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A DEATH—AND A BIRTH

ONE effect of the death of M. K. Gandhi—an effect not widely anticipated—has been a revelation of the strong hold he had attained upon the imagination of intelligent westerners. Ordinarily, for the "practical" West, death is an irrational event. Western thought accepts death only as an irremediable evil which is ignored as long as possible. When it comes, there is tacit admission that circumstances have been altered by unpleasant necessity—nature has played another shabby trick on mankind, interrupting the rational process for a little while. And in that reluctant interlude of recognition of death, a certain irresponsible freedom of expression is allowed to otherwise conventional organs of public opinion. It is a kind of tribute paid by a practical world to the impractical reality of death. So, in many cases, the editorial praises sung in Gandhi's name afforded the spectacle of a national press suddenly turned non-violent, deeply religious, and consecrated to peace—if only until sundown.

But beyond this, there has been a deep swell of honest reflection, of self-searching—the exposure by men never known to have thought about Gandhi at all, of things which they have been carrying around in their hearts for years. Somehow, Gandhi's death made it possible for them to articulate what was in their hearts. They had not spoken until now, but now they must.

It is hazardous to juggle with historical events and mass human attitudes, but we think it not unlikely that this profound reaction to the death of Gandhi could not have happened in the years before the war. The Western world had not then the same sense of extremity, nor—to notice a pertinent fact—was Gandhi's mission and power so well understood. But today, there is evidence that a kind of polarization of thought, or a shift in the moral center of gravity, is slowly making itself felt. Within and about the fixed institutions of the American and European nations is heard the murmur of doubt and inquiry. Men are asking what, really, they are doing with themselves and their lives, and if it is worth while. The death of Gandhi has helped to make that murmur a cry. It will not, we think, return to the soft-voiced questioning of before.

The new focus of thought, pressed into objectivity by Gandhi's death, may be illustrated by three recent articles. The first is by Vincent Sheean (in the New *York Herald Tribune* for Feb. 8), the American foreign correspondent who stood not ten feet away from Gandhi's assassin when the fatal shots were fired. Mr. Sheean reveals that he had gone to see Gandhi because of a yearning that had been growing in him for years. Increasingly, he felt that the assumptions of the world which had given him his education, which had taught him to be agnostic and provided the field for his brilliant career, were unstable and played out. He went to Gandhi to ask simple questions: What is real? (Specifically, he asked about the pantheism of Sankaracharya, greatest of Hindu metaphysicians.) What is the relation between ends and means? And, finally, What is the path to self-realization?

Gandhi spoke to Sheean concerning the teachings of the *Bhagavad Gita,* India's most precious and universally accepted scripture. It must have been evident to Gandhi that Sheean was deeply affected during this interview, for the correspondent relates that Gandhi warned him against supposing that he, Gandhi, had in any way achieved "perfection." Gandhi admitted only that his struggle had been "in that direction."

A generation ago, this conversation between a cosmopolitan newspaper man and a half-naked ascetic of the East might have seemed a jarring anachronism, without fitness or persuasion. But

now there is nothing unlikely in the disciple-like questions of Vincent Sheean, nor in the uncompromising though gentle replies of Gandhi as his teacher. It is as though Sheean and Gandhi, together, are explaining, "You see, the *Gita* and the *Upanishads* now have a message for all the world—the world is growing up to their wisdom."

Sheean had two visits with Gandhi. On the third day, even while Sheean was planning the questions he would ask, Gandhi was killed. Sheean did not go to the chamber of death. "I had," he said, "a horror of seeing blood on the noblest, bravest and best that I have known."

Edgar Snow, like Vincent Sheean, was at Birla House the night Gandhi was killed. He writes on "The Message of Gandhi" in the *Saturday Evening Post* for March 27, recalling the circumstances of the tragic event. He speaks of Sheean as having "come all the way from *Personal History* and Western philosophy and Freudianism and dialectical materialism and disillusionment in the war—the failure of the righteous battle to win peace and understanding—to sit at Gandhi's side after months of patient study and preparations as a child and student to look into the old man's heart." Not so shaken from his agnostic moorings as Sheean, Snow nevertheless admits that during his last visit with Gandhi, he felt his greatness. "Gandhi," he said, "died in an honest search for truth, and, in the end, all men came to see it and felt it shining in him." Snow's summation of the achievements of Gandhi's life is worth repeating:

> Many seek the truth as many would become painters, or musicians, or writers, or actors, but few leave masterpieces as Gandhi did. He attained a genius with truth and became part of its immortality. He concentrated on eternal truths between men to the exclusion of everything else. He was a servant in abject humility before his wondrous medium, and all his teachings were faces of it. Gandhi won national independence for more millions of people than any other leader of men, and with less bloodshed, and that was the truth. He showed the weak and the poor how to struggle without taking life, and that was the truth. He spent years in jail for the national cause, and once he helped conduct the prosecution against himself after violence occurred in a civil-disobedience movement. He broke the system of indentured Indian labor in South Africa. He won respect for Indians and restored the self-respect of men who had humiliated them. He fought color and racial discrimination everywhere. And all that was the truth. He laid the foundations for a national language which would bring men close together regardless of creed, and he nursed and tended the sick and the helpless to teach men kindliness and self-sacrifice. Against 3000 years of prejudice he raised a crusade for the human rights of 50,000,000 untouchables, and he opposed the bigotry and dogmatism and the hateful orthodoxy of the caste system with more success than any Indian since Guatama Buddha.

Three of Gandhi's beliefs, quoted by Snow, are of historic importance to the Western world. Gandhi saw the truth in all religions, but his central conviction he expressed in the phrase, "There is no greater religion than truth." To Snow, Gandhi called himself "a philosophical anarchist," expressing in this way his opposition to the State in its function as a power over the life of the individual. Finally, speaking of his own life, Gandhi told Snow that he believed he had made "a small contribution to the world." He said:

> I think I have demonstrated that *ahimsa* [harmlessness] and Satyagraha (soul force or nonviolent non-cooperation in its political meaning] are more than ethical principles. They can achieve practical results.

The third article is Pearl Buck's "Should Gandhi's Assassin Be Killed?" in *United Nations World* for March. To this question, Mrs. Buck answers an unequivocal "No!" But in doing so, she says other things which, in the context of current history, seem to have even greater significance. "Gandhi," she says, was "right"—right in all of his major contentions.

> However long the follies of the violent continue [Mrs. Buck writes], they but prove that Gandhi was right. Nonviolence is the only commonsense for human beings. . . . We cannot wait for peace to be made, for arguments to be settled, for the quarrelsomeness of selfish men to subside. Before that settlement comes, life is over. At all costs,

> Gandhi said, we must refuse to use violence. Resist to the very end, he said, but without violence.
>
> To a world confusing violence with power, these words seem too simple to be true. Yet truth is always simple. Men wind confusions and entanglements because they are afraid of simple truth. But truth is not changed. It is simple. It is more fundamental than the atom itself.

These three, Vincent Sheean, Edgar Snow and Pearl Buck may be said to be representative of Western civilization at its best. They have told us what they think, now, and it is possible that they will not change their minds. It is possible that the conviction with which they write has struck deep into their lives, and that they will see more clearly, more with their awakened hearts, in the days and years to come.

That—even the possibility of that—we think, is much. That, and perhaps much more, is what Gandhi's life, and death, have given to the world.

NETHERLANDS LETTER

THE HAGUE.—While physical conditions in the Netherlands continue to improve, there is little relief from the post-war depression. The hope that "after the war" everything would take a turn for the better has not been fulfilled, and fears have taken the place of that waning hope. There is, of course, dread of another war, and apprehension of the bankruptcy that might result from loss of the Netherlands East Indies. But even these fears, while unsettling to many, have in some quarters helped to provoke a sense of the necessity for adjustment, for reconciling oneself to a world that is rapidly changing.

In the field of religion, for example, the strict Calvinism of the country gives evidence of a surprising liberality. Not long ago a minister of the liberal wing of the orthodox Calvinist church explained in a lecture that there are two ways of interpreting the Old Testament: the mechanical or literal method, and the organic or "human" method. The speaker went on to say that, according to the second method, not the literal meaning of the text, but individual opinion, must be the standard of judgment. One has to consider the times, the "psyche" of the writers, and today the times are different and the Bible must be re-interpreted. In the Biblical explanation of the origin of the world, it was said, we learn from the translation that the spirit of God hovered over the waters, but the meaning of the Hebrew original is that of the Spirit brooding on Chaos. This minister told his listeners that there is no mention in the Bible of the "original sin"—asking, How could Adam have sinned before he had knowledge of Good and Evil?

In discussion, the minister—also a teacher of Hebrew—admitted that the term *Elohim* should not have been translated "God," but *"Gods,"* and said that the translation of JHVA as "Lord God, Jehovah," is absolutely wrong.

A further evidence of growing liberality in religion was provided in a speech by the Netherlands Foreign Secretary, in which he said that the UNO, as an organization that might some day include all the peoples of the earth, could not be based on any particular religion. When reproached with the charge that "the UNO does not accept the Christian creed as a basis for its activities," he replied that such thinking would make cooperation with non-Christian peoples an impossibility.

Finally, the reaction of the Dutch people to the death of Gandhi is another sign of awakening. The following, taken from a newspaper, expresses well the general feeling:

> In Gandhi the whole world loses part of its conscience. He was more than an apostle of peace and righteousness. He represented the core of every religion, every philosophy of life: the dominion of the soul over the body, of spirit over matter. In these times of coarse materialism, he represented the ideal to which the world looked up: the urge toward a peace which would be no artificial edifice of political or military balance of power, but a peace growing out of the innermost craving toward harmony, which lives in every man, but which is forever being suppressed. Thus he could be an example for Hindus and Muslims alike, but also for Christian and Heathen, for this craving wells up in the most depraved of human beings during quiet hours.

Werner Richter, in *Re-educating Germany*, speaks of statesmen "for whom history reserves immortal praise" because they have "never surrendered to the moment. They have been guided by a spirit of universality which does not give way to fleeting human passions, but rather transcends the contemporary events of one or two generations." There is hope in the fact that, throughout the world, Gandhi has been recognized as an embodiment of this spirit.

NETHERLANDS CORRESPONDENT

REVIEW
CHANNELS OF FREE EXPRESSION

ALL good books contain an element of prophecy, and Oswald Garrison Villard's *Disappearing Daily,* being a good book, has something to say about the future of independent publishing in the United States. On the whole, what Mr. Villard writes about the newspapers of the country is depressing—depressing, that is, to readers who have given little attention to the process he describes. It is something of a shock to realize that the American press is nothing more than a devitalized, unoriginal and mediocre partisan of the commercialism which dominates American life. But for those to whom chapter and verse on the decay of American journalism come as no surprise, this book is exhilarating and, in parts, even inspiring.

It seems just to call Mr. Villard the last of the great liberal journalists—representatives of a tradition the decline of which he chronicles in *The Disappearing Daily.)*. The book is temperate. The author is careful to give the devil his due. The "accidental" virtues of Mr. Hearst and Col. McCormick are not ignored, although, as might be expected, these publishers fare rather badly. The technical excellence of the New York *Times* receives the tribute it deserves. But the over-all picture is that of the press in the United States as an articulate rationalizer of the enormous commercial interests which control the public opinion of the country and which, more from moral and intellectual sloth than from any other cause, have made it virtually impossible for anyone but the merchandising expert and the propagandist of convention to address the mass audience of the American people. The net of Mr. Villard's analysis is that the independent journalist is a vanishing American, and that the independent daily has just about disappeared.

The book, however, is inspiring in its portrait of Henry Lloyd Garrison, militant abolitionist of the Civil War days. Here was a man determined to be heard on the great moral issue of his time. Garrison published the *Liberator* almost single-handed, writing the articles, setting the type, running the press, himself—becoming a force in American history without ceasing to be a private individual. And Mr. Villard, a descendant of Henry Lloyd Garrison, believes that the future of free expression in the United States lies with men who will follow his example.

Today, it is more difficult. Advances in printing techniques and production costs place tremendous obstacles in the way of the independent publisher. But Mr. Villard, in his last chapter, sees certain avenues still open to the men who, like Garrison, are determined to be heard. There are the pamphlet, the small weekly, and even the mimeographed newsletter, for a beginning. And within the past five or ten years, there has been a noticeable spurt in small-scale independent publishing of this sort. One of the most promising efforts—which did not survive the war—was *Uncensored,* a weekly of news commentary issued in Washington by Sidney Hertzberg. George Seldes' *In Fact,* while editorially less admirable, illustrates the possibility of the newsletter method in reaching a large audience. Scott Nearing has combined a farming enterprise in Vermont with weekly publication of *World Events,* a letter of political and economic discussion. Most successful, perhaps, of the newsletters is *Human Events,* published in Washington by Frank Hanighen, which each week provides its readers with a "trend" type of article dealing with political and moral questions.

The Human Affairs Pamphlet series, formerly issued by the Human Events Associates, now by the Henry Regnery Company of Hinsdale, Illinois, puts into print some of the most intelligent thinking and criticism of our time. Starting with *The Atom Bomb versus Civilization* by Robert M. Hutchins, these pamphlets have dealt with basic issues such as Arthur Morgan's community thesis, the Gandhian revolution, the meaning of conscientious objection, and the economic and

moral paralysis of Europe. A recent Human Affairs pamphlet (they come out monthly) explores the attempt of American book publishers to establish a virtual cartel to increase the sales of their books in Europe. Two publishers' organizations have taken steps to influence the Government of the United States to exert pressure on other countries through trade treaties, in order to create larger markets for American books. They recommend, that is, that a portion of the dollars provided in foreign loans be "earmarked" for the purchase of American books. The author of this pamphlet, Mr. W. T. Couch, remarks:

> Take, for instance, the argument that Europe wants American books. Why then the pressure for allocations to purchase here? If they really want to buy, can't they be trusted to make their own allocations—if this process has to be followed—without benefit of U.S. State Department advice or pressure? . . .
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> Why should the Dutch have to buy books from the United States rather than from the French, or the Swiss, or the British, or the Norwegians, or the Swedish, or the Danish, or the Belgians? Can these countries, all of them either former allies or friendly neutrals, not be trusted to decide what they need most and where to buy it? Why should any of these countries be required, as a condition of a loan, to buy anything from us rather than from each other? . . . And why an allocation for books any more than for medicine, food, clothes, machinery? Where will a policy of allocating to please groups lead?

Mr. Couch, who is Director of the University of Chicago Press, made several attempts to point out to the trade organizations, The American Book Publishers' Council and the American Textbook Publishers' Institute, that the policy they are pursuing is a form of imperialism. He found them unable or unwilling to grasp his meaning. Now, he asks:

> In what ways do these American book publishers' cartels differ from Nazi cartels? The Nazi cartels, we hope, are dead; these are certainly alive. And they publish American books, democratic books, books that condemn cartels as sources of evil, that condemn the collaboration of governments and industries in securing foreign markets, books that blasted the Nazis for blocking (allocating) foreign credits and forcing unwanted goods on their neighbors, books that condemn all these practices as the prime cause of war and the chief enemy of democracy.

Mr. Couch is sure that most American book publishers don't realize what they are doing. This pamphlet gives them a chance to find it out.

Escape from Reason

The Book-of-the-Month for April is a most peculiar selection. In contrast to all of the BoM's choices noticed so far, it is extremely difficult in this instance for the reviewer to determine either why the book was written or why it was selected by the Book Club judges. *Great Mischief* is a fantasy, moving from the prosaic life of a middle-aged, sister-ridden bachelor pharmacist to a world of goblins, werewolves, hags and other denizens of the "evil-spirit" world. Josephine Pinckney's book is, it must be noted at once, a fantasy without point. While psychological observations of value turn up as one passes from page to page, there is definitely no central theme. One learns from Miss Pinckney that an apparently self-sacrificing sort of love may be intensely selfish, and that theological Christianity is thoroughly illogical, and that good and evil are seldom what they seem, but none of these views on the part of the author necessitates the type of plot she has woven.

Great Mischief is considerably different in mood from Miss Pinckney's also successful novels and play. She evidently decided to write this one just for fun. While it may be going too far into the field of conjecture to claim we know just why she thought writing *Great Mischief* was fun, we may hazard the guess that she simply desired an escape to a world completely outside the bounds of logic or reason. Her description of "hell" and the "devil" indicates that she was not interested in making either hell or the devil rational. She is not building a case for unholiness, which might of itself be both an interesting and a rewarding task,

although she makes a few fitful starts in this direction.

Book-of-the-Month Club judges apparently also desire a completely new form of escape once in a while. This book is itself of little importance, yet may be important enough evidence to warrant the conclusion that if *Great Mischief* can happen to several hundred thousand American readers, almost anything may happen to them at any moment. For this novel seems to be in the mood of that peculiar sophistication which requires that it be inexplicable. *Great Mischief* is also like many of the less credible examples of modern art, for it combines fact and fantasy in a deliberate attempt to avoid meaningful synthesis. The success of the book is a worrisome portent, since other authors may decide that if this book could receive the coveted monthly award, an even worse one may have the additional opportunity to become a motion picture prospect.

It must be admitted that one of the reasons why this reviewer stares at Miss Pinckney's contribution so stonily is his own thorough belief in witchcraft and spirits of the other world. Miss Pinckney is simply not herself a Believer and may be regarded as only temporarily slumming.

COMMENTARY
CAPACITY FOR BROTHERHOOD

HE sat easily in the comfortable chair and told four or five people about his boyhood on a sugar cane plantation in Louisiana. He spoke of his brothers and sisters, and half-brothers and half-sisters, and of the woman who had mothered them all. He told how he and some of the other children had brought her to Los Angeles, and how he was planning to make the closing years of her life as happy as he could. Answering friendly questions, he described the difficulties he and his wife had encountered in adopting a little girl, how they were finally overcome, and said that the child was now in his care, without danger of another separation. Then, explaining that people were waiting for him in his car, he said goodbye.

His visit was a momentary affair, and the fact that he was black is of no special importance. Probably everyone can remember some similar experience. He had come to pay a call on a woman for whom he had worked for many years. They were old friends, and his color was—as it should have been—irrelevant. And yet, there was something about him that made the incident difficult to forget. There was, first, his dignity and complete composure. It was different from the ease of a negro with frequent contact with whites on race relations committees, and different from the social facility which comes with education. He was too much of a man for anyone to think about his "education." It was just his own quiet self-respect. Then, there was the atmosphere that developed as he talked, the steadily growing impression that his life was one of unusual fulfillment, making you want to know more about it—as though you, in hearing, could share something of its excellence.

The point is, this man made it easy to think of yourself in his position, without rhetoric and without intellectual abstraction. And, what is perhaps more important, without self-consciousness or "liberal" compulsion. It ought, of course, to be easy to do this anyhow. But social theory is different from the intangible feelings and involuntary attitudes which develop in a people who have wronged the negroes throughout all the generations they have lived in this country.

At another level, Richard Wright's *Black Boy* gets at the heart of the problem in the same way. Before long, in reading this autobiography, you're on Wright's side, not because he is black, but because of his courage, and because his side is the only side a man who believes in justice can choose.

The problem of human equality finally breaks down to the fundamental question: Are you willing, are you *able*, to put yourself in the position of another man, or another race of men, and face the same life that he faces? Human brotherhood means this, and it means nothing less.

Too often tolerance means only that one ought to try to neutralize his feelings of distrust and dislike toward others. Tolerance can be a virtue that you wear around for a week or so, after seeing *Gentlemen's Agreement*, but brotherhood, as distinguished from tolerance, means that you are as willing to wear the badge of ostracism as the badge of virtue, and not regard yourself as virtuous at all. The trouble with the "tolerance" you learn about at the motion pictures is that it is based on something called the "American Way of Life," which nobody understands very clearly. Tolerance is something you practice for God and country, but brotherhood is what you practice on your own account, whether God and country like it or not.

Brotherhood does not grow from a scientific theory of racial equality, nor from a political manifesto. Biology and politics may help to confirm, but they will never create the brotherhood of man. Brotherhood comes from the capacity to recognize the dignity of man wherever it occurs, and from expecting to find it in every human being. The people who increase the general sense of human dignity accomplish more for the cause of brotherhood than all the ideologists in the world, because they reveal its foundation in spontaneous fact. The secret, as Victor Gollancz said, is to "abandon utterly" the concepts which set human beings apart in the groups of nation and race, and to realize that all these millions are so many "individual human beings like you and me," with precisely the same potentialities. "Until that truth is not merely intellectually grasped but emotionally lived with, a sane solution of the world's problems is impossible."

CHILDREN
. . . and Ourselves

THERE have been numerous helpful definitions of education. Many are familiar with the one associated with Mark Hopkins—a teacher on one end of the log and a pupil on the other." Yet such a definition, however excellent, is primarily designed to suggest the value of an informal attitude on the part of school-teachers. A definition for education within the family relationship needs to be at once more subtle and more basic.

It is possible that definitions of education ought to be formulated according to the age and actual capacity of the child, yet it should be obvious that any successful learning from parents must begin by the child *wanting* to learn from parents, and wanting to learn more than factual information, if we are to concern ourselves with "moral" or character influence. It is also obvious that a child will not want to learn from his parents anything in excess of the casual unless he is privately convinced that the character of the parents contains something worth learning about, and that the parents are trying, as is the child, to learn something more about everything.

As to the first qualification, the child will not be drawn to a thoughtful contemplation of his parents if he feels that they are satisfied with static routines, or hold dogmatic views. Parents must themselves be constantly "aspiring" in order to be a focus for the aspirations of their children, and unless the quality of aspiration is evident in the manner and bearing of parents, they will be to the child uninteresting fixtures rather than interesting features of the home. No matter what the parents' attainments or obvious virtues, such signposts of personal character are not intriguing to the child unless a parent is using them creatively. No static accomplishments are ever fascinating to anyone, nor do they inspire by example. Creativity is the "soul," so to speak, of character, and if this intangible presence has fled, it is as though life has left a human body.

In regard to the second qualification, closely allied with the first, the child must be able to feel that some areas of learning are of mutual interest. Because of his short span of experience, the child is not able to share many of a parents' specialized talents, but if the parent has retained something of youthfulness in his own attitude, he will often be able to take a step the child can not take—that of bridging the gap of years and experience. Perhaps no one should allow himself to leave any past activity completely behind him, but always endeavor to retain something of its presence, as is demonstrably useful to those adults who have had many occupations and lived on many different economic levels, which enables them to retain the direct feeling of understanding for others working at tasks once engaged in by themselves.

While it may sound ridiculous to think of a parent sharing the physical exertion of young children and making something creative for himself out of participation in it, here is an opportunity for a mutually constructive type of enjoyment. Both parent and child may learn that the world of each may not be so remote from the other as daily circumstances would indicate. Nor is this applicable only to boys and fathers. Girls and mothers can also benefit from learning to stand or walk on their hands together! Though the physical activities chosen by boys and girls are typically different, the same psychological equation is involved in the early struggles of both, and varieties of play during the early years are similar.

Too many parents become completely static in regard to the learning of new physical accomplishments, long before their child even comes to an age permitting much conscious thought. And yet the area of physical accomplishment is the first focus for the child's general instinct to achieve self-control. Further, it is when a child begins to concentrate upon acquiring some form of physical proficiency that he discovers that he cannot live entirely by imagination. He must now either discard ideas or prove them in action. just thinking that he is the bravest or the strongest child in the world or the fastest runner will not make him so. He is living at an important psychological crossroads, so important that his successes or failures and the conditions under which they are obtained undoubtedly exert a profound influence on his attitude towards the

solution of later problems. We have before presented the thought that the child's capacity for unlimited imagination is a wondrous and valuable gift—a gift often mislaid by his parents since the time of their own youth. The child exists in a mood of endless adventure, influenced by the spontaneous desire to transcend obstacles, while the parent is inclined to think in terms of *adjustment to* "obstacles." The child lives on the "open road," psychologically speaking, while most parents have come to tether themselves to forms of imagined security. Yet this advantage in spirit and attitude which the child possesses over the average parent will be regrettably temporary if the child is frustrated in physical accomplishment by not knowing how to use his mind for this purpose.

Physical achievements, just as aesthetic, mental and moral ones, require intelligent discipline and, if rightly presented in the process of education, can teach the child that there is no real failure in diligent effort—a postulate easily proved by tangible physical development. The child has a great deal of time to achieve desired physical proficiencies, and if a parent can help him to see that gradual improvement rather than immediate success is the law of human evolution, the child may come to be persistent in mental and moral growth as well as in the training of the body. This help cannot be adequately given unless the parent is willing to prove he thinks the child's physical problem is important by giving his *own* physical problem some of the same purposeful attention he would like to see manifest in his child.

In frontier communities, children did not habitually regard their fathers as physically "old" until long after they had passed the age of fifty. This was because men lived active lives, and a decline in physical prowess came considerably later than at the present time. The most important reason for the feeling of modern children that those who pass the age of twenty-five are somehow "old" is because most people *are* old as soon as they have spent two or three years at an office desk. Any stage of physical decline is unattractive to children, and the decline begins the moment a man or woman fails to sustain any further desire to live to physical capacity.

In a pioneer society, the parent who is hunter or farmer continually searches for ways of improving the technique of his physical efforts. In present life, where physical accomplishments may usually be described in terms of golf and bowling, there is little ground for a natural rapport between the physical exertions of children and parents. Children are interested in discovering their physical capacities in very vigorous fashion. Parents have usually decided what *their* physical capacities are in terms of limitations rather than unexplored potentialities, which creates an unnecessary psychological difference.

While the parent cannot give as much time as a child to exploration of his physical capacities, his superior coordination does not require this and he can desire to "keep up" with the child's sense of growing mastery of new physical abilities by trying to master a few things himself. When there is some "sharing" at this apparently unimportant physical level, the child has an opportunity to learn something of immeasurable benefit from the parent, for the parent will make his physical exertions more organized and deliberately purposeful than the child. Here can be some very practical "teaching by example." When children have no comradeship with adults in "play," they are being deprived of an opportunity to be inspired by an example of integrating thought with physical effort. And in actual fact, the child's capacity for able and logical thinking often first develops or fails to develop in this area.

FRONTIERS
Fields of Life

ANOTHER brave attempt to bring the average man up-to-date on modern physics is currently appearing in *Harper's.* Part I of Lincoln Barnett's "The Universe and Dr. Einstein" (in the April issue) gives promise that the series may excel all previous efforts in this direction, for the writer seems able to convey something of the philosophical implications of recent physical discovery as well as to describe the various stages by which the new physics has replaced the cosmic machine of Galileo and Newton.

The average man assumes that physics undertakes to answer three questions: What is matter? How does it move? Why does it move? Those who would like to acquaint themselves with the technical difficulties involved in these apparently simple inquiries should read Chapter VII of Karl Pearson's *Grammar of Science.* Here, it must suffice to say that a century ago, at least two of the answers would have seemed fairly easy to an educated man of that time. He would have said, first, that matter is the "stuff" of which all things in nature are made, that it has various properties such as hardness, impenetrability, weight, etc., and is measurable in various ways. To the second question, he would have said that matter moves according to the principles of mechanics—that is, as parts of a machine. The third question would have gained either a simple, dogmatic answer such as, God is the prime mover, or the assertion that blind force is back of all motion, making the *why* question meaningless.

Today, the first two answers are quite different. As the *Encyclopedia Britannica* declares, we know—or think we know—that *"it is clear that electricity is the fundamental constituent of all matter,"* And as for the "forces" behind the motions of matter, Mr. Barnett tells us:

> Save for gravitation, all other forces in the material universe—frictional forces, chemical forces which hold atoms together in molecules, cohesive forces which bind larger particles of matter, elastic forces which cause bodies to maintain their shape—are of electromagnetic origin; for all of these involve the interplay of matter, and all matter is composed of atoms which in turn are composed of electrical particles.

Even the gravitational force noted as an exception, Mr. Barnett points out, is closely similar to electromagnetic force, and Dr. Einstein is hard at work on his "unified field theory"—an attempt to unify both gravitation and electromagnetism under a single set of equations. It is no longer possible to illustrate the motions of matter by exhibiting the model of a machine. If you ask a modern physicist how matter moves, he will refer you to mathematical formulas, and will be unable to "represent" what he is talking about in any other way. How, then, can ordinary people hope to regain a sense of familiarity for the concepts of physics?

One without skill in advanced mathematics now suffers the same helplessness that must have overtaken pious believers in Galileo's time, who felt the ground cut away from beneath their feet by the Florentine's daring heliocentric theory. If the earth is not the center of all things, what holds it in place? It took centuries for the non-scientific majority to acquire a sense of satisfactory support in the Newtonian idea of Gravitation, and this was finally accomplished despite the fact that Newton had not really "explained" Gravitation, but had only established a mathematical relation which seemed always to be present in such phenomena as the falling of bodies or the motion of the moon. Gravitation, as a "force," was simply *postulated,* which had the effect, as Lange said years ago, of placing *"mathematical law itself in the rank of physical causes."*

So, instead of God's will, mathematics became the cause of physical motion. And in the twentieth century, as mathematics assumed far greater importance in physical theory, James Jeans was able to agree with the Pythagoreans and Platonists, that "God geometrizes," a perception that began the present-day transformation of

science into philosophy and physics into metaphysics.

The verdict of contemporary physics is that we must seek for the intuition of scientific reality neither in matter nor in the (scientifically) unexplored world of spirit, but in the intermediate world of abstract relationships, the dynamic patterns described by mathematical formulas. For the plain man, this amounts to virtual exile from scientific knowledge, making him dependent upon the pronouncements of specialists who have given many years of their lives to the mastery of mathematical language. There *ought* to be, he feels, some short-cut, some practical symbolism available—like the mechanical models of the old-fashioned world machine—to help him understand the physical universe.

Precise thinkers will doubtless disagree, but we cherish the hope that something of this sort may ultimately develop from the combined fields of physiology and psychology. Some years ago, a happy inspiration suggested to a writer on scientific subjects that for the old planetary conception of the atom, with electrons held on their orbits about the nucleus, it might help to substitute the idea of "thoughts" nestling in a single mind, to represent the new, wave-mechanics version of the association of electrons within the atom. Then, too, modern biology has not been without a parallel evolution of theory in terms of the electrical constitution of life itself. Conceivably, if both matter and life receive their ultimate definition as forms or expressions of electricity, then thought, also, may some day be described as a kind of electrical function, and by this accumulating sense of reality for the modes of electrical phenomena, future generations may learn to appreciate and understand analogies of electrical activity as easily as they now grasp the operations of a machine.

The development of electrical theory in biology has a long history, as exciting, in some respects, as the part it has played in modern physics. A MANAS reader has kindly supplied us with an outline of these investigations, which began in the eighteenth century with Galvani's theory of animal electricity. Carl Mateucci (1811-1868) demonstrated the presence of electrical current "in the muscle of a living animal." These pioneers had many successors, one of whom, A. D. Waller, recorded the first electrocardiograms in 1889. Waller lectured at the University of California in 1909, insisting that electrical responses are indications not only of whether tissues are alive, but even how much "alive" they are. Other investigators include Emil du Bois Reymond (1818-96), who spent most of his life studying electro-physiologic processes, and George Washington Crile, whose *Bipolar Theory of Living Processes* presents electricity as the foundation of all life.

Then, in the 1930's Drs. H. S. Burr, C. T. Lane and Leslie F. Nims, all of Yale, proposed "the existence in the living organism of an electro-dynamic field." This field, according to Dr. Burr, is the "true" architect of the organism. Speaking before the National Academy of Sciences in April, 1939, Dr. Burr presented an electrodynamic theory of life comparable, as he pointed out, to field-theory in physics. Studies made with the help of a sensitive "microvoltmeter" revealed:

> In the growing embryo, the electrical pattern develops hand in hand with the development of the whole organism. All else in the body undergoes constant change; the individual cells of which the body is made, excepting the germ cells, grow old and die, to be replaced by other cells, but the electrical architect remains the only constant throughout life, building new cells and organizing them after the same pattern of the original cells, and thus, in a literal sense, recreating the body. . . . This electric field, having its own pattern, fashions all the protoplasmic clay of life that comes within its sphere of influence after its image, thus personifying itself in the living flesh as the sculptor personifies his idea in stone. . . . The Yale scientists have succeeded in revealing the master architect at work, and even to catch the first outlines of his configuration in space, showing him to be in absolute control of the organism as a whole and of its parts, and at all times correlating the workings of the parts with the whole.

Thus the life sciences are not far behind modern physics, and we may look forward to the day when the field theory of life will be acceptable to everyone, just as field theory in physics has already replaced the "particle" conception of matter.

The real problem of explanation, of course, remains in the question of what is the nature of the cosmic and organic intelligence which, on the one hand, sustains the great field of physical phenomena, and, on the other, operates from behind the scene in the living organism through electrical impulses that seem to govern all vital processes.

A simple answer, such as "the will of God," deserves the description given it by Spinoza—the "asylum of ignorance"—and yet, it is equally difficult to deny either all-pervading or transcendent intelligence in relation to the living world of nature. Bishop Berkeley's conception of a universal mind, shorn of its theological implications, might be of theoretical assistance, although the mechanisms of its operation would have to be understood with particularity before such an idea could have scientific value. In any event, the movement of physics and biology is certainly in this direction, and some philosophical preparedness might be the means of avoiding a vast amount of ambiguity and extravagance, both on the side of eager religious belief and on the side of blind "scientific" denials.