore, while a symposium can provide information and direction it cannot speak with binding authority in any instance. Each man is ultimately responsible before God for his own actions and he cannot relinquish this responsibility to others no matter how qualified they may appear to be.

The Character of Sexual Intercourse as a Means of Procreation and as an Expression of Fellowship in Married Love.

Sexual intercourse is a gift of God and is to be expressed and experienced only within the marriage relationship. In this act husband and wife become one flesh. Marriage is ennobled by God and is likened in Scripture to the union between Christ and His Church. Coitus includes the purposes of companionship and fulfillment, as well as procreation. Any marriage which does not seek to fulfill all of these sexual functions constitutes an incomplete relationship. The Bible teaches that procreation is one purpose of marriage and considers children to be an evidence of God's blessing. The Biblical norm is productivity for all of nature, including man. It gives the sense not of a static balance but of a dynamic and abundant creation.

Procreation, however, is not the sole purpose of the sexual relationship even as coitus is not the sole component of the marriage relationship. God intended sexual intercourse to be continued and to be enjoyed even if procreation is impossible. Therefore procreation need not be the immediate intent of husband and wife in the sex act. Coitus may be simply the expression of love and a mutual fulfillment of normal desires.

The Prevention of Conception

Because of the Christian's high view of the sexual relationship, contraception often presents complicated ethical questions. This is true whether the individual employs so-called natural means (coitus interruptus and rhythm), or methods made possible by medical science.

The Bible does not expressly prohibit contraception but it does set forth certain abiding principles such as the sanctity of life, the command to multiply, and the mutual obligation of husband and wife to satisfy each other's sexual needs.

The prevention of conception is not in itself forbidden or sinful providing the reasons for it are in harmony with the total revelation of God for married life. Disease, psychological debility, the number of children already in the family, and financial capability are among the factors determining whether pregnancy should be prevented. The method of preventing pregnancy is not so much a religious as a scientific and medical question to be determined in consultation with one's physician. Of all the methods of contraception, sterilization presents the most difficult decision because it impairs the creative activity God has given to man and is usually irreversible. Yet there may be times when a Christian may allow himself (or herself) to be sterilized for compelling reasons which outweigh these.

Induced Abortion, the Fetus and Human Responsibility¹

Abortion confronts the Christian with the most perplexing questions of all: Is induced abortion permissible

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and if so, under what conditions? If it is permissible in some instances is the act of intervention still sinful? Can abortion then be justified by the principle of tragic moral choice in which a lesser evil is chosen to avoid a greater one? As to whether or not the performance of an induced abortion is always sinful we are not agreed, but about the necessity and permissibility for it under certain circumstances we are in accord.

The Christian physician who is asked to perform an abortion will seek to discover the will of God in this as in every other area of his life. He needs divine guidance for himself in his practice and for counseling his patients. The physician, in making a decision regarding abortion, should take into account the following principles:

- 1) The human fetus is not merely a mass of cells or an organic growth. At the most, it is an actual human life or at the least, a potential and developing human life. For this reason the physician with a regard for the value and sacredness of human life will exercise great caution in advising an abortion.
- 2) The Christian physician will advise induced abortion only to safeguard greater values sanctioned by Scripture. These values should include individual health, family welfare, and social responsibility.
- 3) From the moment of birth, the infant is a human being with all the rights which Scripture accords to all human beings; therefore infanticide under any circumstances must be condemned.

Christian Conscience, Natural Law and Legal Authority

The Scriptures inform us that all men are bound by God's moral law. To this fact, the universal phenomenon of conscience bears witness. Because of sin, men are severely limited in their ability to perceive the content of this law. Apart from the guidance of Scripture and the Holy Spirit, men tend to equate it with the mores of their particular culture. Nor do we believe that ethical judgments can be used on the situation alone. While

the individual must consider the circumstances present in each situation, his ethical decision should be controlled by Biblical principles.

The fallenness of human nature requires the guidance of laws. Such laws are for the benefit of society and should be administered in recognition of the authority of God as the Supreme law giver. Harmful pressures easily result from the codification of law in a way that is either too authoritarian or too permissive.

The Christian maintains that in avoiding legalism on the one hand and license on the other, the prescriptions of legal codes should not be permitted to usurp the authority of the Christian conscience informed by Scripture.

II. PRINCIPLES OF THE CHRISTIAN PHYSICIAN IN THE CONTROL OF HUMAN REPRODUCTION

The rendering of guidance is basic to a physician's concern and effective work. This may well result in the confession to the patient or colleagues of his view of life as a Christian. In the realm of the control of human reproduction, his view of Christian life is reflected in the following Biblical principles:

Sanctity of Family Life

- 1) The sanctity of marriage as a God-given institution. It is lifelong and secure in love. Husband and wife live for each other and in God's service.
- 2) Children are God's gift, born into the love and security of family for nurture and training.

Responsibility, Fulfillment, Self-discipline and Divine Grace in Sexual Relationship.

- 1) The sexual relationship is a good gift from God to mankind, but this, as all of God's good gifts, has been marred by the effects of sin on human thought, will and action. The forgiveness and the grace of God are a constant human need.
- 2) Sexual intercourse is rightly confined to marriage. Therefore, fornication, adultery and prostitution with

SOME THEOLOGICAL ISSUES

My few comments and questions will be restricted to some statements included in the section of *Theological Basis*. Although a statement of this type must of necessity be very general, such generality often obscures important issues.

Is Sin Ever Permissible?

I am disturbed with the possible implications of the statement "As to whether or not the performance of an induced abortion is always sinful we are not agreed, but about the necessity and permissibility for it under certain circumstances we are in accord." Would those who believe that abortion is always sinful also maintain that sin may be both necessary and permissible? Is sin ever permissible from God's perspective? Are acts *per se* sinful, regardless of motivation?

How Is Will of God Determined?

It is also stated that the Christian physician who is asked to perform an abortion will seek to discover the will of God, not only for his own decision, but also in order to counsel his patients. How would the physician determine the will of God in any specific instance? If one physician decides that it is not the will of God for him to perform an abortion in a par-

ticular case and another physician feels free to perform it, what then is the will of God for the family in question?

Abortion vs. Infanticide

Although there is not complete agreement, a fetus is considered to be, "at the most . . . an actual human life or at the least, a potential and developing human life." Why then do all agree that abortion is permissible in certain circumstances, but that "infanticide under any circumstances must be condemned?" Is a pre-natal "actual human life" that different from one after birth? Why is a human being accorded "all the rights which Scripture accords to all human beings" (unfortunately these rights are not identified) immediately after birth, but not before it? Why is it "Christian" to abort the fetus of a potentially normal person but sinful to kill a newly born infant who is too retarded mentally to ever be able to experience those "rights?"

Induced abortion is to be advised only to safeguard "greater values sanctioned by Scripture," among which are "individual health, family welfare, and social responsibility." How does one determine that these latter values are greater than the life of a fetus? If they are, then why do they all suddenly become subordinate to the life of an infant? On what basis is the hierarchy of values changed when the "human being" is born into the world, as opposed to his existence before that event?

Conscience

The universal phenomenon of conscience is said to bear witness to the fact that all men are bound by

or without contraception are not Christian options.

- 3) Sexual intercourse is to be undertaken with understanding and consideration of one marriage partner for the other.

Preservation of God-Given Life

- 1) It is the duty of physicians to preserve human life and the integrity of the human body.
- 2) Physicians are called upon to maintain and restore the health of the whole man.

Mitigation of the Effects of Evil

- 1) We live in a world pervaded by evil. Human relationships become distorted; unwanted children are born into the world; genetic defects are not uncommon and harmful social conditions abound. Therefore, it is the duty of Christians to be compassionate to individuals and to seek responsibility to mitigate the effects of evil when possible, in accordance with the above principles.
- 2) When principles conflict, the preservation of fetal life or the integrity of the human body may have to be abandoned in order to maintain full and secure family life.

III. GUIDELINES FOR PROFESSIONAL PRACTICE²

The Prevention of Conception

The Symposium on the Control of Human Reproduction affirms the role of the physician in the support of the integrity of the family. The partners in marriage should have the privilege of determining the number of children they wish to have in their family. The physician should cooperate by providing counselling, taking into consideration both medical and moral factors. It is recognized that at times permanent sterilization, either male or female, may be indicated.

If contraception is indicated, the physician should assist in selecting the best available method for *this* purpose. Although better and simpler contraceptive techniques are expected to be developed in the foreseeable future, in some countries, the intrauterine device (I.U.D.) is expected to be the contraceptive method of choice for some time.

The single person seeking contraceptive advice requires concerned counselling *by the physician*. If he provides contraceptive agents, he participates in the intent of their use.

Induced (Therapeutic) Abortion

The sanctity of life must be considered when the question of abortion is raised. At whatever stage of gestation one considers the developing embryo or fetus to be human, even at birth, the potential great value of the developing intra-uterine life cannot be denied. There may, however, be compelling reasons why abortion must be considered under certain circumstances. Each case should be considered individually, taking into account the various factors involved and using Christian principles of ethics. Suitable cases for abortion would

fall within the scope of the American College of Obstetricians and Gynecologists Statement on Therapeutic Abortion. However, we believe that sociological pressures that justify abortion rarely occur in isolation. We do not construe the A.C.O.G. Statement as an endorsement of abortion for convenience only, or on demand.

The American College of Obstetricians and Gynecologists Statement on Therapeutic Abortion

Termination of pregnancy by therapeutic abortion is a medical procedure. It must be performed only in a hospital accredited by the Joint Commission on Accreditation of Hospitals and by a licensed physician qualified to perform such operations.

Therapeutic abortion is permitted only with the informed consent of the patient and her husband, or herself if unmarried, or of her nearest relative if she is under the age of consent. No patient should be compelled to undergo, or a physician to perform, a therapeutic abortion if either has ethical, religious or any other objections to it.

A consultative opinion must be obtained from at least two licensed physicians other than the one who is to perform the procedure. This opinion should state that the procedure is medically indicated. The consultants may act separately or as a special committee. One consultant should be a qualified obstetrician-gynecologist and one should have special competence in the medical area in which the medical indications for the procedure reside.

Therapeutic abortion may be performed for the following established medical indications:

1. When continuation of the pregnancy may threaten the life of the woman or seriously impair her health. In determining whether or not there is such risk to health, account may be taken of the patient's total environment, actual or reasonably foreseeable.
2. When pregnancy has resulted from rape or incest: in this case the same medical criteria should be employed in evaluation of the patient.
3. When continuation of the pregnancy is likely to result in the birth of a child with grave physical deformities or mental retardation.

Approved by the Executive Board, May 9, 1968.

Changes in the state laws on therapeutic abortion that will permit honesty in the application of established criteria and the principles enunciated in this statement should be encouraged. Provisions should be included to protect the physician from legal action or medical liability should he refuse to perform the operation because he finds a particular abortion to be against his moral standards.

Fetal Indications for Prevention of Conception and for Therapeutic Abortion with Specific Reference to Genetic Considerations.

Much human suffering can be alleviated by preventing the birth of children where there is a predictable high risk of genetic disease or abnormality. This appears to be a proper Christian objective.

An accurate diagnosis of genetic defect and statement of risk for subsequent pregnancies can often be based on examination of a single affected child. (Multiple abnormalities in a family are not essential to establish indications for intervention.) In some conditions a sig-

God's moral law. It would be more correct to say that the existence of conscience bears witness to the importance of cultural training. It is a human characteristic to feel "guilty" for having acted in ways contrary to one's cultural prescriptions. To state that "apart from the guidance of Scripture and the Holy Spirit, men tend to equate it [natural law] with the mores of their particular culture," fails to recognize that all Christians equate God's law (or will) with their own cultural mores. Not only does "Christian conscience" differ from one culture to another, but also from one American Christian sub-culture to another. As a result, different groups are convinced that it is "God's will" for Christians to act (or to abstain from acting) in certain ways, while the issue is irrelevant to other Christian groups. "Under the guidance of the Holy Spirit" people arrive at opposite conclusions, for example, whether or not the possible impairment of the

mother's health makes abortion permissible. Which of these conclusions is in accord with natural law? In a culture in which the "sanctity of human life" is not emphasized as strongly as in ours, infanticide might well be considered necessary for the health and welfare of those family members who already are struggling to stay alive on an insufficient amount of food.

I certainly appreciate the effort of theologians to attempt a Christian statement on this important issue. Possibly a major problem is that they have attempted to base it on Scripture without overtly recognizing that many of the values expressed in the statement are actually part of their cultural training, which are then often "validated" by "guidance" from the Scripture and the Holy Spirit.

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nificant risk can be determined prior to the production of any children, through evaluation of the family history and laboratory tests. The assistance of a consultant who is a specialist in human genetics is required.

When a genetic problem is encountered the physician should point out the implications for subsequent pregnancies. The parents should be helped to understand the medical, emotional, and financial problems involved in rearing a child with a congenital disease. The short-term consequences of contraception and sterilization should be explored. The family may wish to consider other factors, and the decision concerning additional pregnancies should be left to the parents. If contraception is attempted but fails, the risk of severe defect in the child might constitute a fetal indication for abortion. The couple may prefer voluntary sterilization for husband or wife (the choice depending on the specific case). We find that principles of care for the individual and society on which we have agreed to be in accord with generally accepted precepts of sound clinical genetics.

When an affected individual is not mentally competent to make decisions for himself, the genetic problems should be made clear to the guardian or guardians. In such circumstances, involuntary sterilization could be considered upon the request and express permission of the guardians.

ASKING THE RIGHT QUESTIONS

All life is a marvel; only human life is considered sacred. We do not hesitate to kill cows for food, although in other parts of the world this is unthinkable. Animals who are friends to man, such as dogs and cats, are afforded a position of greater value at least in our culture, presumably because of their association with human life. Much of one's attitude is culture-determined. The Christian community has consistently upheld the sanctity of human life in a unique way, in spite of those inconsistent records of the church's commendation of killing in support of itself. But the question is, "What is human life?"

Defining Human

Webster's dictionary says that "human" means "characteristic of man." Of "man" the dictionary says, "an individual of the highest type of animal existing or known to have existed, differing from other high types of animals, esp. in his extraordinary mental development." To be human then is to exercise the faculties made possible by this extraordinary mental development. It is this development that makes possible insight, rational thinking, conscience, hope, God-consciousness, awe, reverence, appreciation for beauty, self-consciousness and the desire for understanding, to name just a few.

A chimpanzee is not human. Yet a one-year old chimpanzee displays more "human-like" characteristics than a one-year old infant. It is recognized that the one-year old infant has the *potentiality to become* human, whereas the chimpanzee does not. We *give* to the child the value placed upon an individual who will in the normal course of events exhibit the qualities of humanity; he is a *potential human*. We withhold from the chimpanzee the value placed upon a potential human, because in the normal course of events

The Christian in an Over-Populated World

The control of human reproduction demands the attention of Christians from the standpoint of the desperate needs not only of individuals and families but also of nations and people. This Affirmation acknowledges the need for the discriminating involvement of Christian people in programs of population control at home and abroad, so that the services or counsel rendered may conform both professionally and ethically with the principles embodied in this Affirmation. It is emphasized, however, that participation in programs of population control should be in response to requests for help from the states or communities involved.

FOOTNOTES

1. Unless otherwise specified, when the word "abortion" without qualification is used in the text, induced abortion and not spontaneous abortion is intended. In addition, unless otherwise specified, the word fetus is used in reference to the developing life from the time of conception until birth.
2. The physician must always be the captain of the health-care team. Therefore, specific reference is made to him in this section. Nevertheless, these guidelines apply in general to other members of the team. The underlying principles also apply to practitioners of other professions who assist families in making decisions.

it is impossible for him to exhibit the qualities of humanity at any time. The value we attribute to the life of the infant, or to the unborn fetus, is an *imputed* value, held in expectation of what the fetus or the infant can become.

A very old person who is the victim of advanced senility may live in the condition of an unthinking creature. He exhibits none of the human qualities associated with extraordinary mental development. The same could be said of a person who has suffered grave and permanent brain damage. His mental faculties have ceased to function; in a real sense they are dead. The value we attribute to such an elderly victim of senility or to the victim of brain damage is an *imputed* value, held in memory of what the elderly or injured person once was. He once *was* human; his humanity can be remembered.

What shall we say of the creature born into the world with grave brain damage? It has no potential for humanity; it has no past of humanity. If we define it as human, we are saying in effect that any creature born of a human being *is* a human being. What is the meaning of such an affirmation?

In an exact sense of the word, neither the fetus nor the senile is human. (We shall not press the other variations mentioned above further at this time.) If we are to contemplate ending the existence of the fetus, we must consistently consider ending the existence of the senile. In fact, the life of the fetus may be regarded as having the far greater value; it represents the potentiality for human development. The life of the senile is virtually at an end; only the memory of his humanity remains.

The Soul

These considerations are closely connected to the question, "When does the unique spiritual quality of man (soul) come into being?" This question can be coupled with a second similar to it, "When does the unique spiritual quality of man pass out of existence (either end, or undergo transformation)?"

The question, "When does a man's soul come into being?" cannot be answered. It is in the class of meaningless questions. It incorrectly assumes that

a time can be set for the event under inquiry, and that a man's soul has a certain timeless identity independent of his body. These two assumptions are discussed in what follows.

To make it possible to set a time for the coming into existence of soul, it would be necessary that there be two well-defined states: the soul-less and the soul-full. This use of the word "soul" cannot be related to the world as it is. Every living creature possesses aspects of those attributes we associate with the concept of "soul." A cat has "soul": a cat's "soul." A dog has "soul": a dog's "soul." By this we mean simply that the characteristics associated with soul in terms of a description of life on the "spiritual" level are at least partially present also in cats and dogs. They are not identical with "human souls", however, for the entire being (physical, biological, psychological etc.) of a cat or dog falls short of the capabilities and potentialities of the entire being of a man. The soul of any creature is commensurate with the total development of that creature. Thus the fetus has a "fetus' soul" and a senile man has a "senile soul." But language becomes meaningless if these "souls" are identified with the "human soul." The quality we call "soul" is not an either-or situation. We can maintain properly that there is "soul" present from conception to death, but if so we then have to ask ourselves what it is we have really affirmed. We can watch as the "fetus' soul" develops into the "human soul," but we cannot ask when the human soul came. We can watch as the "human soul" degrades into the "senile soul;" can we ask when the human soul went?

Continuity of "I"

What is meant when we speak of "I," as though the "I" of today is the same as the "I" of a decade ago or of a decade hence? What is there in common between the child of five and the man of fifty? Is the man, who in his wisdom would avoid the sins of the child, still guilty for the youthful misdemeanors? Is the child, who in his naivete is not capable of the crimes of the man, still guilty for the sins he may one day commit? Take away the tie of memory, and what identity is left between the man and the boy? Does a victim of amnesia respond to a movie of himself in childhood in any other way except that of indifferent non-recognition? There is only one common link between the man and the boy: they are both the embodiment of a specific biological life system at two different times during its life. Whether they are necessarily both the embodiment of the same psychological or spiritual life system is not so easily decided. If the man develops from the boy in the normal course of events, memory affirms the common root.

But suppose that something happened to that boy in the course of his life: a severe accident that affected the working of his brain and altered his personality. In what sense is the link of continuous personality now present? Is the "I" before the accident the same as the "I" after the accident? Or shall we say that the "I" before the accident died, and that the "I" after the accident was born at that time? But then we would have two personalities, two "I's", evidenced by embodiment in a single life system, and even our definition given above to link a person at two stages of life would prove deficient.

In some sense the experience of Christian conver-

sion can be related to these considerations. The event of regeneration is pictured as a creative act of God, a second birth, whereby a new element to the "I" is brought into being (e.g., Romans 7:15-32). The "I" after conversion is not the same as the "I" before conversion; the latter has been and is being in some sense put to death, while the former is newly born. Conversion not only saves a man's soul, it also changes it.

Summary

What is the point of this discussion? Two conclusions may be made. (1) Issues in the area of Christian ethics, whether in abortion, euthanasia or mental illness, cannot be resolved on the assumption of a changeless identity that exists partially or completely independently of the physical, biological and psychological "body" of this life and then passes away from the body upon death. Nor can they be resolved by assuming that distinctions can be made between soul-less and soul-full states of living existence. (2) Any concept of a soul-identity that transcends the specific physical embodiment at a given time and condition must be attributed to a creative act of God beyond the experiences of life in this world. If a "soul" is to exist after the death of the body—in particular in the "interval" between an individual's death and the resurrection (if it is meaningful to speak of such an "interval")—it must be a "soul" newly created by God, since the soul that we see, experience and deal with in this life is intimately and indissolubly related to the health and life of the body.

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AN EVANGELICAL POSITION ON BIRTH CONTROL

Abstinence

In seeking to formulate an evangelical position on birth control it may be helpful to group the various methods into three basic categories—abstinence, prevention, and abortion. Abstinence, which includes late marriage, periodic abstinence (or rhythm), and celibacy, has traditionally been regarded as an acceptable method for Roman Catholics. But in general, abstinence is a highly unreliable method for restraining the population explosion. Late marriage may limit the number of child-bearing opportunities if it is accompanied by pre-marital abstinence. But given the strength of the sex drive, it may simply increase the temptation for pre-marital intercourse and result in an increase in illegitimate children. Likewise, celibacy if accompanied by sexual abstinence removes some units from the population production line. But the number of such persons is far too small to make any

significant change in the rate of population increase.

Within the marriage relationship complete abstinence from intercourse is not only unnatural but contrary to Paul's warning in I Corinthians 7:5 that husbands and wives should be careful not to deny one another the sexual rights of marriage lest they be tempted into unfaithfulness. And even the practice of periodic abstinence, while perhaps better than no family planning at all, is both unreliable and for many people unpleasant. The precise counting of days and keeping of charts that is required to give any hope of success would seem to most observers, including many Roman Catholics, to be so cumbersome and mechanical as to destroy much of the normal enjoyment of the sexual act.

Contraception

Therefore, the evangelical Christian would probably not regard abstinence as a very realistic or even particularly desirable method of birth control. This is especially true in view of the improvements which have been made in mechanical and chemical contraception. If one accepts the general Protestant viewpoint that the creation of one flesh through the sexual relationship is both natural and desirable even when procreation is not the basic purpose, then there would appear to be no particular moral or religious basis to prevent the evangelical Christian from using any of the generally accepted means of preventing conception. Even *coitus interruptus*, though it may be rejected on aesthetic grounds or regarded as an unpleasant interruption of a natural process, would not seem to be morally objectionable. In contrast to Roman Catholic teaching, for example, the sin of Onan is best understood as resulting not from the use of *coitus interruptus* but from his disobedience to God's direct commandment to raise up seed in his brother's name. And the sin would have been just as great if he had abstained from the sex relationship completely.

In general there would appear to be no Scriptural reason to deny a married couple the right to use any of the standard mechanical or chemical methods of preventing pregnancy. Even the question of the possibility of destroying life by destroying a fertilized egg through an IUD or a pill seems likely to be dismissed by most evangelicals as a highly theoretical and legalistic controversy.

Even the development of a "morning after" pill would seem to be a real boon for mankind and therefore, should be welcomed rather than condemned. The fact that it could be taken after intercourse would permit a tailoring of the use of the pill to the requirements of specific individual patterns, especially for those who have intercourse rarely or irregularly. It would eliminate the necessity for taking a regular cycle of pills and might provide a method that could be exported most easily to the underdeveloped areas where population control is most desperately needed. It would also be a far more acceptable solution to the problem of pregnancies resulting from rape than that provided by abortion.

Abortion

It is in fact this last category of population control through abortion (defined as destruction of the embryo or fetus after conception has occurred) that represents the most difficult moral challenge. There is a

strong movement both internationally and in the United States toward legalized abortion for certain cases, particularly where the mother's life is endangered by the pregnancy or for victims of rape. The American Medical Women's Association, for example, in their convention in November 1966 joined with the American College of Obstetricians and Gynecologists and the American Law Institute in urging limited legalized abortion. They note that there are an estimated one million abortions performed in the United States each year and few of them are performed under sanitary medical conditions. Therefore, they recommend that licensed hospitals be permitted to provide abortions in cases where there is substantial danger to the mother's mental or physical health, where there is strong probability that the child will be born with severe mental or physical abnormality, or where the pregnancy is the result of rape or incest. The State of Colorado has adopted a law which permits abortion, and serious consideration is currently being given to similar moves in several other state legislatures. Where they are designed to provide careful medical and legal controls, such laws may be desirable if they are used only in extreme emergencies. In general, however, abortion should not be considered as a significant device for limiting population and its widespread use for that purpose represents a very callous disregard for human life.

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Reprinted from *Birth Control and the Christian*, W. O. Spitzer and C. L. Saylor, Editors, Tyndale House, Wheaton, Illinois (1969) pp. 192-194.

OTHER LITERATURE

The *Journal* has commented on the problems mentioned in *A Protestant Affirmation on the Control of Human Reproduction* in several issues. The March 1962 *Journal* discussed the population problem as it was presented at the 1961 convention at Houghton College and agreed in most respects with the present *Affirmation*. But a note of disagreement with the use of the "command to multiply" occurred in the Dec. 1966 issue where Ivan Howard of Asbury Seminary declared, "It is significant that the command to populate the earth was given only twice, and each time when it was without inhabitants." I conclude one is not now ordered by Scripture to have children, although I consider it a privilege to have them.

A pessimistic note is sounded on the future of the population-food problem. In the review of William and Paul Paddock's book *Famine—1975! America's Decision: Who Will Survive?* this paragraph by Wilbur Bullock is significant, "In a carefully documented presentation, they demonstrate that the population-food collision is inevitable. None of the methods now in use or under consideration, individually or collectively, are capable of controlling world population in the near future. Due to the impossibility of an immediate in-

crease in agricultural production, in proportion to the population increase, the hungry nations of today will inevitably be the starving nations of the next decade. There is no hope to avert this disaster. Synthetic foods, hydroponics, desalinization, the ocean, fertilizers, plant breeding, irrigation, land reform, government support, private enterprise, or any "unknown" panacea cannot possibly contribute enough in time. Neither can the developed nations avert the disaster. Only the United States will be able to provide any help, and our resources are totally inadequate to feed the world of 1975."

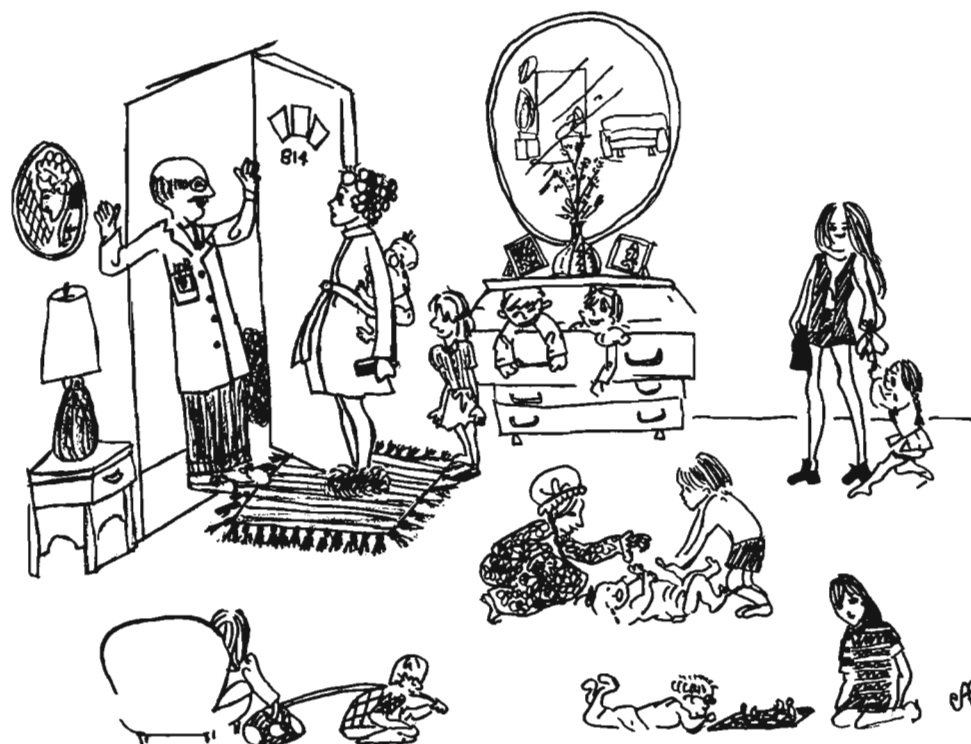
The former book review editor, Marlin Kreider, in reviewing J. C. Monsma's book, *Religion and Birth Control*, summed up this symposium of protestant physicians in these words, "The general points of at least partial agreement among the protestant physicians could be stated as follows: "Contraception control is not contrary to the 'Natural law'; abortion (therapeutic) is justified only if the mother's life is threatened;

sterilization (generally of the woman) may be justified for a number of reasons if it will contribute to the health and happiness of the family; artificial insemination of semen from the husband may be acceptable but there is a serious question about semen from other, even unidentified, males. A section on natural child-birth presented divergent viewpoints."

Many of you have seen the excellent issue of *Christianity Today*, Nov. 8, 1968, on Contraception and Abortion. I note the differing views as to when life begins and consider its analysis necessary in deciding on when abortion is permissible.

This affirmation and its expansion in the volume on *The Control of Human Reproduction* from Tyndale House are commended to each thoughtful Christian who counsels on this important matter.

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"Great news, Dear! I've just had a major breakthrough in increasing fertility!"

We have failed rather miserably to give even to so-called educated people some feeling for the way in which science investigates a subject, and the way in which scientists subject their observational material to critical evaluation before reaching conclusions. The thing that most people are least able to do is to refrain from drawing conclusions when there is not enough evidence at hand to warrant drawing conclusions.

E. U. Condon, "UFOs I have Loved and Lost"
Bulletin of the Atomic Scientists, December 1969, p. 6
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Cultural Factors Affecting Human Fertility*

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Human fertility remains high in many countries because cultural values influence parents to procreate many children. From Biblical cultures in antiquity down to the present, religious views are integrated with various cultural factors in encouraging human reproduction rates although the New Testament does not seem to be explicit in suggesting family size or encouraging human reproduction. Among a range of cultural factors influencing population are such values as virility, prestige, security and others held by parents in a cultural milieu. If one adopts the Malthusian, or pessimistic, view that human population will eventually outstrip food resources, birth control measures, especially contraceptives, will be effectively disseminated in non-Western cultures only by cognizance of cross-cultural appreciation of values and acculturational processes.

"So God created man in his own image, in the image of God he created him; male and female he created them. And God blessed them, and God said to them, 'Be fruitful and multiply, and fill the earth and subdue it . . .'" (Genesis 1:27-28, RSV).

Perspectives on Fertility

With these words the Bible introduces the divine intention that human fertility is to be the means for populating the earth by man still free from sin with its pervasive and dire effects. Undoubtedly this directive influenced early man's view about human reproduction which, when coupled with subsequent events, eventuated in an attitude toward children epitomized in the agonizing plea by Rachel to her exasperated husband. "When Rachel saw that she bore Jacob no children, she envied her sister; and she said to Jacob, 'Give me children or I shall die!' Jacob's anger was kindled against Rachel, and he said, 'Am I in the place of God, who hath withheld from you the fruit of the womb?'" (Genesis 30:1-2). Childlessness, aggravated by envy of her sister and co-wife, prompted Jacob's favorite wife to consider suicide in her belief that barrenness is a divine reproach.

At the inception of Christianity, Paul perhaps echoes a similar opinion towards human fertility in instructing Timothy thus: "So I would have younger widows marry, bear children, rule their households, and give the enemy no occasion to revile us" (1 Tim-

othy 5:14, RSV). As the Roman Catholic Church became dominant, it adopted like ideas which have persisted through the centuries and, excepting recent opposition by liberal members in Europe and America, instilled the attitude among Catholics so effectively that a devout member in Malitbod, a small barrio in the Philippines, summarized a consensus of opinion regarding birth control by women practising contraception and abortion with these words:

"When these women die, they will be brought before our Lord who will ask: 'Why did you kill your child?' And what will they say? Surely, they cannot tell lies because God can see through their hearts; He knows what we humans are doing. If our hearts are black, as these women's, God will certainly say: 'You have murdered an innocent child; you have rejected my gift. Go and burn in hell for all the mortal sins you have committed in my name'" (Jocano, 1969:17).

A maxim among the Lugbara people in Uganda, "The work of women is to bear children" (Middleton, 1965:57) expresses a view widely shared among peoples throughout the world. To be more precise, we should rather say that the attitude of this maxim is common to most male-dominated societies. This belief is opposed. Sabamma, a mother in Gopalpur, a village in south India, offers what may be a representative opinion among women in countries marked with high birth rates. After eleven pregnancies and bearing eight living children, Sabamma sums up her motherhood by saying, "Thank God, those pregnancies finally stopped" (Beals, 1962:14).

Sex is of course a primary drive among most species in the animal kingdom. The urge to perform the sexual act is powerful quite apart from intention to propagate the species. Among many animals, this drive

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is controlled by instinctual mechanisms so that sexual activity is confined to annual rutting seasons although man in domesticating certain animals has altered their sexual habits. In contrast, man is normally characterized by an oestrality favoring sexual activity throughout the year, hence birth of offspring may occur throughout the year. Also in terms of human biology, a healthy female is fecund for about thirty years. This biological potential rarely operates freely, however, for man possesses culture with ideas restricting his biological nature. The central assumption in this essay, therefore, is that human fertility with attendant population problems should be considered from a cultural perspective if programs to ameliorate a critical world problem are to achieve success.

Cultural Influences

The view emphasized here then is that to understand human fertility rates and threatening population increases, cultural influences must be identified and modified. Admittedly one can be either pessimistic or optimistic in appraising man's growing numbers and the potential food resources (or other materials essential to human life), for disagreement exists among scholars with some holding to the Malthusian theory while others think scientific ingenuity can increase productivity adequate for probable population increments. Whether the pessimistic or the optimistic view is valid cannot be argued here, but it does seem reasonable to conclude that ultimately there must be limits to the "carrying capacity of the land"—to borrow a phrase used by ranchers in western range country.

Culture is the central concept in anthropology denoting man's distinctive quality setting him apart from all other life forms. Simply defined, culture may be considered the total way of life or the design for living characterizing each human society. It includes in a complex integrated whole all learned and shared behaviors stemming from themes or values within an emotional matrix or ethos. Animal behavior seems to be dominated by instincts which in man are greatly modified by cultural influences. Although culture channels most human thoughts, feelings, and actions, we need not adopt extreme cultural determinism for each individual can exercise freedom in varying degrees of deviation from cultural patterns.

As defined by anthropologists, culture is significant in understanding human fertility rates in modifying sexual activity by relating sex and reproduction to the culture's value system. For example, anthropologists agree that the incest taboo preventing sexual mating between certain men and women considered relatives is culturally proscribed. Hence relationships subject to the incest taboo vary considerably from society to society. In many of our states, the mating of first cousins is illegal because it constitutes incest, but among many societies marriage of first cousins is approved and preferred especially if these cousins are "cross-cousins" (i.e., father's sister's children, or mother's brother's children).

Likewise shame and guilt feelings associated with sexual matters and activity invariably stem from cultural views with some societies holding strict taboos against open discussion and education while others are relatively free from these restrictions. One may ask to what extent current opposition to sex education in public schools in the United States springs from a pur-

itanical ideology long characteristic in American culture. We may have seemed to stray from our subject, but these observations are relevant in this study because cultural values are inextricably woven in decisions to favor or oppose programs affecting sexual activity and human fertility.

Several Questions

Several questions emerge in this and other studies seeking a solution to the ominous population increase. With developed communication and dissemination of information about growing population pressure in the world, and the effectiveness of inexpensive contraceptives, why haven't birth rates declined more rapidly? Why do parents in various cultures continue to have large families when privation and even starvation confront them? What influences are at play causing fecund women to bear unwanted children? Why have some governments failed in their efforts to initiate successful programs for birth control? Our contention is that answers to these and similar questions can be offered only by understanding the cultures, including religious beliefs, of the countries where human fertility rates remain high. We will examine briefly, therefore, selected attitudes held by various cultural groups about the birth of children.

With developed communication and dissemination of information . . . , and the effectiveness of inexpensive contraceptives, why haven't birth rates declined more rapidly? Why do parents in various cultures continue to have large families when privation and even starvation confront them? What influences are at play causing fecund women to bear unwanted children? Why have some governments failed in their efforts to initiate successful programs for birth control?

Hebrew Culture

In ancient Hebrew culture, the bearing of many children was viewed as evidence of divine approval and blessing. A simplistic explanation for this attitude is to attribute it to obedience to God's injunction to Adam, "be fruitful and multiply" (Genesis 1:28) which was reiterated to Noah (Genesis 9:1,7) and to Jacob (Genesis 35:11). However other factors undoubtedly influenced the Hebrews, so often prone to disobeying God, in observing this command by incorporating it into their cultural values. For example, we may infer from God's covenant with Abraham, with its dual promise of possession of the Holy Land and "I will make you exceedingly fruitful" (Genesis 17:6), that many children provided economic security for old age in a pastoral economy as well as populating a sparsely populated country much desired by more populous and stronger neighbors. This pro-fertility theme is unequivocally advocated by the Psalmist in these lines:

*"Lo, sons are a heritage from the Lord,
the fruit of the womb a reward.
Like arrows in the hand of a warrior
are the sons of one's youth.
Happy is the man who has*

*his quiver full of them!
He shall not be put to shame
when he speaks with his
enemies in the gate" (Psalm 127:3-5 RSV).*

Such thinking promoted a rapidly expanding population to foster an abundant society where a man was surrounded by many children to care for him in old age, to expand flock and field, and to increase the tribe with numbers and prosperity for strength and security in the nation. This attitude also met the concern to preserve the family name and lineage insuring inheritance continuity in the land—a theme that reinforced the abundant society goal, for to fail to have offspring to carry on the family name was a misfortune imperiling the social structure. The levirate, a cultural practice requiring a man to marry his deceased brother's wife to produce offspring to preserve the dead brother's name and inheritance, illustrates Hebrew thought. When Judah's son, Onan, refused to honor his levirate responsibility, the Lord "slew him," to emphasize a cultural value which reinforced prolific human fertility patterns among the Hebrews (Genesis 38).

New Testament Times

When one considers cultural factors affecting human fertility in New Testament times, there is some evidence that marriage and children were accorded high evaluation and were cited as models of acceptable faith in God. There is, however, no detailed or extended statement suggesting explicitly what family size should be. As a matter of fact, Fagley has observed correctly that parenthood in the New Testament is considered in dialectical fashion (1960:124). In a thesis and antithesis pattern there is a yes and a no in both the Gospels and the Epistles. Seemingly negative and affirmative utterances regarding family conditions were made by Jesus to his disciples. Later, embedded in a Judaic ethos but alertly sensitive to pervasive Hellenistic influences, Paul spoke both for and against family ties when he sought to cope with emerging problems within the first struggling churches. In short, we cannot conclude that the New Testament presented an explicit view to influence human fertility rates among the first Christians.

Christianity

It seems, therefore, that early Christianity contained opposing views with some leaders advocating such an extreme as celibacy while others favored marriage and the procreation of offspring. The patristic writings reveal an ambivalence stemming from the conflicting opinions. As the Christian movement developed through history, the Eastern Orthodox Church, the Roman Catholic Church, and later the Protestant churches, made interpretive pronouncements about parenthood and childbearing. These doctrines were usually fashioned to influence cultural attitudes among the people where the churches flourished. The Eastern Orthodox Church viewed marriage and sexual relations primarily as a means for procreation of children even to the point that coitus within the marital state was tinged with sin if procreation was not the purpose. Any form or method of contraception was condemned as evil.

In Roman Catholicism, marriage became a sacrament intended to sanctify conjugal activity primarily

for producing offspring. While in time permission was given to couples to practice the rhythm method for contraception, the Roman Church condemned "artificial" contraceptives in maintaining that coitus is ultimately justifiable only for begetting children. The current controversy and dissension within the Roman Church includes papal authority in banning contraceptives, although it is common knowledge that many Catholic couples, especially in urbanized Europe and the United States, disregard the official dictum.

Protestantism originally shared Roman Catholic views in opposition to limiting births by contraception, but the tendency has been increasingly to view marriage as a function for companionship and parenthood with the conclusion that the former does not require the latter to justify conjugal relations. Even among the conservative and evangelical segments of Protestantism, sexual intercourse in marriage without procreative intentions is widely accepted and the employment of contraceptives is common (Vincent, 1968).

Non-Christian Cultures

Outside the culture areas where Christianity dominates, religious views within cultural settings affecting human fertility vary considerably according to Fagley's survey (1960:94-108). Among Hindu and Buddhist peoples there are few religious or legal restrictions preventing artificial means of birth control. The portentous population growths in countries like India and China are due to other cultural factors, for contraception is legal and sterilization is usually allowed on both social and eugenic grounds. In Japan abortion is permitted for economic reasons under medical sanction.

In Islamic countries, "The cradle is proving more potent than the sword" (Fagley, 1960:101) with Middle Eastern countries marked by population growth rates of nearly three per cent annually—a rate second in the world only to some Latin American countries. The pro-fertility patterns rest upon a cultural system where children are much desired for the labor services relating to employment on the land when the children are young, or numerous children enhance the parental prestige with much honor ascribed to large families, or children are the only means whereby the Islamic law of inheritance can be realized. Despite these cultural views favoring population increases, contraception is legal in some Muslim countries, as in Egypt and Pakistan, but somewhat surprisingly it is not in Turkey which has been receptive to many modern ideas. Whether contraception is allowed or forbidden in Muslim countries, policies determining the practice within the culture seems to be primarily for political reasons rather than religious. Paradoxical situations also exist in some Muslim countries; for instance Turkey considers contraceptives illegal but is quite lenient in penalizing abortionists. (As a Judaic enclave within the Islamic World, Israel has legalized contraception but severely penalizes those guilty of induced abortion.)

Latin America

As stated earlier, this paper sees religion and ideology of peoples as integral and pervasive parts of cultures. Evidence leads us to conclude also that religious beliefs commonly influence, or serve as sanctions for, most cultural traits, complexes, and other

institutions. This must be born in mind as we direct our attention to what may seem to be non-religious factors within a culture as these factors affect human fertility rates and related population problems. Assuming this argument to be true, we focus our attention upon selected cultural traits at play in an area characterized by the population "explosion." The area is Latin America where the population is increasing about three per cent annually, and where social scientists have identified typical factors contributing to the alarming population increases (Stycos, 1969).

Rapid population growth in Latin America is surprising when it is known that most people in general seem to prefer small families. This general preference, however, is offset or defeated by cultural values which militate against married couples having small families. For example, soon after marriage the typical wife becomes pregnant because young husbands fear possible rumors of sterility or impotence, thus reflecting the great value placed upon masculine virility. To the Latin American, the most convincing way to demonstrate masculinity is to father children. Sexual experience and adventures do not prove manliness, for while most Latin American men engage in pre-marital and extra-marital sexual activities, these are usually with prostitutes who, if they become pregnant and bear children, cannot enable a man to claim virility since the paternity of an illegitimate child is uncertain. When questioned about sexual and family matters, one informant gave this typical response: "This business of being married and having no children looks bad. One likes to have them to prove he is not barren" (Stycos, 1968:69). Hence when his wife, becomes pregnant soon after marriage and bears him a child, a young man confirms his adult status; and when the wife continues to bear children, the man demonstrates to his community his continuing virility.

The pronounced double standard of sexual behavior among Latin American societies is a second factor favoring human fertility. This double standard fosters intense jealousy among men toward their wives who in turn are deeply suspicious of their husbands. These marked jealousies frequently are rationalizations for desertion and extramarital sexual life, but their significance for this analysis is that they affect family size in that both men and women believe that having many children reinforces the marital bond and reduces tendency toward unfaithfulness. In actual practice this belief is more effective in restricting the woman—something recognized by both men and women. One Puerto Rican wife put it this way: "He told me the more kids I have the more tied to him I was . . . that with so many kids I could not abandon him to go with another man or return to my family" (Stycos, 1968:70).

Male authority is a third reason contributing to the high birth rate among Latin Americans. Men usually object to their wives using contraceptives because they feel such use undermines their "rightful" male authority. In order to sustain his authoritarian position, the husband assumes that he has the right to determine the time, form, and frequency of coitus. He thus is the determining member in the family birth patterns. This dominating role, coupled with the desire to demonstrate his masculinity has its fulfillment in repeated pregnancies, each following quickly the previous childbirth.

Another cultural feature at play in keeping high birth rates is the man's fear of his wife's infidelity. Many Latin American husbands believe that if their wives were allowed to control conception by contraceptive methods the wives would not hesitate to engage in extramarital sexuality. This conclusion rests upon the widespread notion that men are much more clever and wise in seducing women; therefore to grant the wife prerogatives with respect to becoming pregnant raises the threat that some adroit male may captivate and conquer her. Related to this is Oscar Lewis' observation that "Some husbands deliberately refrain from arousing their wives sexually, as it is assumed that a passive or frigid wife will be more faithful. In general, sexual play is a technique men reserve for the seduction of other women" (1960:58). Jealousy also motivates men to forbid their wives to submit to physical examination by a male physician; this in turn prevents many wives from learning about effective contraceptive methods and birth control.

*Factors favoring human fertility:
 masculine virility double standard
 of sexual behavior male authority
 fear of the wife's infidelity
 fear that birth control may impair one's
 health psychological reactions in
 coitus lack of information
 cultural distinctives.*

Both men and women, in ignorance, fear that birth control may impair one's health. We need not be unduly surprised that such apprehension exists for it may be remembered that serious charges have been made against oral contraceptives by medical authorities in our so-called enlightened United States. Many Puerto Rican husbands and their wives believe that birth control methods cause cancer or other serious maladies in women. Common views include the notion that diaphragms get trapped in the vagina and can be removed only by major surgery. Sterilization, it is assumed, can cause a woman to be chronically ill and helpless. One husband offered a typical feeling in these words: "I have never used prophylactics with my wife nor will I. That is dangerous because if it breaks the woman may die if that stays inside her womb" (Stycos, 1968:74).

Another cultural attitude rests largely upon psychological reactions in coitus. Many men are convinced that condoms destroy pleasurable sensation in the sexual act. We may challenge this stated reason for evidence seems to suggest that it is a rationalization for a more basic premise. In their double standard system, Latin men think women should be classed as "good" or "bad." Bad women are the prostitutes with whom the man can enjoy themselves sexually, but good women are those desired for wives. The good woman is to be treated with respect and reserve—an attitude that influences many husbands in their sexual life with their wives with the result that marital sex tends to be mechanical with little affection and eroticism. This persists as a culture pattern because

the husband ascribes purity to his wife, while she has inculcated from her parents, especially her mother, the conviction that sex is ugly and unladylike. Small wonder that these false postulates tend to develop passivity and frigidity in many wives. Consequently men, who seek to demonstrate their virility in impregnating their wives, resort to prostitutes for erotic and sensual sex experiences. Since in so doing, they are threatened by venereal disease from prostitutes, they are willing to use condoms, which in turn become associated with the world of evil and which are inappropriate for conjugal intimacies with wives who are related with sacred bonds. As one husband confessed, "Those things I don't use with my wife, because it debases my wife to use something that is used with prostitutes" (Stycos, 1968:75).

Lack of Information

Unquestionably absence of accurate information and lack of communication between spouses about sex and child birth are unfortunate characteristics in many sociocultural groups. Even where literacy and education are cultural foci, facts about sex and reproduction may be shrouded in prudish ignorance, or worse, information about birth control may be erroneous because it is derived from questionable sources. Unfortunately in some cases distorted ideas are propagated by zealous religionists holding views contradictory to fact. Cultural premises may include puritanical attitudes by husbands and wives who consequently are ashamed to discuss sexual matters between themselves or consult competent authorities. An exaggerated sense of modesty is often a cultural principle to the degree that couples, especially wives, are reluctant to seek birth control information. So pronounced is this modesty concept in some cultures that wives refuse to submit to physical examination by a male physician and some are even ashamed to be seen by their own husbands.

Examples about misinformation and restricted communication forming part of cultural value systems may be cited for Latin America, Islamic countries, India, and elsewhere where population growth rates remain high. Obviously the decision to effectively employ birth control methods is a mutual one between spouses. Husband and wife may have knowledge about contraception but if cultural beliefs hamper freedom to discuss intimate matters between themselves, it is not likely that effective action can be implemented. Contraception and limited human fertility depend upon couples aware that their wishes are shared. Intensive and extensive educational schemes must not only be introduced in many countries but these programs must be directed by those cognizant with acculturational processes and cultural factors already cited as well as the following selected at random from various societies.

Other Cultural Factors

Barnett provides an absorbing description of the role played by children in transferring and redistributing wealth among the Palauans in Micronesia (1960). In this cultural system, couples desire many children because the children are considered potential sources of services for the mother's kinsmen. The father is required to pay what Hoebel calls the "progeny price" which is compensation to the wife's kin for its loss of a legal claim to the children that she will bear

If it is difficult to inform people in the Western cultures where education is valued and the need for birth controls is appreciated, it is infinitely more difficult to instill necessary ideas in peoples who link many children with cultural ideals.

(1966:345). The father in turn realizes reimbursement by an adoption system whereby wealthy people adopt by payment as many children as possible for prestige and services. Children are thus viewed as a significant commodity in the economic patterns of Palauan culture. To suggest that a man limit his procreative activity is to threaten his right to economic security. Birth control measures meet stern opposition here.

In his study of a south Indian village, Beals singles out a cultural ideal bearing upon India's massive population problem (1962). While conducting a census in Gopalpur, he discovered a household containing fifteen people which in analysis led him to observe that "This is a large household, the symbol of one old man's success in life. Few other men live to see a household full of children and children's children. Out of one hundred thirteen households, only six have more than nine members." In the succeeding paragraph Beals conveys something of the pathos expressed by a woman who informed him that nine of her children died before reaching adulthood (1962:13). But Western medical and health methods are reducing the terrible infant mortality rates while efforts to introduce birth controls lag due to this cultural equation that links family size to the successful life. The result is staggering population increases among those who must choose between the burgeoning numbers and an adequate standard of living. Through lack of information about the impending crisis, the villagers retain cultural views leading them to conclude that it is possible to have both.

African birth rates are high because in most cultures, many children symbolize prestige and insure old age security. It is a truism for Africa that parents, especially fathers, love children. Both polygyny and the levirate persist amidst changing cultures because these culture traits aid a man to father many children. In fact the desire to enlarge the family with many children explains why sociological paternity is more important to African men than biological paternity, a value quite foreign to Western husbands who in all likelihood will divorce a wife who bears a child not fathered by her husband. When Hoebel argues that the payment by the groom and his family to the bride's family to legally establish marriage should be labeled "progeny price," he reflects insight into African attitudes. The critical factor in most African marriages is that the wife produce offspring greatly desired by the man but which can be his legally only if an agreed upon amount has been paid to the bride's family. Hoebel puts it in these words: "Progeny price may be in part compensation for the loss of the girl by her kinship's group, but is much more an act of

compensation to that group for its loss of a legal claim to the children that she will bear" (1966:345). Commonly the cause for divorce in Africa (as well as in many non-Western cultures) is a wife's barrenness, and polygyny is fostered for the same reason—to provide progeny to the man.

The culturally-induced desire for many children is illustrated by Gulliver's study of Jie marriage in Uganda (1960). Jie marriage is primarily for procreation as clearly revealed in fertility rites, and, equally significant, the view that marriage must be confirmed by the birth and survival of children. Radcliffe-Brown succinctly underscores this cultural principle in his assertion that "The most important part of the 'value' of a woman is her child-bearing capacity. Therefore, if the woman proves to be barren, in many tribes her kin either return the marriage payment or provide another woman to bear children" (1950). High infant mortality rates in Africa formerly limited population growth rates to offset the high birth rates stemming from these cultural incentives, but now medication and health improvements are lowering the mortality rate while birth rates remain at high levels to aggravate growing population pressures.

Abortion

The practice of abortion needs some comment in any summary of cultural factors affecting human fertility. Abortion is practiced by practically all peoples despite its illegality in many cultures. A striking example of how this custom affects population dynamics is provided by Schneider in his study of abortion among the Yapese in the Pacific (1955). Prior to European contact, Yap's estimated population exceeded 50,000 people, but by 1945 when occupied by American troops, the island's population had declined to about 2,500. The Yapese express concern in their admission that something should be done "to have more babies." Evidence indicates that self-abortion is widespread among Yapese women during their years of maximum fecundity. The result is that 34 per cent of those interviewed between twenty-six and fifty years of age admitted that they have never borne children. Schneider's study revealed that Yapese culture encouraged non-responsibility in early adulthood with extended and multiple love affairs as a primary quest for erotic pleasure. Pregnancy and childbirth are considered threats to the culturally-favored amorous adventures. Despite male objection, women may accomplish abortion in secrecy easily because tradition requires the menstruating woman to retire to isolated areas. Here in seclusion, a pregnant woman (the pregnancy undetected by the man) induces abortion without her lover or husband being the wiser. Customarily pregnancy is kept secret by the woman for the first three months, a time when the expectant mother and her unborn child are highly vulnerable to sorcery. The pregnant woman has ample opportunity to accomplish abortion while visiting the isolated menstrual areas without detection because of this three-month secrecy practice. Thus the cultural milieu favors a practice among the Yapese threatening their survival.

It is not likely that abortion will become the dominant means for limiting human fertility even though it may be effective as among the Yapese. Western ideas of medical practice and health measures will undoubtedly advocate inexpensive contraceptives as the preferable method rather than the more costly,

and in some cases much more dangerous, abortive method. It is possible that increased emancipation of women and access to higher standards of living will favor that most extreme method, sterilization, especially by couples who have had several children.

Difficulty of Education

Unquestionably education is critical for disseminating safe and effective birth control methods to retard population increases. But from the viewpoint of cultural anthropology, we must caution those seeking to implement educational programs in cross-cultural situations. If it is difficult to inform people in the Western cultures where education is valued and the need for birth control is appreciated, it is infinitely more difficult to instill necessary ideas in peoples who link many children with cultural ideals. Education will be effective only to the degree that cultural values and customs are understood and the principles of acculturation are applied. Among those who have explored the multi-faceted problems in transcultural communication, Barrett has provided what should be required reading by every one seeking to promote birth control programs in other cultures (1953).

Short of ruthless dictatorship and coercion, governmental policies for restricting human fertility can be implemented only by appreciating that the citizenry have value-laden ideas about the "rightness" or the "wrongness", the "desirability" or "undesirability", and similar judgments about procreating many or few children. Perhaps there is occasion for optimism in Meier's conclusion that advances in science coupled with developed technology of communication will effectively disseminate birth control information throughout the world (1968). But cognizance of cultures is imperative in order to identify those subtle factors affecting human fertility so that programs may be realized and thus cope with the world's ominous population increases.

REFERENCES

- Barnett, Homer G.
1953 *Innovation: The Basis of Cultural Change*. New York, McGraw-Hill Book Company.
- 1960 *Being a Palauan*. New York, Henry Holt and Company.
- Beals, Alan R.
1962 *Gopalpur: A South Indian Village*. New York, Holt, Rinehart and Winston.
- Fagley, Richard M.
1960 *The Population Explosion and Christian Responsibility*. New York, Oxford University Press.
- Gulliver, Philip H.
1960 Jie Marriage. In *Cultures and Societies of Africa* edited by Simon and Phoebe Ottenberg, pp. 190-198. New York, Random House.
- Hoebel, E. Adamson
1966 *Anthropology: The Study of Man*. New York, McGraw-Hill Book Company.
- Jocano, F. Landa
1969 *Growing Up in a Philippine Barrio*. New York, Holt, Rinehart and Winston.
- Lewis, Oscar
1960 *Tepoztlan: Village in Mexico*. New York, Henry Holt and Company.
- Meier, Richard L.
1968 Sex Determination and Other Innovations. In *Population in Perspective* edited by Louise B. Young, pp. 406-412. New York, Oxford University Press.
- Middleton, John
1965 *The Lugbara of Uganda*. New York, Holt, Rinehart and Winston.
- Radcliffe-Brown, A. R.
1950 Introduction. In *African Systems of Kinship and Marriage* edited by A. R. Radcliffe-Brown and

Daryll Forde, pp. 1-85. New York, Oxford University Press.
 Schneider, David M.
 1955 *Abortion and Depopulation on a Pacific Island. In Health, Culture and Community* edited by Benjamin

D. Paul, pp. 211-235. New York, Russell Sage Foundation.
 Stycos, J. Mayone
 1968 *Human Fertility in Latin America: Sociological Perspectives*. Ithaca, Cornell University Press.

Poverty and the Adolescent Parent*

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High teenage fertility, poverty, and illegitimacy are found together more often than would be expected by chance. Although a definite cause-and-effect relationship is difficult to prove, most students of the subject believe that poverty is an important underlying factor in high teenage fertility and illegitimacy. There are unfortunate consequences from school age pregnancy, whether it occurs in or out of wedlock. These include reduced health for the mothers and children, and lowered economic and social stability among their families.

Available statistical data are based to show a greater apparent than real difference between the rates of out-of-wedlock conceptions and births among the rich compared to the poor, and among nonwhites compared to whites. This bias gives false support to class pride and to punitive attitudes among many in our land.

Because of certain dominant values in our society, pregnant school girls are ostracized, reducing their chances of finishing high school or of obtaining needed health and social services. The end result is that many slide into a life pattern of high fertility, increasing social dependency, and personal degradation.

It is the responsibility of Christians to work for more and better services to pregnant school girls, and to work to modify society's punitive attitudes toward them. Following Christ's pattern, the emphasis in such cases should be to give real help rather than to ostracize and punish.

Poverty in the United States today is such a gigantic and complex phenomenon that, like the elephant being examined by the blind men, it cannot be fully apprehended from any one perspective. The majority of Americans, moreover, have an even greater sensory limitation with regard to poverty in this country than did the elephant-examiners with regard to their elephant! Most middle class Americans are sufficiently distant from the experience of poverty that they do not view the scenes of poverty, and cannot smell the smells of poverty, hear the sounds of poverty, or sense the pain of it. Michael Harrington was well aware of this when he wrote his classic book on poverty here entitled *THE OTHER AMERICA*, which is credited with a major role in sparking the War on Poverty.

We could study the problem of poverty by the examination of general statistics on the subject, and they are indeed sobering. For example, in 1966, 20%

of our families earned only 5.4% of the national income, whereas another 20% of our families received 40.7% of the total, roughly eight times as much.¹ In 1966 almost one quarter (23.2%) of the families and unrelated individuals in this country had incomes of less than \$3,000.² However, the statistics alone cannot show either the cause or the impact of poverty on human beings, and so I have chosen to focus upon one population group, whose problems are closely associated with poverty: adolescent parents.

CHARACTERISTICS OF TEENAGE PREGNANCY

The Magnitude of Teenage Pregnancy

Some persons fear that teenage pregnancy, particularly that which is illegitimate, is on the rise. Their fears are justified or not, depending upon the indicators which are chosen. Thus teenage pregnancy has shown a constant increase for decades in terms of

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actual *numbers*, but in recent years this has been due entirely to an increase in the number of women in the teenage category, and not to any increase in the birth rates for this age group. As a matter of fact, the birth rates per 1000 teenage women has actually fallen over the past decade. Between 1955 and 1966 the birth rates to mothers under 15 years of age was constant at 0.9 births per year per 1000 women in that age group, and during the same interval, the birth rate to women between the ages of 15 and 19 actually fell from 90.5 to 70.6 per 1000 women per year.³ In all, approximately 14% of all births in the United States are to teenage women.⁴

Therefore, although the absolute number of births to teenagers is increasing and will continue to do so as the population increases, the risk of pregnancy to a given teenage woman is actually decreasing slightly.

Illegitimacy Among Teenage Pregnancies

Any discussion of teenage pregnancy must include a discussion of the role of illegitimacy in the problem, because of the relatively high proportion of teenage births which occur out-of-wedlock. The best overall classification of the population of unwed teenage mothers is that of Herzog, who divides the population into two subgroups.⁵ The first, or subgroup A, consists of the approximately one third of the mothers who come from the middle or upper socioeconomic classes, are predominantly white, and characteristically do not keep the child unless they marry. They resolve the pregnancy problem in one of three ways: abortion, marriage, or going to another city or a maternity home and putting the baby up for adoption. Approximately 70% of all illegitimate white babies are put up for adoption, and the proportion is even higher among the teenage group. Most of these mothers receive social services, and many receive psychiatric treatment as well.

The remainder of the population, group B, consists of approximately two-thirds of the unwed teenagers and comes from low income groups (although they are not necessarily on public assistance); they are largely nonwhite. Approximately 90% of these mothers keep their babies, in part because there is not a large demand for adoption of nonwhite babies. They seldom seek abortion, perhaps because legal abortions are seldom offered to them, and illegal abortions, if they know where to find them, are frequently too costly.⁶ Nevertheless, sometimes this group does seek illegal abortions, with unfortunate results in terms of maternal deaths (see below).⁷ Prenatal care, when sought, is obtained late and predominantly in public clinics.^{8,9} Although their social problems are usually greater than those in the first population group, they are less likely to receive the needed social services, except for the minimal services which may be given to some in connection with their welfare status.^{10,11}

The Magnitude of Teenage Illegitimacy

It is difficult to discuss this with confidence because of deficiencies in the data. The definition of an illegitimate birth is not always the same from state to state, and many states neither collect nor report illegitimacy data. It is impossible, therefore, to obtain illegitimacy statistics for the United States as a whole. Moreover, the statistics from the states which do report illegitimacy show a systematic bias, because women from the upper and middle income groups are better

able to hide the fact of out-of-wedlock conception by abortion, by marriage, or by going to deliver in a state which does not report illegitimacy.

Because of the limitations of the data, all that can be reported are estimates of the illegitimacy problem. As in the case of all teenage births, we see a steady increase in *numbers* but a leveling off of the rates of illegitimate births. The estimated number of illegitimate births to teenagers has increased from 91,700 in 1960 to 129,200 in 1965.¹² There has, however, been no change in the rate of illegitimate births per 1000 *nonwhite* teenage women since 1957, and only a slow increase in the rate of illegitimate births to *white* teenage women during the same period of time. A third indicator, the proportion of all live births that are illegitimate, does show an increase during the past few years. This, however, results from the fact that the total birth rate for this age group has been falling, and the illegitimate birth rate, by remaining relatively constant, has increased proportionately.

Therefore, within the limitations of our data, there does not appear to be an increasing risk of out-of-wedlock births to teenagers. However, as the numbers of teenage births rise, there is a continuing increase in the need for services to these parents and their children.

Most middle class Americans are sufficiently distant from the experience of poverty that they do not view the scenes of poverty, and cannot smell the smells of poverty, hear the sounds of poverty, or sense the pain of it.

Relationship of Early Pregnancy to Income, Education, and Illegitimacy

As a generalization it may be stated that people from the lower income brackets tend to marry earlier, have children earlier, and have more children in all.¹² For example, in a recent study in New Orleans, Beasley found that although only 26% of the female population of the city was classified as "poor" by his criteria, this group of women accounted for 56% of the live births, 88% of the "visible" illegitimate births, and 68% of the births to women under 19 years of age.¹³ As a matter of fact, 8 out of 10 of the "poor" women in the study had had their first child before the age of 18.

Another generalization which can be made on the basis of existing data is that the younger the mother, the greater is the risk that her child is born out-of-wedlock. (Table 1).

Table 1. Estimated Illegitimacy Ratios by Age of Mother. U.S., 1965.

Mother's Age	Percent of births illegitimate
Below 15	78.5
15	56.4
16	37.4
17	17.6
18	13.3

Source: U.S. National Center for Health Statistics, *Trends in Illegitimacy United States, 1940-1965*, Series 21, No. 15, Feb. 1968, p. 36.

Race, Fertility, and Illegitimacy

Race is an independent variable associated with teenage fertility and illegitimacy, but it is a difficult variable to interpret meaningfully. Overall fertility rates for nonwhite women are higher in every age category than for whites, and the percent excess of nonwhite fertility over white fertility is highest in the teenage category, where nonwhites have a 69.3% higher fertility rate.

Overall reported rates of illegitimacy among women 15-19 years of age were roughly 9 times as high for nonwhites as for whites in 1965.¹⁴ This statistic does not, however, account for the considerable bias produced by the greater capacity of the white population to hide this condition. Therefore, the actual rates of out-of-wedlock conceptions between the racial groups may not be as different as this suggests. Moreover, the ratio of nonwhite to white illegitimate *first* births was only 5.8, whereas the ratio for second and subsequent illegitimate births was as high as 14.7.

This implies that either the whites are more likely to marry before the birth of the second child, or that they are more likely to use contraception, abortion, or to change their life style. This in turn may well be due to the fact that whites are far more likely to receive the needed services around the first pregnancy than are nonwhites. Herzog states:

... services are far from sufficient and those we do have are not distributed evenly or efficiently. A disproportionate amount of social services have gone to those unmarried mothers who are above the poverty line, who are white, and who are likely to place their children in adoption.¹⁰

On the basis of these statistics, some believe that the nonwhite population must consider out-of-wedlock pregnancy acceptable behavior. Actually this is not so, and is contradicted to some extent by the fact that one reason many nonwhites seek out services late or not at all is their desire to conceal pregnancy as long as possible.⁸ There is evidence that out of wedlock pregnancy is not desired by the poor, but that it is tolerated to a greater extent because of its apparent inevitability.

CAUSATIVE FACTORS IN TEENAGE PREGNANCY

It should be emphasized that a statistical association between poverty and high fertility does not necessarily imply that one causes the other, or if one is causal, the association does not prove which one is cause and which result. One could argue that being poor causes one to marry early, or at least have coitus early. On the other hand, early and frequent children produce financial strains on a young marriage or on a young unwed mother. Moreover, both the poverty and the high fertility could result from other factors, such as discriminatory practices in education and hiring. If a man cannot maintain his self-image of manhood because he is unable to find a job and because he is subjected to discrimination over which he is powerless, siring children may be one of the few available avenues for demonstrating his manhood.

Vincent has reviewed the history of ideas about the causes of out-of-wedlock pregnancy, and he finds that one idea after another has had its period of being in "fashion".¹⁵ For example, prior to 1930, there was

The poor do tend to live with a deep sense of fatalism and hopelessness, live on a day-to-day basis without much planning for the future, and live with a general sense of alienation from society at large. There is a sense in which these attitudes are justified by the constant degradation, defeat and powerlessness experienced by the poor.

emphasis upon "theories pertaining to moral and in-born sources of behavior, and the emphasis on immorality, bad companions, and mental deficiency as causes of illegitimacy." During the 1930's there was greater emphasis on environmental sources of behavior, such as broken homes and poverty. During the late 1930's and 1940's there was "interest in the concept of 'culture'," and illegitimacy was considered to be a part of a way of life for certain population groups. Since that time there has been greater interest in psychological and psychiatric explanations of behavior, so that out of wedlock pregnancy has frequently been viewed as the result of emotional problems, or as a means to try to satisfy unmet emotional needs, such as a loving relationship. There is a common misconception that most illegitimate children are the result of "promiscuous" behavior. While it is true that the children are conceived out of wedlock, the relationship which resulted in a child was usually a very meaningful one to the mother, and one which had usually lasted for at least one to two years.⁹ It would seem that many or all of these factors may be involved in the etiology of early pregnancies, whether in wedlock or out. Herzog states:

The factors that so far do not appear to stand up under analysis as *the* major cause include low intelligence, broken homes, geographical mobility, and psychological or interpersonal disturbances. Any of these factors may be involved in specific instances, but none can be held mainly accountable for *the* problem.¹⁰

THE IMPACT OF TEENAGE PREGNANCY

The impact of early pregnancy is felt in many areas, some of which are discussed below:

1. *Forcing early marriage.* It must be emphasized that *all* school-age pregnancies are of concern, and not just those which result in out-of-wedlock births. Wallace reports studies which showed that approximately 50% of marriages between two high school students in California involved premarital pregnancy, as did a high proportion of marriages in which the woman was of high school age and the man was older.⁴ This and other factors lead to high rates of unstable marriages among teenagers.

2. *Unstable marriages.* Wallace states: "The highest divorce rate is in the age group married at 15 to 19 years. The divorce rate is 3 to 4 times higher among those married in their teens than among those married at later ages. It is apparent that a high proportion of teenage marriages are unstable and that there is great need for marriage counseling services in communities."⁴

3. *High Neonatal Death Rates.* Apart from the

question of illegitimacy, Stine et al. have shown that among Baltimore residents, the younger the mother, the higher the neonatal death rate (Table 2).¹⁶

Table 2. Neonatal Death Rates by Race and Age of Mother, Baltimore residents, 1961.

Age of Mother	Neonatal Death Rates per 1000 Live Births	
	White	Non-White
16 yrs.	23.0	42.8
17-19 yrs.	20.3	33.8
20 yrs.	16.9	27.4

The same relationships are found in fetal death rates and prematurity rates.

4. *Maternal mortality.* Pakter found that in New York City unwed mothers had a higher mortality rate, due primarily to puerperal infection from illegal abortions.⁷

5. *Repeat pregnancies.* The late teenage period is one of the most fecund periods in a woman's life. Beasley's study in New Orleans showed that the "poor" mothers had an average of nearly 5 children by the time they were 26 years old, despite the fact that 60% of them had not wanted more than three children.¹³ More than 90% of the "poor" showed "marked ignorance" about reproductive physiology and family planning, and only 28% had used any form of conception control, compared to 85% of those in his study from the middle and upper income brackets. For the United States as a whole, there are estimated to be almost as many second or higher order repeat illegitimate pregnancies as there are first illegitimate pregnancies. Some studies have found even higher rates of recidivism. For example, in a follow-up study of a cohort of 100 unmarried pregnant teenagers, Sarrel found that over a period of 5 years following the initial out-of-wedlock delivery, they produced 240 more children, or an average of 3.4 children per mother in a space of about 6 years.¹⁷ Some of these children were born in wedlock and some out.

6. *Interruption or cessation of education.* Stine et al. found that in Maryland

... pregnancy is the most frequent single physical condition causing an adolescent to leave school prior to graduation. More than twice as many adolescent females left school with pregnancy as the stated reason than left school for all other physical or medical reasons.¹⁶

In his New Orleans study Beasley found that those "poor" women who had their first child before the age of 18 "were five times as likely not to complete their high school education as those who delayed their first child until beyond the age of 18."¹³ For the most part, this interruption of education is forced upon the mothers by our society. In 1965 Sauber and Rubenstein reported that the requirement of the New York City Board of Education (which was typical of others around the country) was that pregnant girls must withdraw from regular school attendance until they have had their babies. After their infant's arrival, these women may return to school to continue their education.⁹ It is to New York City's credit that it changed these rules to permit pregnant teenagers to stay in regular school throughout pregnancy. Most school systems, however, have not changed their regulations in this manner.

One problem is that, after becoming a mother, it is more difficult to return to regular school. Fatigue, financial problems, fear of ridicule, and especially the

difficulties in making adequate arrangements for the care of the infant prevents a large number from returning to school. Sauber and Rubenstein found that only about half of the unmarried school age girls returned to school after their babies were born, and of those who did return about one-third had dropped out again by 18 months without graduating. Until recently there had been almost no attempt in the United States to provide a real school equivalent for these mothers during pregnancy or to assist them in their return to regular school. One of the earliest attempts was the Webster school in Washington, D. C., described in a study by Howard.¹⁸

We are in a state of crisis regarding our current approaches to providing social, medical, and educational services to our society, particularly to those from minority groups and those who are poor.

7. *Financial problems.* No data could be found regarding the financial problems of all teenage parents taken together. It is known, however, that a majority of the younger mothers are unmarried, and some data is available for them. Pregnancies to teenage women from middle and upper income families usually end in abortion, giving the baby up for adoption, or marriage, which may be financially assisted by one or both families. Sauber and Rubenstein found that approximately 45% of the unmarried mothers who retained their babies were on welfare at some time during the 18 month period immediately following delivery.⁹ Sarrel found that 60% of his sample of 100 teenage unmarried mothers were on welfare at some time during a five year period following delivery of their first child.

However, the belief that illegitimate children form the bulk of children on welfare does not appear to be substantiated. Pakter et al., found in 1961 that:

... contrary to popular opinion, the out-of-wedlock children did not constitute the majority of children on the welfare rolls. Of 193,376 children on the welfare rolls, as of August, 1959, 63 percent were born in wedlock.⁷

Sauber and Rubenstein found that approximately one-third of the unmarried mothers were working 18 months after delivery, which raises questions concerning completion of schooling, and the quality of mothering. Suffice it to say that for the unmarried teenage mother, and probably for most teenage parents, life is economically difficult at an age when they are frequently ill-prepared to cope with these problems. Financial problems are undoubtedly one of the stresses which contribute to the instability of many teenage marriages.

8. *Skills as parents.* It is difficult to see how high school age mothers, particularly those who live alone, could become satisfactory mothers without considerable help and support. A high percentage of the younger (unmarried) mothers who kept their babies have come from broken homes.^{7,9} These studies, how-

ever, do not establish that the percentage is greater than for those from similar socio-economic groups who do not have early pregnancies. Psychiatrists are in essential agreement that both parents are needed in the home for optimum psychosocial development of the children.³⁰ What is not clear is whether or not it is better to have the husband and father around if he is inadequate and is a burden on the family. In all, the research on the effects of fatherless homes is confused, and we cannot confidently assert that a child from a "broken home" is more likely to have problems than is someone from a two-parent home in otherwise similar circumstances.²¹ As Dr. Rene Dubos has emphasized, man has an amazing capacity to adapt to a large number of different circumstances.

WHAT NEEDS TO BE DONE?

On the basis of the above data it seems desirable for teenagers to postpone childbearing until they are prepared to establish stable homes. Factors which would encourage this, preventing the occurrence of an undesirable condition, would be called "primary prevention" in Leavell's classification of levels of health services.²² The most basic approach to primary prevention is the subclassification of "health promotion". In the case of teenage pregnancy, health promotion would involve improving the economic, social, emotional, and educational climate in which children are raised. In fact, Herzog cautions against expecting too much from service programs in the absence of this type of fundamental social change.¹⁰

Still under the category of primary prevention, efforts focused specifically at preventing a particular problem are termed "specific protection". Few programs for the primary prevention of teenage pregnancy have been reported in the recent literature. A few community programs are now offering contraceptive services to teenagers regardless of marital status.^{23,24} Garland described an extensive, community wide educational effort in Harlem, which, however, lacked evaluation.²⁵

If primary prevention has failed because an unwanted conception has occurred, then the methods of secondary prevention may be applied. This category also has two subclassifications, the first being "early diagnosis and prompt treatment". Abortion fits into this category, but as has been mentioned earlier, this is not greatly utilized by the poor. The ethical and religious questions raised by both contraception and abortion have been thoroughly discussed in a report of a symposium entitled *BIRTH CONTROL AND THE CHRISTIAN*, and will not be discussed here.²⁶

If for one reason or another a teenage mother does not interrupt her pregnancy, programs to meet her needs could be described as "disability limitation" in Leavell's classification. These programs seek to prevent the undesirable medical, social, psychological, and educational results of an existing pregnancy, and to assist the parent(s) to prevent unwanted children in the future. Most existing service programs fall into this category, but unfortunately, with rare exceptions, there has been little careful effort to evaluate their success.^{18,19}

In providing service programs for young teenage mothers, one must keep in mind that the problems of teenage parents, particularly those from poverty

situation, are on at least two levels. The first is the level of *circumstances*, where one circumstance (i. e. pregnancy) itself creates other circumstantial problems (loss of education, financial problems, conflict with parents, etc.) Thus, effective service programs must provide coordinated assistance to the many problems such as giving medical, social, financial, and educational services.

There is also another level of problems for the school age parents from poverty areas: their *life style*. Although these characteristics are sometimes overemphasized, the poor do tend to live with a deep sense of fatalism and hopelessness, live on a day-to-day basis without much planning for the future, and live with a general sense of alienation from society at large.²⁷ There is a sense in which these attitudes are justified by the constant degradation, defeat, and powerlessness experienced by the poor. Nevertheless, services to parents from this segment of society must take account of these attitudes, and work to build self-respect and self-confidence, so that they can cope with their problems rather than accepting them with resignation. Moreover, the alienation of these people makes them value personal relationships highly, but fear and suspect large, impersonal medical and social institutions. And rightly so, as the sociologist Andrew Billingsley has emphasized, in commenting on the social services provided by welfare departments:

The most far-reaching and characteristic aspect of this service strategy has been the limited programs in selected communities, in which very young, upper middle class white female college graduates without any professional training have been hired by welfare departments because they scored high on examination. They have been given caseloads of sixty low income Negro families and told to visit them once a month to see that they were not cheating the government of money and to provide casework services. No one, with the possible exception of politicians and armchair reformers, could consider this a reasonable—to say nothing of maximum—effort to institute a service strategy.²⁸

THE EFFECTIVENESS OF CURRENT EFFORTS

We are in a state of crisis regarding our current approaches to providing social, medical, and educational services to our society, particularly to those from minority groups and those who are poor. There is widespread doubt in government and other circles as to whether we have a clear idea of how to program our efforts to help the disadvantaged. Despite this there has been little effort—at least until recently—to build careful evaluation into our service programs. Dr. Jack Elinson of Columbia has pointed out the dearth of careful, controlled, prospective studies of the effectiveness of "social action programs on health and welfare."²⁹ He could only find ten studies which met his rather straightforward criteria for an adequate evaluative study during roughly a ten year period from the mid 1950's to the mid 1960's. And regarding these ten carefully performed evaluations, he comes to the disturbing conclusion that "I think it is not an unduly harsh judgment to make when I say that *none of the ten programs of social intervention achieved striking positive results.*" (Italics his)

It is perhaps not surprising that our current services are less effective than we would desire. Helping people with multiple problems is at best an immensely difficult and sensitive task. Add to this the subtle problems

in communication and understanding which occur between those of different social, cultural, and economic backgrounds, and the opportunities for failure are apparent. Again Billingsley has put his finger on the heart of the problem:

And even in . . . pilot projects and intensive service programs, the conception of service has been restricted by the middle class, professional, psychological perspective. The fact is however, we do not know in a professional way what services are required. We have not made sufficient efforts to find out from the people involved.²⁸

It takes more humility than the average middle class professional is able to muster to admit that *he* needs help from those he serves in order to be an effective servant. The servant must *truly* be a servant if he is to be truly effective.³⁰

THE ROLE OF SOCIETY'S VALUES

Proverbs 19:4 tells us that "Wealth maketh many friends, but the poor is separated from his neighbor." This, I would hold, is not a statement of a desirable condition, but rather an astute observation of fact. The poor in our society are, in fact, isolated and alienated, and few more so than the young pregnant teenager.

The poor are isolated because the rich and the middle class have isolated them, by fleeing to suburbs, and by a thousand other more subtle (and often unrecognized) techniques that are lumped together by many under the term "racism". Few feel this isolation more than the pregnant teenager, married or unmarried, who is forced to leave her school as though she had some dread disease. In fact, teenage pregnancy (especially that which is out-of-wedlock) is such a threat to middle class values, that the educational system has sought to get rid of it by ostracism. Pregnant teenage girls are quite literally "outcasts" in our society. One early school for pregnant teenage girls had to be established in an administration building, because the educational authorities didn't even want it in the same building with the rest of the students. They did not want the other children "contaminated". I cannot find justification for this response in the New Testament. In fact, Christ became involved in disputes with the Pharisees over this very point when they condemned Him for associating with "sinners", some of whom were adulterers.³¹ Christ's response speaks clearly to our situation: It is the sick who need the physician, not the well; they need help that they may go and sin no more. But our wealthy society is more concerned to take care of its own, as we have seen above, than to help those in most desperate need. It was clear that the Pharisees were not interested in helping the poor, other than by a certain amount of ostentatious giving (cf. the parable of the good Samaritan). The parallels to our wealthy society seem clear: we will help by paying a certain amount of taxes and by giving to the United Fund, but please stay away from us.

The hypocrisy of the educational expulsion is clear, since only the female suffers this. She is unfortunate enough to show physical evidence of her behavior, but the male, who is often the aggressor in producing the child, is not kept out of school since he shows no evidence. The message to the other students is clear: "It is OK as long as you don't get caught".

Vincent has pointed out the larger hypocrisy of our society in which we "inadvertently encourage, if not explicitly condone, the cause (illicit coition), and explicitly censure and condemn the result (illicit pregnancy)."¹⁵ Our society uses sex as a means to profit in all of the mass media, and yet is upset when this stimulation has the probable effect of increasing sexual awareness and activity. The Hebrew-Christian tradition firmly condemns fornication and adultery and I suspect it also condemns the modern use of sex as a tool for profit. Are not our youth being led into temptation?

Not only has our society encouraged youthful sexual behavior through the mass media, while condemning the result, it has also encouraged teenage pregnancy by permitting the problems of poverty in our society to grow to their current magnitude.

But not only has our society encouraged youthful sexual behavior through the mass media, while condemning the result, it has also encouraged teenage pregnancy by permitting the problems of poverty in our society to grow to their current magnitude. This has been allowed to proceed so far because the wealthier groups have caused themselves to be "separated from the poor". Many distorted ideas about the poor have developed within the suburban middle class ghettos, and many have punitive overtones. For example, it is common to believe that the predominant cause of poverty is laziness. Because of this, the government has established a system of welfare based on a fear of rewarding the lazy. The result is levels of public assistance so low as to rob the recipients of any prospect of decent living conditions. The end result is degradation, loss of self-respect, and hopelessness, which to outward appearances may appear as laziness, but which could more accurately be termed "defeat". These attitudes, of course, mitigate against the poor coping with their current problems, and they are easily passed on to the next generation.

Society fears visible immorality as well as laziness, so that there has been strong pressure upon legislators to reduce the AFDC payments to mothers, particularly the increment for subsequent children, so that the AFDC will not be found to be "rewarding immorality". But in fact, many, if not most, welfare mothers are married, and subsequent children will be the husband's. The net effect of this attitude of middle class society is well summarized by Herzog:

And the few relevant studies available show that giving services and support does not increase them (out of wedlock births). Births out of wedlock do appear to be increased, however, by programs that put a premium on fatherless homes by refusing aid to families containing an able-bodied man, regardless of his ability to support.¹⁰

Billingsley believes that the welfare system, by requiring a recipient family to be without a male head, was more the cause than the result of the black family

disintegration emphasized by Moynihan:

Using 1960 census, Moynihan concluded that nearly 1/4 of Negro families were headed by females. The large proportion of fatherless families led him to conclude that the Negro family was disintegrating and failing to prepare the Negro child to make his way in the world. In fact just the reverse was happening.²⁸

Billingsley discusses the difficulties in removing the punitive attitudes from the welfare legislation in our "Christian" nation:

Even after the focus on services and the interest in family stability entered the national thinking around 1962, and the Congress was persuaded to abandon the custom of requiring unemployed men to desert or divorce their wives in order for their families to be supported, only eighteen of the fifty states have adopted this provision and made it possible for such families to stay together and be supported. . . . Not a single Southern state, for example, has taken advantage of the federally supported option to support dependent children while their father, though unemployed, remained in the home with his family. In many states, the husband and father must not only abandon his family, but must be gone for a period of time (up to ninety days in California) before the family can be considered eligible for this federal support. Thus it is clearly not the absence of an income strategy, but the presence of a wholly inadequate and dysfunctional income strategy, which has failed to stabilize Negro family life.²⁸

Pakter's studies in New York City did not support the idea that welfare encourages having more children:

The belief that unmarried women on welfare rolls repeat the pregnancy in order to obtain additional grants is erroneous. Our study indicated that parity for the unmarried Negro and Puerto Rican women was essentially the same whether she was a recipient of welfare assistance or not.⁷

The way out of the present dilemma is likely to be in the direction of providing more, not fewer, services to teenagers.

The solutions to the social problems of today will be no easier than were the solutions to the health problems of a century ago; in fact, they may be considerably more difficult and costly.

CONCLUSIONS

It is my thesis that neither social nor scriptural data support the punitive attitudes discussed above. Rather the scriptural message and the social need would seem to require special efforts to help this group out of the vicious cycles of the problems they face. Before this will really be possible, however, society must change its attitudes, so that fear of rewarding the lazy and immoral does not undermine the efforts to help those in need. Society must also readjust its financial priorities to provide a realistic attack on the conditions which contribute to poverty and family breakdown. These changes are dictated by biblical concern for social justice. The solutions to

the social problems of today will be no easier than were the solutions to the health problems of a century ago; in fact, they may be considerably more difficult and costly. But as a society—and as individuals—who claim to hold to the Hebrew-Christian system of values, we cannot do otherwise.

REFERENCES

- 1U. S. Bureau of the Census, *Current Population Reports*, Series P 60, No. 53, Dec. 28, 1967.
- 2U. S. Bureau of the Census, *Current Population Reports*, Series P 60 No. 53, Dec. 28, 1967.
- 3U. S. Bureau of the Census, *Statistical Abstract of the United States: 1968*, 89th ed., Washington, D. C., 1968. Table No. 58.
- 4Wallace, Helen M., "Teenage Pregnancy," *Am. J. Obst. & Gynec.* 92(8), 1125-1131, Aug. 16, 1965.
- 5Elizabeth Herzog, *About the Poor*, Washington, D.C.: Children Bureau Publication No. 451, 1967, pp. 73-75.
- 6Hall, R. E., "Therapeutic Abortion, Sterilization, and Contraception," *Am. J. Obst. & Gynec.* 91, p. 518, 1965.
- 7Pakter, Jean, et al., "Out-of-wedlock Births in New York City," *Am. J. Public Health* 51(6), 846-865, June 1961.
- 8Herzog, E., and Bernstein, R., *Health Services for Unmarried Mothers*, Washington, D. C.: Children's Bureau, 1964.
- 9Sauber, M., and Rubinstein, E., *Experiences of the Unwed Mother As a Parent*, Community Council of Greater New York, 1965.
- 10Herzog, E., "Unmarried Mothers—the Service Gap Revisited," *Children* 14(3), 105-110, May-June 1967.
- 11Teale, J. E., et al., "Factors Related to Social Work Services for Mothers of Babies Born Out of Wedlock," *Am. J. Pub. Health* 57(8), 1300, August 1967.
- 12Kiser, Clyde V., et al., *Trends and Variations in Fertility in the United States*, Cambridge: Harvard University Press, 1968.
- 13Beasley, Joseph D., "View from Louisiana," *Family Planning Perspectives* 1, 1-17, Spring 1969.
- 14U. S. National Center for Health Statistics, *Trends in Illegitimacy, U.S., 1940-1965*, Series 21, No. 15, Feb. 1968, p. 36.
- 15Vincent, Clarke E., *Unmarried Mothers*, New York: The Free Press of Glencoe, 1961.
- 16Stine, Oscar C., et al., "School Leaving Due to Pregnancy in an Urban Adolescent Population," *Am. J. Pub. Health* 54(1), 1-6, January 1964.
- 17Sarrel, P. M., and Davis, D. C., "The Young Unwed Primipara," *Am. J. Obst. & Gynec.* 95(5), 722-725, July 1, 1966.
- 18Howard, Marion, *The Webster School*, Children's Bureau Research Report No. 2, 1968.
- 19Howard, Marion, *Multiservice Programs for Pregnant School Girls*, Washington, D. C.: Children's Bureau, 1968.
- 20Lidz, Theodore, *The Person*, New York: Basic Books, 1968.
- 21Herzog, E., and Sudia, C. E., "Fatherless Homes," *Children* 15(5), 177-182, Sept.-Oct. 1968.
- 22Leavell, H. R., and Clark, E. G., *Preventive Medicine*, New York: McGraw-Hill Book Company, 1958.
- 23Gordis, Leon, et al., "Adolescent Pregnancy: a Hospital-Based Program for Primary Prevention," *Am. J. Pub. Health* 58(5), 849, May 1968.
- 24Siegal, E., et al., "A Longitudinal Assessment of the Characteristics of New Admissions to a Family Planning Program," *Am. J. Pub. Health* 58(10), 1864, Oct. 1968.
- 25Garland, P., "The Community's Part in Preventing Illegitimacy," *Children* 10(2), 71 March-April, 1963.
- 26Spitzer, W. O., and Saylor, C. L. (editors), *Birth Control and the Christian*, Wheaton: Tyndale House Publishers, 1969.
- 27Irlan, L. M. (editor), *Low-income Life Styles*, Washington, D. C.: U. S. Department of Welfare, no date (circa 1965).
- 28Billingsley, Andrew, *Black Families in White America*, Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1968.
- 29Elinson, Jack, "Effectiveness of Social Action Programs in Health and Welfare," *Report of 56th Ross Conference on Pediatric Research*, Columbus, Ohio: Ross Laboratories, 1967, pp. 77-81.
- 30John 13:16.
- 31Luke 5:29-32, Luke 7:36-50.



BOOK REVIEWS



PROTEST AND POLITICS: CHRISTIANITY AND CONTEMPORARY AFFAIRS edited by Robert G. Clouse, Robert D. Linder and Richard V. Pierard, Greenwood, South Carolina: The Attic Press, Inc., 1968. 271 pp. \$5.95.

The authors of the essays collected in this volume are among those evangelicals who are "displeased with the calloused indifference on the part of so many of our fellow evangelicals to the vital political, social and economic problems of the day," and are using this means to protest against that situation (p.2). Seven of the writers are historians and four are political scientists. All identify with either the Democratic or Republican party and all have in some way participated in political campaigns. With the exception of Mark Hatfield, a senator from Oregon, all have earned doctorates in their fields and are on the faculty of a college or university. In each essay the author discusses the basic issues and suggests what he considers to be a Christian approach to the problem. In most instances the documentation is extensive.

The essays (in the order of appearance) are: Mark O. Hatfield, "How Can a Christian be in Politics;" Walfred H. Peterson, "The Responsibility of the Christian Voter;" Richard V. Pierard, "Christianity, Democracy, and the Radical Right;" William W. Cuthbertson, "The Christian, the American Military Establishment, and War;" James E. Johnson, "The Christian and the Emergence of the Welfare State;" Robert D. Linder, "A Christian Approach to the Contemporary Civil Rights Movement;" Donald E. Pitzer, "Christianity in the Public Schools;" Earl J. Reeves, "The Population Explosion and Christian Concern;" William W. Adams, Jr., "Communism, Realism, and Christianity;" George Giacomakis, Jr., "The Israeli-Arab Conflict in the Middle East;" and Robert G. Clouse, "The Vietnam War in Christian Perspective."

It obviously is impossible to review, or even briefly summarize, 11 different essays. In lieu of this, quotations from five essays have been selected to give the reader a sampling of conclusions reached on vital issues. It is hoped that these will serve to stimulate interest in the entire group.

In discussing the American military establishment, William Cuthbertson states:

Militarism treats man as an object, the state's property, and places the enemy on the level of animals to be exterminated. . . . The Christian is bound to suspect the national Military Establishment which asks him to obliterate one who is divinely loved without being morally certain that this action toward his human counterpart is unavoidable. The basic dilemma of the Christian at war will always be how to love one's enemy and kill him too (p. 88).

The unthinking mouth the slogan, "Better dead than Red," not realizing that war and militarism may be more destructive of their goals than communism. There is a fate worse than death—life without meaning (p. 89).

James E. Johnson argues that the increase in power and functions of the state in the area of welfare should not be looked on as an evil development, for only the state has the power and resources to care for the many human needs.

Evangelical Protestants are rising in the class structure and have become basically content with the existing social system. Since social reforms might affect their comfortable position, they often oppose them. . . . Moreover, "Middle-class Christians tend to make Biblical passages about 'the poor' and 'the sick' apply only figuratively to 'the spiritually poor' and 'the spiritually ill.' This distorts the literal message of God's word and may even contribute to a denial of the historical activity of Jesus Christ" (p. 115).

Concerning Christianity in the public schools, Donald Pitzer writes:

Those sincere individuals who are still advocating the amendment of the Constitution in order to permit the practice of state-sponsored devotional Bible reading and prayer in the public school systems are unwittingly calling for the establishment of a meaningless "cultural" or "patriotic" religion. By their very nature any religious exercises devised by the state to satisfy virtually everyone cannot be considered true religion. Nevertheless, the participants may be deceived into thinking of themselves as religious or Christian because they have gone through forms which appear to be religious or Christian. Such insipid ritualism cannot be tolerated as a substitute for the vital conversion experience and committed Christian life which the evangelical community envisages as the standard for true religion (p. 178).

One of the most emotional issues for Christians today is the fight against communism, and William Adams asks for a *realistic* attitude toward communism.

The human view recognizes that communism is *not* a more effective ideological cement than Christianity, Islam, or some other faith. Communists may be motivated by power and interests as well as by ideology and they quarrel among themselves. Moreover, communism may change as readily as any other system. . . .

Thus, dealing with communism is not all or nothing; defeat is not "the only alternative to victory." For the Christian ideological compromise with communism is impossible. But this need not rule out dealing with communist states and parties when they act as power units and not as ideological missionaries with a messianic complex (p. 218).

Closely related to the fear of communism is the war in Vietnam, about which Robert Clouse states:

This war mentality has a vicious and brutalizing effect on American Society both in internal and external affairs. Much of the traditional Christian basis of national life seems to be eroding in Vietnam. . . . How, a Christian should ask, will all this affect American character? Can minds twisted by brutality and accustomed to violence ever be normal again? As one observer stated: "I simply cannot help worrying that, in the process of waging this war, we are corrupting ourselves. . ." (p. 266)

Does this mean the beginning of a world police force, a "pax Americana?" If this is the case, then

where did the United States obtain a mandate for such action? The possibility of revolt and unrest exists in several lands today. Many of these revolutions will be financed and led by communists. Does this mean that American soldiers will be deployed every time an uprising occurs against a "friendly" government, (p. 267).

On the whole these essays are well written and well reasoned. Although not all who call themselves "evangelical" will agree with the positions taken, all should seriously consider the arguments of the authors as they speak out in protest against the status quo.

Reviewed by Claude E. Stipe, Department of Sociology and Anthropology, Marquette University, Milwaukee, Wisconsin.

GALLUP OPINION INDEX: SPECIAL REPORT ON RELIGION by George H. Gallup, Jr., and John O. Davies III, editors. American Institute of Public Opinion, Princeton, N. J., 1969. 64 pp., \$12.50.

Readers of this *Journal* have undoubtedly seen news reports of the Gallup Poll's surveys on religion. Perhaps, like me, they have wished that these scattered reports could be combined into a single unit for easy reference. This summary book only partially satisfies that need, for most of its data are from surveys during widely scattered weeks during the one year of 1968. We do learn, however, that in 1955 49% of the national sample had attended church during an "average week," a high equalled in 1958 with subsequent declines to 43% in 1968. This nevertheless leaves the U.S.A. at the top of the eleven nations in which comparable surveys were made, only Netherlands coming close (42%). Among college students in the U.S.A. the figure was 47%, the Democrats among them attending more than Republicans and Independents. (Can you guess the intervening variable that is not reported with those data?)

Churchgoers (not clearly defined, but presumably those who attended during the preceding week) differ little from non-churchgoers in regard to "major issues facing the nation" (respect for college students, hawks-doves on the Vietnam crisis, guaranteed annual work and income, drinking and driving, spanking children, women working, and attitudes toward the increasing or decreasing influence of religion in American Life), except for the last item. Two-thirds (67%) of all categories studied feel religion is losing its impact upon American life, and only 18% believe its influence is increasing in contrast to 69% in 1957. Among churchgoers, however, 24% felt its influence was increasing, compared to only 14% of the non-churchgoers. Differences on that item are also apparent between males and females, Protestants and Catholics, age levels (21-29, 30-49, 50 and over), and educational categories (college, high school, grade school) of the population.

A twelve-nation survey reported in Part II indicates clearly that the U.S.A. pattern of religious beliefs about God, heaven, hell, life after death, reincarnation, and the devil is considerably different from other nations, Americans exhibiting the highest level of belief on all but two of those items. Reasons behind belief in God were authoritative (36%), rational (28%), empirical (10%), and utilitarian (12%) in the American survey.

In Part III data from 34 U.S.A. surveys in 1967 and 1968 are used as a basis for comparing the

"profiles" of Protestants, Catholics, Jews, Baptists, Methodists, Presbyterians, Lutherans, Episcopalians, and persons of no religious preference on the variables of age, sex, race, education, occupation, political preference, income, and community size. For the three major faiths and no preference the data are also reported for each of four regions (East, Midwest, South, and West).

Comparative views of Protestants and Catholics on "key issues facing the nation" comprise Part IV of the report. It includes attitudes toward transplant operations, jailing drunken drivers, racial problems, crime, general satisfaction, guaranteed annual income, the Supreme Court, divorce, open housing laws, Pope Paul's encyclical on birth control, dissemination of birth control information, belief that life is getting better or worse in terms of religion, morals, honesty, happiness, and peace of mind, celibacy of the Catholic clergy, racial and religious intermarriage, whether this country is a "sick society," preferred occupations (including clergyman), and ease of obtaining a divorce. Several of these reports are accompanied by international comparisons.

This is a very valuable resource to all who are concerned with the place of religion in American life. Naturally, it is wise to allow for sampling deviation fluctuations by not assuming that differences of only two or three percentage points are necessarily significant, as newspaper reports of religious or political trends based upon polling data sometimes imply. In general, it comprises one of the most dependable sets of data available on the issues covered and can be the basis for subsequent trend analyses, for many of the items are duplicated in similar manner from year to year in the Gallup Polls.

I have sometimes criticized comparisons of public opinion poll data on church attendance for not controlling adequately the week in the church year in which the data are gathered. Undoubtedly different patterns of attendance prevail from the week in which most Catholics take care of their Easter duties to the "summer slump." Analysis of seasonal fluctuations in church attendance by religious affiliation would make an interesting subject for research. Undoubtedly religious traditions, theological values, and the work cycles of the basic economic and educational institutions have significant impact upon church participation. If the reported attendance data are based upon several surveys throughout the year, these statistics cannot be accused of that deficiency. (I state "If" because the footnote for the asterisk on page 3 is missing; it might have clarified this subject.)

Furthermore, as good as weekly attendance is as a criterion for "regular" participation, it may not be an adequate indicator for certain purposes. In some religious groups normative standards of high participation may be satisfied by it, but in others "regular attendance" criteria may be fully satisfied by bi-weekly or even monthly participation in activities of the group, while in still others the person who attends "only Sunday morning" may be viewed as a "lukewarm" or fringe member. Neither the official institutional values placed on attendance nor the subjectively-intended meanings of participation are revealed by these public opinion data.

Critics of public opinion surveys and related studies are fond of condemning their questions, hence the

resulting data, as ambiguous because they are taken out of context, because words have numerous meanings, because they presume intimacies will not be shared with or cannot be interpreted properly by strangers, etc., etc. If all of their arguments were carried out to a logical extreme, there could be neither meaningful verbal communication between people nor any social science. On the whole, the questions in this report are very straightforward, but they must not be accepted as telling us anything more than precisely what is asked. For example, their question, "Do you believe in a God?", is not the same as "Do you believe in God?"

The data on the "three major faiths" and "five leading Protestant denominations" are most likely based upon "church preferences." These overlap with and include but are not at all identical with "church membership." Clarification of those classifications would have improved the report, as would several other details of definition in regard to the classifications and topics included. It is not clear, for example, whether incomes of "\$7,000 and over" are inclusive of those "\$15,000 and over" or only an editorial error. At one point the income data represent "family income," so presumably that is the case in all reports. Whether that concept is intended to cover non-earned income, income in kind, and similar non-wage and non-salary items could have been clarified by inclusion of the specific questions used to elicit that information.

In summary, this is a very valuable piece of descriptive data on the status of religion in American life as of the year 1968.

Reviewed by David O. Moberg, Department of Sociology and Anthropology, Marquette University, Milwaukee, Wisconsin.

JOHN LOCKE: Empiricist, Atomist, Conceptualist, and Agnostic, by John Louis Kraus. Philosophical Library, New York, 1968.

John Locke is an important figure in the history of thought. His *Essay* was the first attempt at a comprehensive theory of knowledge in the history of modern philosophy. We remember him as the first of the great "English Empiricists." Dr. Kraus sets forth a tight and well organized examination of his theories. After one reads through the four-page table of contents, it is easy to believe that most of Locke's theories are indeed discussed.

Dr. Kraus has set forth a clear study of Locke but is guilty of the fatal flaw of being too specific. One's eyes are never lifted from the pages of Locke's writings. There is no evaluation of his thought and no mention of its influence on later thinking. This seems like a serious omission in view of Locke's broad influence in such areas as philosophy, science, psychology, education, and religion.

In spite of the limited horizon Dr. Kraus has done a good job of taking us into the detailed thinking of John Locke.

Reviewed by Charles Campbell, Department of Philosophy, Houghton College, Houghton, New York.

BIRTH CONTROL AND THE CHRISTIAN: A Protestant Symposium on the Control of Human Reproduction. Walter O. Spitzer and Carlyle L. Saylor, Editors. Tyndale House, Wheaton, Illinois 1969. 590 pp.

This extremely useful reference text is the product of a symposium on the Control of Human Reproduction held in August 1968 in Portsmouth, New Hampshire, under the co-sponsorship of the Christian Medical Society and *Christianity Today*. Twenty-six contributors from disciplines including genetics, sociology, psychology, law, pediatrics, theology, medicine, obstetrics, and gynecology tackle the crucial problems involved in arriving at a Christian view of methods of birth control including abortion and sterilization, the nature and claims of the fetus, and the broader implications of birth control in view of the growing problems of population runaway. Particular sections of the book treat these questions from the perspective of the Bible, the health sciences, medical ethics, the sociological sciences, the legal profession, and a historical summary of the attitudes of the Christian Church. An Appendix features selected responses to papers presented at the symposium.

One of the achievements of this Symposium was to produce "A Protestant Affirmation on the Control of Human Reproduction," which is reprinted and discussed in greater detail elsewhere in this issue.

All of the authors do not agree on the answers to the vital problems discussed, but the reader is aided by this disagreement to arrive at his own decisions. One of the more interesting of such disagreements is that between one of the authors as he presented his originally prepared paper, and *himself* after experiencing the symposium. In an unusual and refreshingly honest confession, Dr. Merville O. Vincent tells at the end of his chapter on "Psychiatric Indications for Therapeutic Abortion and Sterilization," how his original conviction that a new life was created at the moment of conception was altered by the discussions of the symposium to the position that "the fetus has great and developing value, but is less than a human being." As a key step in this change of conviction he credits the paper by Kenneth Kantzer, "The Origin of the Soul as Related to the Abortion Question," which argued that "the body and soul came into their full value by a process."

The book is a valuable addition to Christian sources for this challenging and timely subject.

WHO SHALL LIVE? Man's Control over Birth and Death, A Report Prepared for the American Friends Service Committee, Hill and Wang, New York, 1970. 144 pp. Paperback, \$1.75. Cloth, \$3.95.

Eight members of a Working Party, aided by two staff writers and a research assistant, were motivated by public concern over abortion to prepare this report exploring the implications of abortion; concern over the quality of life; contraception, sexual morality, and the role of genetic counseling; and the ethical issues implicit in the current concentration on prolonging the life of the dying. Occupations of the members of the Working Party are as follows: Emeritus Profes-

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sor of Divinity at Harvard; Director of the Friends Family Planning Program; Professor and Chairman of the Department of Preventive Medicine and Comprehensive Health Care at the University of Colorado; Family Planning Consultant at Mecklenburg County Health Department in Charlotte, North Carolina; Professor of Pediatrics at Mount Sinai School of Medicine, City University of New York; Professor of Population Planning at the University of Michigan School of Public Health; the Editor of *Annals of Internal Medicine* and Professor of Medicine at University of Pennsylvania School of Medicine; and Emeritus Professor of Pediatrics at the University of Pennsylvania.

The authors recognize that a future balance between population and resources demands a reduction in the birth rate, but feel that there is no evidence that universal access to contraceptive information or propaganda about population problems will be effective in achieving this reduction. Stressing the need for motivation, they argue that "it is unrealistic to expect birth control programs to be successful unless they go hand in hand with improved economic and cultural conditions."

Among the topics considered by the authors are abortion in its historical, biological, legal and religious aspects; problems associated with prolongation of life in the dying; definitions of death; euthanasia; and contributing factors to the quality of life. They point out that legal and financial restrictions on abortion penalize primarily the poor, that in the United States it is safer to have a hospital abortion in the first three months than it is to have a full-term baby, that we may ignore the ethical responsibility concerned with the quality of life after birth in our preoccupation with the potential of the unborn child, that the sanctity of human life may have come to an end when the brain has stopped functioning even if heart and lungs can be maintained in activity, and that prolonging life indefinitely may not be a desirable end in itself.

The focus of the report is Chapter 6, containing some tentative answers for today. These answers may be summarized as follows.

1. "We believe that contraception is by far preferable to abortion. But we also believe that abortion, performed under proper conditions, is preferable to the birth of an unwanted child."

2. "We believe that it is wrong as well as ineffective to use either law or the fear of consequences to enforce moral standards; that punishing a woman with an unwanted pregnancy and condemning a child to a blighted life to buttress morality are both socially irresponsible and morally indefensible."

3. "We believe that the necessary limitation of family size should be and can be achieved voluntarily by far more attention to the adequate availability of contraceptives, by the legalization of abortion, and by educational programs to motivate people to practice family planning."

4. "We believe that no woman should be forced to bear an unwanted child. . . . We urge the repeal of all laws limiting either the circumstances under which a woman may have an abortion or the physician's freedom to use his best professional judgment in performing it."

5. "We believe that married couples should have the benefits of the best medical and genetic counseling obtainable when genetic or congenital difficulties are anticipated in their children. . . . For the mentally retarded, we encourage genetic counseling and the availability of both abortion and sterilization on request of the guardian. . . . We are opposed to compulsory abortion and to compulsory sterilization and believe that such laws should be repealed."

6. "'Positive' or 'progressive' eugenics or direct genetic manipulation to improve the breeding of men seems to us to be socially and morally undesirable as well as scientifically impractical. . . . We are opposed to efforts to improve the human race by compulsory selected mating or by other compulsory methods."

7. "We believe that human life is a gift that is meaningful only as long as the receiver is able to function as a person. . . . We approve withholding therapy or withdrawing the supportive therapy that is keeping an unconscious person alive if . . . it is the best judgment of the medical profession that the patient's brain is irreparably damaged and he will never regain consciousness."

8. "We believe that death should be viewed in proper perspective, as a natural part of the process of life. We believe in its necessity and goodness, as well as in its inevitability."

This last statement raises certain theological and biblical problems, especially when read in the context of further discussion on the same page (p. 72), which suggests that immortality should not be considered as "an unending personal life" but rather in terms of "contributions to the continuity of culture, the memories we leave behind, and the heritage of thought and values we pass on to future generations."

The book closes with a plea for reorienting of priorities. Is it desirable to expend vast sums of money to keep a few people alive, while the same funds might better be spent to improve the quality of the life of the living? Is it proper that the U.S. budget for 1968 called for more than twice as large an expenditure for military activities than for welfare, health, agriculture, education, housing, and economic aid to the developing world combined? During 1968, Congress appropriated \$391 million for environmental protection; the first stage of the ABM is conservatively estimated to cost almost 20 times that amount.

Seven Appendices are found at the end of the book, dealing with population data; effect on population growth of birth, death, and fertility rates; reproductive processes and fertility control; positions on abortion; abortion laws; new definitions of death; and laws concerning the donation of tissues and organs. A 21 page annotated bibliography completes the book.

MEDICINE AND MISSIONS: A Survey of Medical Missions by Edward R. Dayton, Editor, Medical Assistance Programs, Inc., Wheaton, Illinois, 114 pp., photo-offset, paper.

In 1968 the Medical Assistance Program, a voluntary foreign aid agency serving the international missionary medicine, sent a questionnaire containing 69 questions to 1000 medical missionaries in order to better understand their needs and thereby be of greater service to them. The services of the Missions Advanced Research and Communication Center were used to analyze the information received from the 158 missionaries who responded (mostly from the United States, Great Britain and Canada; serving in 58 different countries), and to make this report available. Responses to each of the 69 questions were analyzed in terms of five crosscuts based upon the home country of the missionary, the country of service, the continent of service, the denominational/non-denominational affiliation of the missionary, and the years of service of the missionary. The data in verbal, tabular and graphical form are presented with little attempt to be exhaus-

tive or interpretive. The purpose of the survey is to give an overview of medical missions and the medical missionary from a number of different viewpoints. On this basis the survey should play a useful role in understanding medical missions in spite of the relatively small sample involved.

SEARCH FOR REALITY: Psychology and the Christian, by Gary R. Collins, Key Publishers, Wheaton, Illinois, 1969. 207 pp. Paperback, \$1.95; Cloth \$4.95.

Gary R. Collins is Professor and Chairman of the Division of Pastoral Psychology and Counseling at Trinity Evangelical Divinity School, with a PhD in clinical psychology from Purdue University. Dr. Collins is therefore in an excellent position to fulfill the purpose of this little book, namely to provide an introduction to the modern science of psychology as it relates to the Bible and the work of the church. Starting with an exposition of the purpose of psychology—to understand, predict and control the behavior of man and animals, and with his basic commitment to the Scriptures—inerrant as written in the original languages but not a scientific textbook, Dr. Collins goes on to explore in informative fashion such topics as determinism, the nature of man, healthy and unhealthy reactions to stress, criteria for abnormality and the problem of mental breakdowns in Christians, demon possession, neurotic trends in the church and society, miracles and faith healing, brainwashing and conversion, behavior manipulation, and the role of psychology in teaching, education vs. propaganda, and the work of the local church.

Admitting that there may well arise circumstances in which scientific theory is at odds with currently accepted scriptural interpretation, Dr. Collins counsels for moderation and a patient spirit that is willing to await future developments in both areas of understanding. Throughout the book runs the theme that it is seldom a question of psychology or Christian faith, but most often a realization that psychological phenomena must be involved in but do not exhaustively explain Christian phenomena. In discussing psychological models for man, he points out that even models which are only partially true may still be practically productive in guiding research.

Dr. Collins recognizes that neurotic trends may be found both in the church and in society at large. In the church he notes the tendency for feelings of inferiority, insecurity, dishonesty, rigidity, guilt and double-mindedness, as well as difficulties in interpersonal relations. In society he puts the finger on anxiety, the fruit of intensive competition and the forgetting of our completeness in Christ, and on the prevailing consciousness of meaninglessness, discouragement, conformity and busyness to attempt to cover up for the others. He presents a good contrast between secular techniques of brainwashing and Christian practices of evangelism and conversion, but might make a stronger picture by simply admitting that brainwashing is in fact *counterfeit* conversion. He argues that psychological tricks or pressure can never generate the genuine condition of Christian conversion.

At times the author's desire to draw no conclusions in areas of apparent problems between psychology and

Christianity today, leaves the question somewhat more up in the air than might be desired by the reader who looks to Dr. Collins for specific guidance in these matters. In the chapter on demon possession, for example, the author points out the grievous mistreatment given to people in the past when their mental illness was misdiagnosed as demon-possession, and recognizes that almost all psychologists today believe that demon possession is not a factor to be included in the treatment of psychological ailments. In order to be true to scriptural integrity, however, he feels it necessary to maintain the reality of demon possession both in the past and today, with the result that he indicates that psychologically ill persons should be treated psychologically and demon-possessed persons should be exorcised, but gives no guidance as to decide which is which. In the chapter on miracles he indicates both that miracles did not end with the apostolic era but continued on into the present, and that such supernatural occurrences seem relatively rare today. He repeatedly speaks of God "intervening" and of God usually working "through the natural laws which He has created," in a form of speech which does not adequately express the fact that the very existence of the universe depends moment-by-moment upon the activity of God. It is in fact the very mode of speech based on "intervention" which gives to miracles their problem.

Dr. Collins suggests that "perhaps the time has arrived for some Christian psychologist to advance a view of man which is consistent with Biblical revelation but meaningful to psychologists." He has been aware of this need for some time, and it is to be hoped that he will continue to work away on this problem because of the uniqueness of his qualifications for the task.

A final word dictated more by the editorial concerns of the reviewer than anything else. Dr. Collins is a distinguished educator, theologian and psychologist; he was also Program Chairman for last year's annual ASA Convention, as well as a member of the Executive Council of the ASA. In the light of these credentials it is most unfortunate that Dr. Collins has—probably quite unconsciously—continued a regrettable trend among ASA authors, i.e., they forget to make any mention whatsoever of their ASA relationship. The only mention of the ASA in this entire book is a reference to the *Journal ASA* in a footnote. The ASA is far too unknown for us to pass up wonderful opportunities to let others know of its existence. It is to be hoped that later editions of this book will carry a mention of Dr. Collins' close association to the ASA.

A RUMOR OF ANGELS: Modern Society and the Rediscovery of the Supernatural by Peter L. Berger, Doubleday, Garden City, N.Y. 1969. 129 pp. \$4.50.

Professor Berger is Professor of Sociology in the Graduate Faculty of the New School for Social Research and editor of its quarterly, *Social Research*. He considers himself a Christian, "though I have not yet found the heresy into which my theological views would comfortably fit." He is concerned that the heritage of religion can be preserved in our time only by a reawakening of the reality of the supernatural, i.e., "a reality that transcends the reality of the natural world of everyday life."

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While recognizing the assault made on religious faith by the modern interpretations of the physical and biological sciences, Berger argues that the most potent assault of all comes from the discipline of sociology. Sociological research "gives the theologian a sense of his own minority status in contemporary society." Social science, called into service to aid the theologian, all too often gives results that seem to undermine his basic presuppositions. Of even greater impact is the development of the sociology of knowledge which is able to explain the relativity demonstrated in history. "History posits the problem of relativity as a fact, the sociology of knowledge as a necessity of our condition."

Berger is quick to turn the double-edged sword of relativity against would-be modern-day sociological absolutists, carrying both liberal and neo-orthodox in his swing. He calls attention to the remarkable fact that the *past* is always relativized in terms of some socio-historical analysis, but the *present* is supposed somehow to be immune to such relativization. "The New Testament writers are seen as afflicted with a false consciousness rooted in their time, but the contemporary analyst takes the consciousness of *his* time as an unmixed blessing."

In the present relativity-conscious world, Berger proposes that the starting point for the recovery of a sense of the supernatural should be man himself. He therefore sets out to describe "signals of transcendence" within the empirically-given human situation. He finds the following signals: (1) man's propensity for order (when a mother comforts her frightened child by assuring him that "everything is all right", is she lying?); (2) the argument from play, or the suspension of the element of time in playful activity; (3) the argument from hope, or the orientation of human existence toward the future; (4) the argument from damnation, or the experienced feeling that some evil is too great to suffer only temporal punishment; and (5) the argument from humor, or the root of humorous situations in human discrepancies. There are valuable insights here for the Christian in understanding the nature of the "image of God" in man.

Berger passes on from this inductive method of developing a religious position (an approach he associates with theological liberalism after Schleiermacher) to a confrontation with traditional theological ideas and concepts. While avoiding the proposal of a purely eclectic theological system, "a sort of theological Esperanto in which all traditions will be dissolved," he presses for an "ecumenically conscious" theology and endorses the efforts of Wolfhart Pannenberg (although he would rather speak of "discovery" rather than Pannenberg's "revelation"). "The theological enterprise will have to be first of all, a rigorously empirical analysis of these experiences, in terms of both a historical anthropology and a history of religion."

Although his application of these principles in embryonic form to his own thought leads him to "reaffirm the conception of God that emerged in the religious experience of ancient Israel . . . available to us in the literature of the Old Testament. . . . God who is not the world and who was not made by man, who is outside and not within ourselves, who is not a sign of human things but of whom human things are signs, who is symbolized and not a symbol, in whom faith will see the foundation of order, justice, and compas-

sion in the world," Berger finds that he can accept the Christ (the redeeming presence of God within the anguish of human experience) but not Jesus of Nazareth. In fact, he is quick to say that if the unique character of the historical Christian faith depends on the exclusive claims of Jesus to be the Christ, then that unique character had better be sacrificed to a more ecumenical position.

The Christian is convinced that there are at least *some* events that cannot be relativized, some personalities of unique importance, some concepts of timeless applicability. It is on this ground that he and Professor Berger must part company.

CHRISTIANITY: THE WITNESS OF HISTORY

by J. N. D. Anderson, Tyndale Press, London, 110 pp. Paperback, 7s6d. U.S. Distributors: Inter-Varsity Press.

The well-known Christian apologist, Professor of Oriental Laws, and Director of the Institute of Advanced Legal Studies in the University of London, addresses himself to the central questions of the historicity of the Christian faith with the thoroughness of the trained legal advocate. His thesis is that a reader of the New Testament comes away with the impression that the Christian faith is firmly rooted in certain historical events, "a faith which would be false and misleading if those events had not actually taken place, but which, if they did take place, is unique in its relevance and exclusive in its demands on our allegiance." One of the major points at issue in the modern world is how far Christian faith and teaching can "be explained in terms of a mythology which reflects and symbolizes the subjective belief and experience of the apostles and their followers rather than objective historical facts on which that belief and experience were founded."

The book is divided into four chapters which seek to answer the following questions: (1) Is the historical basis of Christianity convincing? (2) How are we to regard Jesus Christ? (3) What is the significance of the crucifixion? (4) What really happened at the empty tomb?

In treating the historical basis, Dr. Anderson points out the extremes: an attempt to get behind the "false" facade of Pauline Christianity to the historical Jesus of Nazareth, and an attempt to emphasize exclusively the Lord of faith as distinct from the man of history; he argues that both of these positions are overdrawn caricatures and that the position of biblically-based Christianity must lie somewhere between.

A helpful analogy is drawn between the relationship of the moral aspects of Jesus' personality and the relationship of the intellectual aspects, as Dr. Anderson treats the mystery of the incarnation.

"In the realm of morality the Bible clearly teaches that God as God cannot even be tempted by sin; that as man is not only tempted but frequently falls into evil; but that God incarnate was tempted (because he had become man) but never sinned (presumably because he remained God.) So the parallel in the realm of knowledge would run as follows: God as God is omniscient, and knows all things; man as man is both limited in his knowledge and actually falls into error; but God incarnate was not omniscient (because he had become man), but was never in error (because he remained God)."

In treating the meaning of Christ's crucifixion, Dr.

Anderson gives an excellent summary of the three historically-propounded theories of the atonement: (1) Abelard's view of a change in man, (2) the "classical" view of a victory over the Devil, and (3) Anselm's view of a change in God. Once again Anderson insists that no one of these views can be taken as ultimately meaningful, but all three must be held in complementary unity to arrive at a fully biblical view of the atonement. In treating the third theory, the author gives a valuable summary of his attitude toward the reformative, deterrent and retributive aspects of penal law.

Finally Dr. Anderson shows how the resurrection of Jesus is the key to each of the other questions asked in this book, and he examines the evidence for the resurrection with the care of a lawyer, as he has in his earlier monograph on this subject. He points out that of course the incarnation and the resurrection are unique events, and thus are in a statistical analysis so improbable as to be incredible. But so is every other event in history. "It is like asking whether the existence of nature herself is intrinsically probable."

"Our argument in this book is that the evidence for the historical basis of the Christian faith, for the essential validity of the New Testament witness to the person and teaching of Christ himself, for the fact and significance of his atoning death, and for the historicity of the empty tomb and the apostolic testimony to the resurrection, is such as to provide an adequate foundation for the venture of faith."

Written with the quiet precision that we expect of our evangelical brothers across the sea, this little book could play a vital role in your personal witness to others.

DEATH IN THE CITY by Francis A. Schaeffer, Inter-Varsity Press, Chicago, 1969. 127 pp. Paperback, 4s6d.

This little book is based on a series of lectures given at Wheaton College, Illinois in the fall of 1968. It is the fourth member in a quartet made up of previous publications *Escape from Reason* and *The God Who Is There* by Schaeffer (see *Journal ASA* 21, 54 (1969)) and *L'Abri* by Mrs. Schaeffer. The purpose of *Death in the City* is to provide the Scriptural basis for the answers offered by Schaeffer to modern man and his dilemma in his other writings, particularly through exposition of Jeremiah and Romans.

Never one to pull his punches, Schaeffer continues true to form, as the following quotation indicates,

"If we are Christians and do not have upon us the calling to respond to the lostness of the lost and a compassion for those of our kind, our orthodoxy is ugly and it stinks. And it not only stinks in the presence of the hippie, it stinks in the presence of anybody who is an honest man. And more than that: orthodoxy without compassion stinks with God."

In spite of what might be inferred from this quotation alone, Schaeffer is not attacking orthodoxy, but rather is seeking to uphold orthodoxy through "reformation, revival and constructive revolution." He calls upon us to realize that Christians are now and in the future a minority in a post-Christian world living in a culture and country under the wrath of God. Like Jeremiah, Christians are called upon today to bring a message of judgment to their contemporaries and their world, pointing out apostasy with love, and condemning the

specific sins that characterize our relativized culture.

From Jeremiah, Schaeffer draws a five-fold program for the Christian: (1) first bring a message of judgment, (2) face the fact that our culture is under the judgment of God, (3) practice truth and avoid cooperation and unity that do not lead to purity of life and doctrine, (4) realize that to know and practice truth will be costly, and (5) keep on preaching even if the price is high.

Turning next to the exposition of Romans, Schaeffer emphasizes that "one of the great weaknesses in evangelical preaching in the last few years is that we have lost sight of the biblical fact that man is wonderful. . . . From the biblical viewpoint, *man is lost, but great.*" He calls the Christian to avoid a strain of anti-intellectualism prevalent in some evangelical apologetics, but to meet head on the causes of man's dilemma.

"From the Christian viewpoint, all the alienations (to use our twentieth-century word) that we find in man have come because of man's historic, space-time fall. First of all, man is separated from God; second, he is separated from himself, thus the psychological problems of life; third, he is separated from other men, thus the sociological problems of life; fourth, he is separated from nature and thus the problems of living in the world, for example, the ecological problems. All these need healing."

The "man without the Bible" needs to realize that his real need is "salvation from moral guilt, not just relief from guilt feelings." Even he has two aspects of the truth which, according to Paul in Romans, he suppresses: (a) man himself, and (b) the external universe; thus Paul says that he has become foolish, preferring to hold positions in spite of the evidence that surrounds him on every side.

As in his other writings, the powerful imagery and content that Schaeffer evokes is overlaid and sometimes dominated by an oversimplification of some of the problems encountered. While recognizing that psychological and sociological conditioning do have some effects on a man's life, Schaeffer argues that we must be extremely reluctant to accept such secondary causes as to why man sins. Although he does not explicitly say so, his treatment of the Speck case indicates that he would strongly favor an approach that held Speck morally and legally responsible almost regardless of the physiological and psychological evidence bearing on Speck's degree of responsibility.

Throughout the book runs a strong central theme. It is that "the real problem is that people have turned away from God and the truth that He has revealed in *verbalized, propositional form* concerning Himself." (Italics mine.) Whereas in principle the statement might well be accepted, in practice certain basic problems immediately appear. Like many other conservative apologists, Schaeffer omits from consideration the whole problem of *interpretation* of God's revelation in order to ascertain what these propositions actually are. Between the affirmation, "I believe that the Bible is the revelation of God," and the statement, "the revelation of God is," interposes the whole question of scriptural hermeneutics. The attempt to do without this is operationally impossible. Thus, to Schaeffer the acceptance of the Bible as presenting truth in a verbalized, propositional form means that the fall of man is an historic, space-time event. If by this Schaeffer intends to imply that for a period of time man lived on this

earth before the fall, and then on a certain day in history the fall occurred, many evangelical Christians committed to Jesus Christ as Savior and to the Bible as the Word of God would contend that there were

hermeneutically possible alternatives to the details without altering the content.

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



AN APPROACH TO THE THEORY OF NATURAL SELECTION by A. D. Barker, *Philosophy* 44, 271 (1969) supports A. R. Manser's view that "Darwin's theory of natural selection is an attempt to construct a conceptual scheme, not to give a testable hypothesis—Darwin's assertions are not of a kind that can be tested empirically, but are unfalsifiable provided that only two premises are accepted beforehand—(a) that evolution has occurred, and (b) that scientific methods are applicable to the field of *biology*". Objections to this view are answered and a supporting argument offered which suggests that it is the very nature of the subject matter that forces the Darwinian model to take its present form—indeed that Darwinism is not only unfalsifiable but alone in the field. Reported by John W. Haas, Jr.

BIOGRAPHICAL ACCOUNT OF SCIENTIST-POLITICAL ACTIVIST, RUSSELL E. DOOLITTLE, by John F. Henahan, *Chemical and Engineering News* 48, (6) 22 (1970). Doolittle, an associate professor of chemistry at the University of California, San Diego campus, mixes his research interest in the chemical complexities of the blood coagulation process and the clues to evolution that may be found in certain blood proteins involved in coagulation with a desire to enter the political arena in order to do something about the problems facing our nation. Doolittle's scientific and political Odyssey is described in a style reminiscent of James Watson's "Double Helix". As educator, scholar and politician, this man illustrates that kind of involvement in life that should characterize the Christian in science. Reported by John W. Haas, Jr.

CHEMICAL EVOLUTION by Richard M. Lemmon, *Chemical Review* 70, 95 (1970). Lemmon emphasizes the synthesis aspects of the subject based on experiments done under conditions which simulate the presumed environment of prebiotic Earth. Encouraging progress has been made in establishing that the most important organic molecules in living systems could have accumulated on the primitive Earth, and some more modest progress has been made in accomplishing the abiogenic synthesis of the protein-like polypeptides and polynucleotides. This review and the recent monographs by D. H. Kenyon and G. Steinman, *Biochemical Predestination*, McGraw-Hill Book Co., Inc., N. Y., 1969 and M. Calvin, *Chemical Evolution*, Oxford University Press, Oxford, 1969 provide rich source material for the progress and direction of current research in chemical evolution. Reported by John W. Haas, Jr.

EINSTEIN AND THE "CRUCIAL EXPERIMENT" by Gerald Holton, *American Journal of Physics*, Volume 37, Number 10, October, 1969. The author is professor of Physics at Harvard University and has strong interests in the history and philosophy of physics. He argues that in developing the famous theory of relativity Einstein was not motivated, contrary to the assertions of most physics texts, by the experimental results of the Michelson-Morley experiment. The genesis of this grand theory arises, rather, in Einstein's great intellectual passion for unity in the explanation of nature. He was willing to overthrow existing concepts if he could achieve this aim. Finally, Holton succinctly points out that "the experimentalist fallacy of imposing a logical textbook sequence, rigorously from experiment to theory, must be resisted. Not only is it false to the actual development of historic cases of thought processes that may here lead to major scientific discoveries. Not only might the doctrine if taken seriously, inhibit creative work in science. But worse, by drawing attention primarily to the external visible clay that provides factual support and operational usefulness for the developed theory, it does not do adequate justice to the full grandeur of the theory." An interesting article for Christians who think that the gap between so-called "objective" scientific experience and "subjective" religious experience is really a myth. Reported by W. Jim Neidhardt.

EVIDENCE AND SPECULATION ON HOW LIFE BEGAN by Leslie E. Orgell, *Science* 166, No. 3913, 1613-1614, 26 December, 1969. Three recent books are reviewed by an active investigator in this field at Salk Institute for Biological Studies, San Diego. J. D. Bernal's *The Origin of Life* (1967) is encyclopedic but general and qualitative. A. I. Oparin's *Genesis and Evolutionary Development of Life* (1968 translation of a 1966 Russian edition) has an excellent history of the subject but is uncritical and speculative (Genesis in the title doth not refer to Book One of the Bible). Orgell regards D. H. Kenyon and G. Steinman's *Biochemical Predestination* (1969; McGraw-Hill paperback, \$4.95) as the most detailed account available, describing the relevant experiments and attempting to interpret them. Reported by W. R. Hearn.

GENESIS 1-3: STORY OR HISTORY? by John Timmer, *The Reformed Journal* 19, (No. 9) 14 (1969) is a survey of an attempt by Dutch biblical scholars in the Reformed tradition to come to grips with the continuing question of how to interpret these difficult first chapters of Genesis. Such factors as literary form, sources of information, transmission and rearrangement of documentary sources in producing the current Biblical text, and the social context of the age in which the Biblical materials were developed are considered. The need for continuing research into the question is emphasized. This paper should open new avenues of thought for Journal readers. Reported by John W. Haas, Jr.

Periodicals on Parade is a new feature of the Journal contributed by the Consulting Editors in order to call attention to articles of particular interest in the current literature. If you have an item suitable for inclusion, the Editor would be happy to receive it.

MEDIEVAL AND SEVENTEENTH CENTURY CONCEPTIONS OF AN INFINITE VOID SPACE BEYOND THE COSMOS by Edward Grant, *Isis*, 60, No. 1, Spring 1969, pp. 39/60. The author is a professor of the history of science at Indiana University. He summarizes his thesis as follows. "Whereas in the Middle Ages God's nondimensionality determined the characteristics of an imaginary infinite extramundane void, in the seventeenth century it was the three-dimensional infinite void space of a new physics that conferred upon God a new property—three-dimensionality. And yet this important difference must not be allowed to obscure an important contribution. Whether conceived dimensionally or not, the belief in God's omnipresence in an infinite void made that overpowering and difficult concept more readily acceptable to a number of significant and theologically oriented philosophic and scientific figures in the seventeenth and early eighteenth centuries. This belief and the arguments justifying it were a legacy from the late Middle Ages." Reported by *T. H. Leith*.

POPPER'S FALSIFIABILITY AND DARWIN'S THEORY OF NATURAL SELECTION by K. K. Lee, *Philosophy*, 44, 291 (1969). He finds that Darwinism fails in the face of Popperian judgment at a number of critical points and that his theory is indicted as mere pseudo-science. But wait—perhaps Popper is too harsh. Many great moments in science would have to be discarded on the grounds of "inability to account for certain discrepancies between theory and prediction without the importation of *ad hoc* hypothesis."

"Falsification is obviously a symptom and a warning that all is not well with the hypothesis, but its progenitor like a loving mother or dedicated physician is too passionately involved to abandon it without making every effort and endeavor to nurse it back to life. The scientist like the gambler may be more tempted by the prospects of possible future gains than disheartened by present loss. It may be disturbing to admit that the most rational procedure which man has devised for the understanding and control of his environment is tainted by something as unscientific as a 'hunch', by imponderables, which in the last analysis escape logic, and where justification is the limited pragmatic one that sometimes it pays off well, as was the case with Darwin and his followers." Reported by *John W. Haas, Jr.*

RELIGION IN HUMAN LIFE by Robert H. Lowie. *American Anthropologist* 65, No. 3, 532-42, June 1963. This article was found among Lowie's papers after his death in 1957. Although he did not consider himself to be a religious man, his study of other cultures convinced Lowie that religion has a positive value. After coming into contact with missionaries on different Indian reservations, he concluded that "both the Indians and the hardy souls who were trying to convert them to Christianity had some inner strength I lacked." He considered the position of those anthropologists who saw value in Hopi religion but denied it in Christianity, as being "ridiculous and completely unscientific." Lowie realized that the average layman craves a complete world view which science cannot give, and held that religion is still the most available source of integration. This clear statement by a famous anthropologist is an important antidote to the claims of many social scientists that religious beliefs are dysfunctional in contemporary society. Although this article is not recent, I consider it to be very important, and am sure that few of our readers would have seen it. Reported by *Claude E. Stipe*.

SOPHIA, a journal for discussion in philosophical theology. Published in April, July, and October at the Department of Philosophy, University of Melbourne, Parkville 3052, Australia. Price: \$2.50 (U. S.). An excellent journal, now in its tenth year, which should be of interest to our members as it deals with the distinctives of religious language and the problems of verifiability in theology. The last issue contains articles on 'Is God Related to His Nature?', 'God and Analogy', 'We no longer have need of that Hypothesis', and 'Are Theological Utterances Assertions?'. Reported by *T. H. Leith*.

THE STATE OF THE SPECIES, *Natural History* 79, 46 (1970). The question of population is explored in a series of terse essays which deal with the origin of man, a close examination of the demographic patterns of the peoples of China and Martinique, a statement of some of the best estimates of the size and distribution of the current world population as well as latest estimates of the future population from United Nations sources. Other articles consider the constraints on the growth of human population imposed by nutritional deficiency, degradation of the environment and the production and consumption patterns of modern man. In a final article, possibilities for expansion of man to other planets are considered. The supplement closes appropriately with Genesis 1:28-30. Reported by *John W. Haas, Jr.*

Where corruption of children's minds is at stake, I do not believe in freedom of the press or freedom of speech. In my view, publishers who publish or teachers who teach any of the pseudo-sciences as established truth should, on being found guilty, be publicly horsewhipped, and forever banned from further activity in these usually honorable professions. Truth and children's minds are too precious for us to allow them to be abused by charlatans.

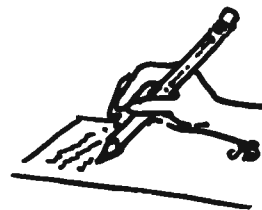
E. U. Condon. "UFOs I have Loved and Lost"
Bulletin of the Atomic Scientists, December 1969, p. 6
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Human assumption that all nature exists exclusively for man's benefit bespeaks a degree of intellectual arrogance that is matched only by basic human ignorance of nature. This attitude is at the root of most of our troubles with the landscape. While man, in his self-imputed wisdom, works toward his own purposes, nature reacts in accord with natural law, and the landscape bears the scars.

Raymond L. Nace, "Arrogance Toward the Landscape: A Problem in Water Planning"
Bulletin of the Atomic Scientists, December 1969, p. 11
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Communications



Comments on Symposium on the Bible and Science

Please send me 4 copies of your December 1969 (Vol. 21 No. 4) issue of the *Journal ASA*. This is a superb issue. I want to pass it on to some young theological students now struggling with these issues.

Herbert Henry Ehrenstein
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Recently, my Pastor gave me the December issue of your publication. He asked me to read it because he felt I was more scientifically inclined than he. I am a layman in scientific matters but for many years have read with interest all I could find on the subject of the relation between the Bible and Science.

I read your publication from cover to cover. The reason for this letter is that the reading produced several questions.

The cover states that, "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 Saviour."

Jesus stated in John 18:37, "... for this cause came I into the world, that I should bear witness unto the truth." In Matt. 19:4,5, he refers to the creation of male and female, even quoting from Genesis 2. In Matt. 24:37 he refers to the flood as spoken of in Genesis.

One of my questions is: How can a believer in Jesus ignore His witness to the truth of Genesis? And, not only Genesis, but Exodus 20:11, which says that God made everything in six days. Jesus testified to the truth of the law in Matt. 5:18. If Jesus allowed us to believe an untruth then he surely didn't fulfill his purpose of being a witness unto the truth.

Another question: If it is scientific for today's scientists to say the world is over 4 billion years old, then why isn't the Bible scientific when it states that creation took six days? And if the Bible is correct, then how can it be said that there are no answers in Genesis to evolutionary questions?

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Thanks to Dr. Pollard

I wish to thank Dr. Pollard (*Journal ASA*, 21, 34 (1969)) for his excellent address. He has established a sound biblical perspective for the immense problems of our time. His comparison of the earth to a spaceship leads me to the following comments:

1) The conditions for life on our spaceship will expire

when the sun exhausts its hydrogen supply, perhaps in five billion years (see e.g., George Gamow, *A Star Called the Sun*, p. 160). We cannot assume the Lord will return before that time (Mt. 24:32-44).

- 2) We do not yet control the motion or the temperature of our spaceship. Such a task would seem to be impossible, but, in view of the comment above, it may be implicit in the cultural mandate of Genesis One.
- 3) The conflicting ideologies of today's world are irreconcilable (see eg. David V. Benson, *Christianity, Communism and Survival*, p. 55). Our spaceship will ultimately be either the city of God or else the city of man, but it can not be both (Amos 3:3).

I believe that we have the opportunity to recapture the imagination and the allegiance of man for the service of God. It is up to us as Christians to warn our fellowmen of the transitoriness of the blessings we now enjoy to call them to a new direction in history.

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RUSSELL D. STURGIS

Russell D. Sturgis, a member of the original group of five Christian men of science whose meeting eventually gave birth to the American Scientific Affiliation, passed away in November 1969. Dr. Sturgis earned his Ph.D. degree in Chemistry from the University of Pennsylvania in 1924, and was awarded an honorary Sc.D. degree by the University of Delaware in 1964. He devoted 40 years of his life to the teaching of chemistry and served as the Head of the Chemistry Department at Ursinus College. He was a Deacon at the First Baptist Church of Norristown, Pennsylvania, and taught the Men's Class for over 40 years. In a statement of Christian faith written for the ASA in 1966, Dr. Sturgis said, "Knowing that the Bible is the Word of God, I have always believed that it needed no defense. In 40 years of teaching I have seen chemistry change greatly, but God's Word has not changed." Dr. Sturgis had just been elected to the position of Emeritus Member of the ASA when news of his death reached the ASA office.

Critical Standards Essential for Evangelicals

Francis Schaeffer's *The God Who Is There* has achieved a considerable following, despite the caution shown by this journal (*Journal ASA* 21, 54 (1969)) and by other evangelical publications in reviewing the book. In several respects its popularity is justified. In identifying relativism and subjectivism as the characteristic intellectual difficulties of our time, in urging Christians to take the offensive against a culture which is less formidable and less self-assured than some might suppose, and in specific suggestions concerning apologetics and evangelism, Schaeffer performs needed services. But in numerous respects he violates his own principle (p. 166) by teaching what will later have to be unlearned.

Take his central point, for example. Schaeffer identifies the fundamental stumbling block today, not as philosophical scepticism, which might make Hume, Kant, and Schleiermacher the central figures in his discussion, but rather dialectical idealism. He supposes that Hegel denied any real difference between a thesis and its antithesis, but constantly sought to resolve differences by synthesis. Now, whether or not Hegel was more interested in the new synthesis than in the subsequent antithesis, it is obvious that Kierkegaard, the author of *Either/Or*, was no disciple of Hegel (p. 21).

The point of dialectical argument, put most simply, is that many philosophical problems prove to be the result of an inadequate, poorly phrased, or historically conditioned dichotomy, which must be replaced by another, in which elements from both sides of the original problem are found in the new thesis, which again has its antithesis. Schaeffer himself uses just such a dialectical approach to show that Camus' dilemma concerning medicine and Providence was not adequate to the true moral situation as revealed by Christian theology (pp. 101 & 107; see p. 95 for another of Schaeffer's own dialectical arguments). All this is rather academic, however, for the real philosophical problems of today stem not from a dialectical method but from scepticism, which has a history going back to pre-Christian times and was recognized as a problem by theologians as early as Tertullian. What Dr. Schaeffer is trying to say about the despair in modern literature and art makes sense only in terms of philosophical scepticism.

Even more damaging to the book is the lack of any sense of the difficulties with which natural theology met in the 13th century and which eventually drove religious philosophers into fideism. The little story of how Hegel hit upon the new way of thinking, not in terms of "cause and effect" but rather in terms of synthesis (p. 20), seems designed to indicate that there were no genuine reasons behind Hegel's attempt to solve some of these very problems, and that we are therefore justified in simply returning to a prior philosophical position (p. 54?).

Besides the seeming ignorance of the relevant development of philosophical theology and the frequent confusion of categories, the book uses a terminology that is hopelessly and needlessly inadequate. For example, Schaeffer could have avoided the absurdity of the phrase "true truth" by realizing that the only way to "think about truth" (see p. 15), as opposed to considering the truth of particular propositions, is to think generally about the conditions under which we would

accept propositions as verified. A number of other words (universal, absolute, real, reason, nature, romantic) fall apart in Schaeffer's hands, or are used for their connotative value, a practice he decries in others.

He is also guilty of misrepresentation, as in regard to existentialism. He is correct in saying that Sartre has forfeited his right to express objective moral judgments on other men's actions, and is bound by his own principles to consider the most hideous act as evidence of a man's "authentic" character. But to say that to Sartre the choice is "unimportant" (p. 24) is a grotesque error. Sartre can show his own repugnance by choosing not to do such an act, though he has not, in fact, limited himself to deeds in expressing his own deep moralizing interest—a point which Schaeffer labors.

To show the logical or practical difficulties in other philosophical traditions, although having a place in apologetics, does not suffice to prove one's own position. And there is a danger that readers who have not been made aware of the difficulties in the way of anyone who wants to demonstrate that the Scriptures contain "truth in a propositional form" or prove that "reason" and revelation form a "unified field of knowledge", will find their witness weakened rather than strengthened. It is not Schaeffer's fault that he was the first to grapple with these broad cultural and intellectual questions, and to indicate the pitfalls to avoid. But evangelicals will be open to the charge of dishonesty if we fail to demand the same critical standards of ourselves that we expect of others.

John Sommerville
Mountainview, Calif.

! WANTED !



If you have information about the identity or whereabouts of this man, contact the Editor of the ASA NEWSLETTER immediately.

Warning: This man is ineluctable!

The Person of Christ

The review by Edwin M. Yamauchi (*Journal ASA*, 21, 27-32) of Schonfield's book, *The Passover Plot*, contains many comments which try to show that Christ is equal to God (Yahweh). For the benefit of readers of your journal, I, as a scientist, would like to point out that an ever increasing body of scholars maintain that the early Christians (not only heretics)¹ believed that Christ was a created, high angelic person. The book by Prof. Martin Werner, *The Formation of Christian Dogma*, contains a wealth of information on this topic. Even the opposers of Werner have had to admit that the Angel-Christology is a very real theme that "had an important position in the early Christian period."²

Did the pre-Nicene theologians equate Christ (the Logos) with God? Scheidweiler (1954) informs us that "all the great pre-Nicene theologians represented the subordination of the Logos to God."³ It was this early Christian belief that Jesus Christ is a created high angel that formed the very basis of the later Arian controversy. Should we close our eyes and try to evade the issue by accusing these pre-Nicene theologians of gross inaccuracy in their statements, as is indeed done by Joyce?⁴ If such is the case, why did the ordinary Christians (converted from polytheism) protest against the proclamation of a divine triad?⁵

It can be stated without fear of contradiction that the trinity concept was cherished universally in the ancient religious systems of the Babylonians, Assyrians, Hittites, Phoenicians, Egyptians, etc. The Canaanites also worshipped their trinities at a very early date.⁶ Professor Albright informs us that the "triad of plastic statues from the Neolithic of Jericho suggests that the divine triads of the ancient Near East, usually consisting of father, mother, and son, were already known by the sixth millennium B.C., and that they were already worshipped with the aid of a shrine and rites of some sort."⁷

In contradistinction to these heathen nations with their trinities, Israel did not worship a triune God. Rather, *Yahweh is one* (Deut. 6:4) and the import of this assertion is that "Yahweh is a single person, not many,"⁸ or for that matter three equal persons in one God. Actually, we find that in Babylon as well as Egypt, the concept of three persons in one god was very closely approximated.⁹ Should we accept the deduction that the Babylonians possessed a superior notion about the nature of God in comparison to the Israelites who "were entrusted with the oracles of God" (Rom. 3:2)?

Even the symbolism used by the Christian Churches through the ages correspond to those used by the heathens to depict their triads. In this regard we may mention the equilateral triangle, the circle, the trefoil, and the fleur-de-lys.¹⁰ The heathens used these symbols many centuries before the Trinity was accepted in Christian circles. Therefore, the only valid conclusion is that the Christians adopted heathen symbolism to picture their Trinity. If they could have adopted this heathen symbolism without qualms, they could equally well have adopted the universal trinity concept present in the heathen religious systems.¹¹ The heathen concept of the trinity clearly influenced the Council of Nicaea. The Melchite Christians present

at this Council postulated the existence of a trinity of the Father, the Virgin Mary, and the Son. These Christians therefore elevated the mortal Mary to the level of God Himself.¹²

From a historical point of view it is therefore abundantly clear that the early Christians did not believe that Christ was equal to God. Rather, the initial belief that Christ is a created high angel was supplanted by the trinity concept which was borrowed from the heathen nations. In this process certain Christians even went so far as to incorporate a female deity into their triad, namely Mary, the mother of Christ.

L. Coetzee
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Arcadia, Pretoria, South Africa

1. Barbel, J. (1941) *Christos Angelos*. Bonn.
2. Grillmeier, Aloys (1965) *Christ in Christian Tradition*, 54, 55.
3. Scheidweiler, F. (1954) *Byzantinische Zeitschrift*, 47, 352.
4. Joyce, G. H. in *Catholic Encyclopedia* (1912), vol. 15, 51.
5. Prestige, G. L. (1936) *God in Patristic Thought*, 98.
6. Nielsen, D. (1922) *Der dreieinige Gott in religionshistorischer Beleuchtung*.
7. Albright, W. F. (1957) *From Stone Age to Christianity*, 173.
8. *Theological Dictionary of the New Testament*, vol. III, 1080.
9. Obbink, H. Th. (1933) *De Godsdienst in Zijn Verschijningsvormen*, 125. The Hague.
10. Stafford, T. A. (1952) *Christian Symbolism*. New York.
11. Paine, L. L. (1901) *The Ethir Trinities and their Relations to the Christian Symbolism*. New York.
12. Hislop, A. (1960) *The Two Babylons*. 89. London.

Reply By Yamauchi

The long letter by Mr. L. Coetzee from South Africa is an interesting response, and one that would be worth printing as it reflects the problems which Jews, Unitarians, and Muslims have experienced with the Trinity.

Others, including theologians who read this journal, may wish to reply in more detail to the points made in this letter. Let me simply make the following comments:

1) To say that "the early Christians (not only heretics) believed that Christ was a created, high angelic person" assumes only that Mr. Coetzee includes in his definition of "Christian" such sub-orthodox groups as Arians and Ebionites.

2) Subordination of Christ to the Father has been understood by orthodox Christians in the divine economy of the Trinity, and does not mean—as Coetzee implies in his second paragraph—the Arian belief that Jesus was a created being.

3. The polytheistic triads of the Eastern religions, typically father, mother, and son in their plastic representations, have nothing in common with the Trinity save the number three. In his third paragraph Coetzee quotes Professor Albright's book *From the Stone Age to Christianity* to illustrate such a heathen triad. That Albright himself, who is one of the leading authorities on comparative Near Eastern religions, sees no relationship between such heathen triads and the Trinity is quite clear from a careful reading of his text. Later in the volume Albright says: "It should hardly be necessary to add that the trinitarian idea of God has immeasurably enriched the concept of monotheism, with-

out in the least detracting from its unified character." (p. 394)

4) The Babylonian theology of Marduk which spoke of the other gods as manifestations of Marduk, and the Egyptian theology of Ptah which did likewise of Ptah were examples of syncretistic thought based on the political dominance of Babylon on the one hand and of Memphis on the other hand. Neither has any real resemblance to the Trinity.

5) The use of heathen symbols does not necessarily mean that the concepts illustrated by such symbols are heathen. Symbols like words belong to the common heritage of mankind. Christians in all ages have used words and symbols previously employed by heathens, and invested them with the higher meanings given by God in His revelation. The cross is found in many pagan religions, but only in Christianity does it have the significance of God's loving triumph over sin and death through Christ His Son.

6) Unfortunately for Mr. Coetzee's otherwise plausible historical argument as for Mr. Schonfield's elaborate plot, the Christian's conviction in the deity of Jesus and in the Trinity rests on the New Testament itself (Matthew 28:19; II Cor. 13:14; John 15:26; I Peter 1:2) and not on heathen concepts imported into early Christianity.

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Criticism of Bible Truth

With pleasure I read your magazine for two years now, but I too see a growing trend in it to show the mythological character of many Bible stories, instead of showing the harmony between Bible history and scientific facts. Criticism of Bible truth is given by many publications in this time, so that I, being a student, cannot consider your magazine worth the price for me any more, because it doesn't give any longer unusual information. Therefore I kindly ask you to cancel my subscription for the time being. Nevertheless, I found it many times a refreshing experience to read the various articles and I hope that more people will again raise their voice on your pages to defend the biblical truth.

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AGE OF THE MOON

From time to time the question of the reliability and interpretation of age measurements by means of radioactive and isotopic ratios is raised with the implication that there are serious questions about these techniques. A striking example of the application of these methods and of the kind of consistency that can be achieved in spite of admitted experimental problems is given in the January 30, 1970 issue of Science. The reports of 10 papers by a total of some 35 authors discuss age measurements performed on samples of rock, dust and breccia brought back from the Apollo 11 moon landing. The following table presents a summary of these measurements.

Science 167 No. 3918

Page No.	System Used	Material	Age, Billion Years
461	Pb-U-Th	Dust	4.66
463	Rb-Sr	Rock	3.65
		Dust	4.5
466	Ar	Rock	3.7
468	Pb-U-Th	Rock	4.1-4.2
		Dust	4.60-4.63
471	Rb-Sr	Rock	3.4-4.5
	Pb	Dust	4.75
473	Rb-Sr	Rock	4.5
474	Rb-Sr	Rock	3.8
476	Rb-Sr	Rock	4.42
479	K-Ar	Rock	2.3
	Pb	Dust	4.76
481	Pb	Dust	4.7

Can there be any serious doubt that the dust and rocks of the moon consistently indicate an age of that body at least 3 billion and probably close to 4.7 billion years old?

What Do You Think of THAT?!

Population Control? Great for You

A questionnaire submitted to the students and faculty at Cornell University by Thomas Eisner, Ari van Tienhoven and Frank Rosenblatt revealed that 84 percent agreed on the desirability of limiting family size, but 39 percent said they wanted three children, and 26 percent wanted more than three children. Concerning contraception, about one-half favored "the pill" and no more than 13 percent gave top preference to any of the other contraceptive appliances (condoms, diaphragms and IUD). Only 6 percent chose vasectomy as the preferred form of contraception when the full desired family size had been achieved. A majority, 52 percent of the men and 61 percent of the women, said that they would *never* undergo sterilization after they had had the desired number of children. (*Science* 167, January 23, 1970)

Familiarity Breeds Comfort

Experiments on imprinting, a form of attachment of young animals to objects or to other animals, is interpreted to mean that just exposure alone is sufficient to produce affection and attachment. Lambs have been imprinted to TV sets, chicks to boxes, balls or sponges, and birds to certain styrofoam shapes. A group of rats was exposed for 12 hours a day for 52 days to Mozart, while another group was similarly exposed to Schönberg. When the rats were given "free choice" later, the Mozart-imprinted rats chose Mozart and the Schönberg-imprinted rats chose Schönberg by significant margins. (Rats raised without music were found to prefer Mozart.) (*Psychology Today* 3, No. 9, 33 (1970), in article by Robert Zajonc)

A Deadly Alphabet

The United States has at present seven "standardized" agents of chemical warfare: (1) GB—a lethal gas intended to be inhaled, (2) VX—a lethal gas absorbed by the skin, (3) HD—a blister agent, better known as mustard gas, (4) BZ—an incapacitating agent that interferes with normal mental and bodily processes for as long as several days, (5) CS—riot control agent, also called "super tear gas" and extensively used by U. S. in Vietnam, (6) CN—riot control agent, normal "tear gas", and (7) DM—riot control agent, which may be lethal under certain conditions. (Army definition: incapacitating—kills fewer than 2% of those who become ill.) (*Bulletin of the Atomic Scientists* 26, No. 1, 23 (1970)).

Look Out Below!

A fascinating study of the petrography of bird urine is reported by R. L. Folk of the Geology Department of the University of Texas, who examined the droppings of chicken, goose, turkey, pigeon, sea gull, sparrow, starling, parakeet, magpies, galahs, cockatoos, ravens, eagles and emus, as well as "many 'unknowns' scraped up from various sidewalks, fence posts, or automobiles." He found that without exception the white part of the excretion consists almost entirely of spheres which are not uric acid as has been universally accepted since 1811. Elaborate evolutionary theories based on the uric acid content of bird urine are called into question by this work. (*Science* 166, 1516 (1969))

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What Do You Think of THAT?!

VD Still Alive and Threatening

Dr. A. D. Dennison, Jr., chief of cardiology, Veterans Administration Hospital, Johnson City, Tennessee, reports that venereal disease, far from being conquered, is raging as never before in the Western world. Although syphilis could be eradicated in three days by two mighty injections of penicillin, over a million Americans have active syphilis and don't know it. Reported cases of gonorrhea last year numbered half a million, indicating that the actual number of live cases is probably more like four million. One out of every four US soldiers in Vietnam is reported to have gonorrhea, and the organism responsible is becoming increasingly resistant to penicillin. There is more syphilis in persons under 25 than in any other age group. In 1966 almost five thousand children with age between 10 and 14 had VD. (*Christian Life*, January 1970, p. 20)

A New Style to Professional Meetings

Student and other young participants in the Science Action Group made a permanent impact on the year-end AAAS meeting in Boston. Their continual theme throughout the convention was: "Science is not neutral. It is being used for evil political purposes by the military and by corporations." Although there was no overt acceptance of these theses by the elder participants, the effects were felt in indirect ways. Panels called for an immediate end to the development of the MIRV and ABM systems, and a ban on tear gas and herbicides in Vietnam. (*Science* 167, 38 (1970))

The Mirror Syndrome

Research by Gordon R. Gallup of the Psychology Department at Tulane University showed that after prolonged exposure to their own image in a mirror, chimpanzees reacted in a way that was consistent with the interpretation that they recognized themselves. Monkeys treated in a similar way showed no recognition signs. It is possible that this is the first experimental demonstration of a self-concept in subhuman form and of a psychological gap among primates, only man and the great apes having the ability of self-recognition. (*Science* 167, 87 (1970))

Four Ways to the Stars

At the American Geographical Society's annual dinner in New York, Dr. Robert Jastrow, director of the Institute for Space Studies of NASA's Goddard Space Flight Center, offered suggestions for four ways that man can reach the stars (the nearest visible star is 36×10^{12} miles away): (1) use matter-antimatter reactions for the fuel requirements in order to allow us to travel with a speed approaching that of light, in which event the trip would only take 6 years; (2) use the deep freeze method of suspended animation to carry the space voyagers through the hundreds or thousands of years of their trip; (3) carry out artificial combination of sperm and ova on the space ship at the appropriate time near the end of the journey so that mature investigators would be on hand upon arrival; and (4) build giant space arks, which like miniature earths would be capable of independent support of life. (*The New Yorker*, January 10, 1970, pp. 17,18)

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