ever were to occur before age 50, the average lifetime would be increased 5½ years, or by only one fourth the gain since the turn of the century. Future progress in longevity will depend largely on the magnitude of the reductions in mortality from the chronic and degenerative diseases.

Children's responses to the nuclear war threat*

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We know that environmental factors, specifically the social environment, play a large role in determining not only attitudes and patterns of behavior, but also the psychological structures that influence the development of character. The nearly universal recognition of a potential or, as many people think, actual threat to the continuity of human civilization and to the integrity of our biological habitat is a change in the social environment which ought to make a difference to the mental content, and thus the psychological experience, of children. On the basis of preliminary observations I have formed the conviction that the profound uncertainty about whether or not mankind has a forseeable future exerts a corrosive and malignant influence upon important developmental processes in normal and well-functioning children, as well as in those who are in any case vulnerable to additional stress due to preexisting psychopathology. In my view, the subtle and pervasive effects of the present social climate upon all children represent a far more serious hazard than the incidence of heightened anxiety and of fear which children share with adults at moments of political crisis. In this paper I shall present some facts and some ideas in support of this conviction.

Before turning to the data, I want to point out that the exploration of the psychological consequences of such a crisis, important as it may be, is a secondary response to the actual threat to survival. If there is a real possibility that nuclear weapons will be used, with disastrous consequences for people everywhere and

for all future generations, a preoccupation with the psychological aspects of the threat is trivial. It is as though people in a house afire were to spend their time reassuring the children instead of putting out the fire. In our role as professionals and in our capacity as citizens, the primary task is social action to forestall a nuclear war and to work toward a livable world. However, I believe that it is possible to combine a primary commitment to necessary social action with an interest in identifying and counteracting malignant psychological aspects of the immediate situation.

There is strong evidence that many children are aware of the existence of nuclear weapons, of political tensions, and of the apprehensions felt by the adults with whom they live. We know less, however, about what this information means to children and about whether or not it makes a significant difference in their lives. Therefore, an informally constituted group of colleagues in New York City, which calls itself The Committee on Children, decided to obtain factual data on children's conscious awareness of the world situation and on their attitudes toward it. Since the spring of 1962, this group has been developing a questionnaire to be administered to large numbers of children in many parts of the country. This article, however, can report only on what was learned from pilot studies.

In these pilot studies we experimented with four different versions of the questionnaire. The study samples were drawn only from the Greater New York area. Data were collected during the summer of 1962, well before the Cuban crisis, and during October and November 1962, and February 1963. Because of the variation in the form of questions and the limitations of sampling, no general conclusions can be drawn from our material, not even about New York City. However, it remains of interest to know what children did say when asked their expectations of the future.

The present report is limited to the responses of 311 children between the ages of 10 and 17 years who were from widely different socioeconomic groups. Over 100 questionnaires were obtained through schools and community centers serving grossly underprivileged areas with large proportions of Puerto Rican and Negro children. Another third of the sample was obtained from schools and camps attended by children of lower-middle and middle-middle socioeconomic groups. And the remaining 100 questionnaires were obtained through private schools, one of them under religious auspices, which serve intellectual, cosmopolitan, upper-middle-class families.

We wanted to find out whether children's spontaneous and overtly conscious expectations in relation to the future are significantly affected by the nuclear danger. We realized that unconscious expectations or fears may be potently at work which might not be reflected in the children's answers, and that children also may not communicate conscious but anxiety-laden thoughts about the future. Nonetheless, conscious and communicable aspects of mental life carry a great deal of weight and are important. The effort was to get children to express their rational expectations about the future and to ask our questions in a way that would not suggest a direct reference to war or to the political situation.

WHAT CHILDREN EXPECT

The kinds of questions we asked were "Think about the world as it may be

about 10 years from now. What are some of the ways in which it may be different from today?" Also: "How would you like it to be different?" And also: "If you had three wishes, what would they be?"

As can be imagined, we obtained fascinating material on children's visions of expanded space and of an automatized world. Interplanetary travel, space stations, trips to the moon, flying cars, machines for all possible purposes (including one, described by an 11-year-old, in which "you push a button and it tells you what you should do that day"), and robots loomed very large. In addition, nearly all the children expressed the universal wish for a long life or immortality, and for lots of money. A great many spoke of miracle cures for fatal diseases, of better living conditions, of an end to racial discrimination, of better education and housing, and of more kindness in the world. Among the underprivileged city children there was a surprisingly strong emphasis on beauty and cleanliness. These children revealed longings for beautiful houses, clean streets, flowers, country life, and contact with animals, as well as urgent concerns about jobs, health, school grades, bicycles, and enough food.

How much room did all of this leave for larger concerns in behalf of the future? Of these 311 children, 218 (or 70 per cent) mentioned the issue of war and peace. In all but a few instances, this was more than a pious wish for world peace. Many of the children wrote of what war would mean, or how and why they thought the world would arrive at peaceful existence, and of the main obstacles to peace.

As one would expect, the under-educated children from marginal social groups were neither as articulate, nor, as a group, as preoccupied with the danger of war, as the middle-class children of comparable ages. With the exception of a small group of 12- and 13-year-olds from a district in New York's Harlem, the most pessimistic children in the samples, the frequency with which the problem of war was discussed was lower among the poor children. Of the underprivileged groups (excluding the Harlem sample), 39 per cent mentioned the possibility of war in speaking of their future. For the lower-middle-class group, the corresponding value was 62 per cent; and for the middle-middle- and upper-middle-class groups, the corresponding values were 77 and 100 per cents.

However, if one turns to what these children have to say about the topic, once they do mention war it turns out that the underprivileged groups are at least as pessimistic as the others. Of those who mention war, 35 per cent considered a destructive war very possible, and some thought it a certainty. A young Puerto Rican wrote: "I think I would be all broken up because of the war which will come. The war destroys New York." Many children perceived a decisive alternative. For example, in discussing what the world would be like in another decade, one 12-year-old wrote: "We may have gone to the moon. We would maybe have a new way of transportation. Maybe we will not even be here 10 years from now. Maybe there will be no such thing as a world. Maybe there will be a world war III. We don't know."

In comparing the responses from the socially deprived groups with those from the middle-class groups, we find that many of the deprived children are so preoccupied by immediate pressing concerns, such as poverty, worry about school grades and jobs, and hostile elements in their immediate situations—such as gangs —that they have less "room" for the contemplation of more remote dangers. Not

world. And people will have to live with the fear of death eventually by the instruments of war."

• An 11-year-old: "In 10 years countries will still be quarreling—larger countries will be preparing bombs to wipe out the world."

• Another 11-year-old: "The people will be living underground and they would have to have a lot of light or I think the children would not be very strong as they are now. But I really hope it will be a lot better than I think it will be."

• A 10-year-old: "There wouldn't be any schools or houses and people would live in the ground. They would be different colors and have long feet and long hands. That's what I think the world will be 10 years from now." In response to the question of how she would like it to be different, this child replied that "it would be peaceful and happy."

The older and well-educated children displayed their pessimism in sophisticated ways:

• A 14-year-old first described medical advances and continued, "yet as far as the world situation is concerned ten-

sion will be much worse." He explained that Red China will have the bomb and will expand, that Russia will be unable to control China, and that the underdeveloped countries will turn to communism. American politics, he thought, would turn more to the right as the world situation worsens, and he concluded that "great powers would continue to pollute the atmosphere with test bombs."

A large proportion of the questionnaire answers obtained from the older, middle-class children, especially those in private schools, turned into essays of this sort which, in totality, touch upon almost every aspect of the war and peace problem. Disarmament, the United Nations, a world federation, the World Court, the economics of conversion to nonmilitary production, the changing balance of power among nations, ideological conflict, moral and religious concerns, and the psychological roots of aggression all were mentioned, and frequently discussed very sensibly.

Also interesting is what these children said and implied about the causes of danger, and about the changes required to make peace possible. Only 11 children (or about 3 per cent) gave evidence of a

mechanism, apparently more common in other groups, of projecting the blame for danger on communism (or on Khrushchev and Castro personally); and even these expressed sympathy with the people in Communist countries, with the hope that they will become free. The vast majority of the children saw the problem of achieving peace as the necessity for nations and people to get along, always including this country in their demand for finding peaceful solutions. The younger children, and many older children from depriving backgrounds, seemed to regard peace as a matter of personal friendliness and intention. A good many children responded in a similar vein as the 10-year-old who wrote: "I wish Russia and Cuba be our friends."

The older and more sophisticated children recognized conflicting interests and the need for legal and military mechanisms to maintain peace. Most of them were critical of the power needs of large countries, often including our own. Here are some examples:

• During the second week of October 1962 (just before the Cuban crisis), an 11-year-old wrote: "I would like Kennedy

and Fidel Castro to become good friends and both countries start to live together and we shouldn't have war—and there will be no more fighting and that we would not have to live underground."

• Another 11-year-old answered the question "Is there anything that can be done to keep the bad things from happening?" with "Yes, by making friends with other countries, that's why we have United Nations."

• A 14-year-old: "I would like to see the 'big 5' sit down and discuss the world situation with good results . . . and we could all live with no threats of bombs hanging about our heads."

• A 13-year-old said he would like new leaders and "a peace organization better than the U.N." "If East and West cooperated," he continued, "medicine and space science would improve and warfare would fall into the past."

• A 14-year-old: "I would like to see the U.S. and U.S.S.R. friendly and all their scientists working together for the good of mankind."

All of the foregoing quotations about cooperation come from public school children. The private school youngsters, generally more sophisticated, expressed the same sentiments but were far more knowledgeable about problems of disarmament, negotiation, peace movements, and the economic sources of conflict.

SOME IMPLICATIONS

It is tempting to continue with the questionnaire material, for as one reads dozens and hundreds of these answers, one accumulates a powerful impression of troubled and wistfully hopeful children. The question "How would you like it to be different?" particularly seemed to invite the indirect expression of fears and dissatisfactions. It is in response to this that children expressed their hopes that there would be no more fear of bombs and radiation, that people might not be hurt, that there would be less fighting, less poverty, better treatment of Negroes, and so forth.

However, a few things must be said about the implications of these expressions in relation to the development of children. Developmental psychology has begun to make explicit some of the ways in which children internalize and make part of themselves what they learn from adult models. We think that certain patterns of adaptation characterize each major developmental stage. And by the same token, we think that each phase of development is especially vulnerable or sensitive to particular aspects of the outer world.

For the school-age and adolescent stages, to which this discussion is limited, the central developmental processes revolve around the mechanism of identification and the establishment of personal identity—related but not interchangeable concepts. Identification is a dominant mode of middle childhood, whereas identity formation is the integration and synthesis of all past identifications into a cohesive sense of self and of one's place in the scheme of things. As Erik Erikson has pointed out, much of adolescent development can be understood as the struggle to achieve a sense of personal identity.[1] I believe that a consciousness of nuclear danger necessarily weakens and impedes the most useful and constructive processes of identification in school-age children and that it tends to distort normal processes of identity formation in adolescents.

Granted, patterns of family living as well as the broader social scene have always contained disruptive elements. Long before nuclear weapons were ever dreamed of, both constructive identifications and an acceptable identity were hard to come by—the psychiatric clinics, the hospitals, the schools, and the courts are witnesses to the many many failures of development which our society has produced. My hypothesis is merely that the changes in the social milieu and within individuals that occur in the wake of the nuclear crisis are of such a kind as to make still more difficult developmental progress in these two areas.

To be specific, though necessarily schematic: School-age children are profoundly aware of their status as children. This status means to them not only that they are as yet dependent and unable to compete with adults, but also that they are in the process of growing and of learning to become adult. Their image of what there is to be learned, of what it means to be an adult, of the attitudes, skills, and attributes of successful living all come from what they see and sense in their elders. As we know to our cost, they identify not only with that which makes a powerful positive impression—courage, lovingness, skill, and learning—but also with painful and hateful components in the personality of those who loom large in their lives. The sons of ineffective fathers may desperately strive for strength and masculinity, and seize upon teachers, public heroes, or any other models as identification figures. Yet, at the same time, they may come to feel unconsciously that in becoming a man and a father, they are doomed to become as weak and ineffective as their own fathers. In short, those identifications that have adaptive value and that are strengthening to the child are derived from models who actually possess useful virtues and successful kinds of competence.

Following is an oversimplified version of what can happen to children's identification figures as a result of the nuclear threat:

Children know that an overwhelming danger exists. They also see that parents, teachers, in fact all adults, feel inadequate to cope with this danger. Even the most affirmative supporter of action for peace cannot assure children of his complete confidence in a livable future. This is an unalterable fact, as long as nuclear weapons exist.

Most children also see in their elders most of the time evasion or lethargy based on underlying fear and fatalism—and children are known to be sensitive to underlying feelings and to unconscious defenses that operate within adults. Other children see helpless anxiety and manifest despair in adults who have become keenly concerned. Only rarely can children see a resolute facing of the problem, clear-cut convictions, and deliberate action even without assurance of success. And many children who do observe a firm stand in their elders are given a demonstration of hatred and scapegoating as the only solution. To judge by some newspapers and public utterances, the way to stay alive is to trust no one and to destroy your opponents before they can destroy you.

These are far from optimal patterns of identification. While they may serve as a protection against anxiety on one level, they generate anxiety on another. For surely the image of the world they suggest, and of how to survive in it, is ugly and uninviting.

EFFECTS ON ADOLESCENTS

Following is an equally oversimplified formulation of the adolescent struggle for identity:

Adolescents must attempt to reconcile strong impulses from within, with all they have learned about themselves, about reality, and about the larger social framework in which they live. Inevitably, their better acquaintance with the adult community, with adult values, and adult traditions leads to disappointment and rebellious criticism. However personal and immature the reasons for adolescent scorn may be, young people have a keen eye for the shortcomings and inconsistencies of adult society. The hypocrisy and selfishness and emptiness of which adolescents have complained since time immemorial really exist. And if it were not for young people, and for those who in their youth acquire enduring altruistic attitudes, society would lack a most important impetus for progress.

Under ordinary circumstances, adolescents become young adults and achieve a more objective perspective largely in response to the realistic opportunities for the satisfying experience which society offers. There *are* opportunities for learning and teaching; scientific advances *are* exciting; happy relationships among people *are* possible; there *are* jobs, potential sexual partners, and opportunities of many kinds. It is not required that these satisfactions be guaranteed. Young people come to terms with the adult world as long as it holds out a reasonable promise for fulfillment in some spheres of living. Adolescent growth is largely a matter of the pull exerted by the prospect of maturity, pitted against remaining needs for dependency and the security of childhood.

But if there is no future to look forward to, or if it seems chiefly disastrous, where is the pull for maturity to come from? The responses to our questionnaire leave little room for doubt that recognition of the threat to survival is of vital moment to children at this critical stage of development. And what I have already said about identification figures for middle childhood can also be said about the adult value systems exhibited to adolescents. Adolescents today can find more than ordinary cause for profound distrust of adult standards of thought and behavior. It is as though the wildest adolescent fantasies of adult insufficiency had suddenly come true. For they feel that it is we adults who brought things to such a pass, and who are not about to better them.

Elsewhere I have discussed another adolescent reaction to the world crisis, which has also occurred.[2] It consists of an alliance between young people and those elements of adult society that do assume an active and consistent stand in relation to the issues of peace and of human betterment. The formation of personal identity can, under some conditions, find its focus in this issue.

Our study presents no conclusions, but the alternatives that emerge were well expressed by two of our young respondents. One of them laconically replied to the question about what the world would be like 10 years from now: "We be dead." The other, an adolescent, gave as his first and foremost wish: "Valid reasons to believe in future progress, not regress and destruction for myself and the world."

Let us listen to the children.

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