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I speak to you today not about a glorious revolution in the past, like the one that is being celebrated all year long with such éclat in this magical city, but about two revolutions in our own day. The term "glorious" can hardly be applied to either. Indeed, it is my hope to enlist you in the ranks of a counterrevolution against the first revolution in the name of the second.

Let me explain. To set the scene: the first revolution is taking place in society; the second is a revolution in science. The counterrevolution involves both. Now on to particulars.

Although profound in its effects, the first revolution has been slow and subtle in its process. There was no storming of the Bastille, no "shot heard round the world" at Concord Bridge, no cannon fire from the cruiser Aurora. But there have been casualties in the hundreds of thousands. And more to come, unless we take to mind, to heart, and—above all—to concerted action, the lessons of the second, the scientific revolution.

What are the two revolutions whereof I speak? Albeit taking place in different domains, both have to do with the same phenomenon—the dramatic changes that have been taking place in family life across the world, and the consequences of these changes for the development of human competence and character, both in present and in future generations. It is these consequences that are being illumined by research conducted over the past two decades in my field—the study of human development. It is the comparatively recent body of research in this domain that I have referred to as a scientific revolution.

To speak first of the changes that have been taking place in contemporary family life. These are better documented for industrial nations, but they are no less and indeed perhaps even more profound in developing countries. The universality of this phenomenon was pointedly brought home at a UNESCO Conference on "The Child and the Family in a Changing World," held 7 years ago in Munich. A small initial working group on this same topic had been conducted in Austin, Texas now a decade ago. Clearly, UNESCO had early recognized the scope and significance of the social revolution.

This paper is based on the Invited address, UNESCO, Paris, September 7, 1989.
Request for reprints should be addressed to Urie Bronfenbrenner, Professor of Human Development and Family Studies and of Psychology (Emeritus), Cornell University, Ithaca, N.Y., USA.
Like this week's event, both of these meetings had been organized under the insightful leadership of Wolfgang Schwendler. Then as now, there were representatives attending from both the developing and the so-called developed countries. At the second meeting, which was larger, it had been planned that, after the initial plenary session, we would break up into two separate groups, one for the industrialized nations and the other for the Third World. The underlying assumption, of course, was that the problems and solutions would be so different as to require separate consideration.

But it didn't turn out that way. The group never separated. By the end of the plenary session, we came to realize that, while differing in their appearance, the underlying dynamics and ultimate effects of family change were strikingly similar around the globe. To quote from my notes of a summary statement I presented on that occasion: "We have learned that the stresses being experienced today by families in both worlds have common roots and call for common strategies grounded in the basic requirements for survival and growth of all human beings in all human ecologies." My summary statement then went on to document what was then known from research about the nature of these common needs, problems, and imperatives, and their possible implications for policy and practice.

Today, seven years later, we know appreciably more about these matters, but the gain also entails an unwelcome paradox. It appears that the more we learn about the conditions that undergird and foster the development of human competence and character, the more we see these same conditions being eroded and destroyed in contemporary societies, both developing and developed.

Given this state of affairs, my presentation has three aims. First, I shall try to summarize the main findings of the scientific revolution that has taken place in the study of human development. Because these findings have thus far appeared mainly in technical publications, they are not readily accessible, let alone comprehensible, to persons outside the field. My initial task, therefore, requires that I first translate the results into plain English (so that they can, in turn, be translated by UNESCO's superb interpreters into always elegant French).

To be sure, it is somewhat risky for developmental researchers to have their findings restated in everyday language, for, once shorn of technical gobbledegook, the results often turn out to be merely what many of us have already learned from our own life experience. Given the specialized interests and qualifications of my audience, such an experience of *déjà vu* and, worse yet *déjà su*, is highly likely, particularly for those of you who have lived and worked directly with children and families. Nevertheless, I believe I can promise you some surprises.

Once the results of the scientific revolution are before us, I shall turn to my second task; namely, to indicate what the new research findings imply with respect to the consequences for human development of the changes that have been taking place in contemporary family life.

Third, and last, I shall address a question that is of particular moment to UNESCO, and, indeed, to every nation in today's world namely, in the light of the widespread changes taking place in family life around the globe and the knowledge we are acquiring about their consequences, what are the practical implications for policy and action
on the part of international and national agencies and organizations, both public and private?

To turn, then to the first issue: What are the conditions and processes that undergird and foster the development of human competence and character from early childhood onward? I speak here of requirements that appear to be universal, deriving from the basic biological nature of species Homo sapiens, thus cutting across culture, nationality, and class.

Note the qualifying phrase "appear to be." The findings of science are tentative by definition. Moreove, in my view, the results of research in this particular sphere should be subject to validation by human experience. For this reason, I confine myself to those findings from systematic studies that also have some support from the observations of professionals and paraprofessionals working in the field, as well as from families themselves. I begin with those facts that are most clearly established from both perspectives.

It is clear, that first and foremost, all children require good health care and adequate nutrition. Because millions of children in today's world lack these essentials, many outstanding organizations and agencies have dedicated themselves to meeting these primary needs.

There can be no question of the urgent necessity of assigning top priority to this task. Indeed, recent research only underscores its importance. At the same time, however, what the new findings do call into question is a policy that makes the provision of health and nutrition its top and only priority. Such a policy would seem to assume that, once these basic necessities are made available, nothing else is of comparable importance, and the achievement of at least normal development for the great majority of young children is, by and large, a likely outcome.

By contrast, what the scientific investigations of the past two decades reveal is that basic medical services and adequate diet, while essential, are not enough by themselves to insure normal physical and psychological development, particular for children of families who have been exposed to biological, economic, and social stress. Beyond health care and nutrition, certain other essential requirements must also be met.

Recently, this general issue was taken as the focus of a special UNICEF seminar conducted last June at the International Child Development Centre in Florence. The seminar brought together field staff from throughout the developing world. The key point is nicely summarized in the following passage from a preliminary report of the seminar:

It has long been accepted that good health and nutrition support the psychological and social development of the young child. Less widely recognized are the more recent findings that developmentally sensitives interaction with a child, namely interaction which satisfies the child's need to grow socially, psychologically, and cognitively, has a direct and measurable impact on the physical

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1 For a recent assessment of the nature and scope of the problem on a world-wide basis see: Strategies for Children in the 1990s. (1989). New York: UNICEF.
health of the child. While the implications of these interaction effects are of considerable importance for the health and well-being of children, they have been seriously neglected in development planning.²

Although "developmentally sensitive interaction" does lie at the heart of the matter, it is not the whole scientific story. Nor is it easy to convey the full scope of that story in a necessarily brief presentation. I shall try to do so in a series of five propositions, each followed by some further explication, and one or more examples.³

Here is Proposition I.

Proposition I

In order to develop—intellectually, emotionally, socially, and morally—a child requires, for all of them, the same thing: participation in progressively more complex reciprocal activity, on a regular basis over an extended period in the child's life, with one or more other persons with whom the child develops a strong, mutual, irrational emotional attachment, and who is committed to the child's well-being and development, preferably for life.

Although the proposition has the merit of being fairly compact, it is also rather complex. We therefore do well to examine its key elements one by one.

I suspect that it is the reference to "an irrational emotional attachment" that some of you would like to have discussed, or—perhaps preferably—simply deleted as unscientific and unnecessary. I am prepared to defend its retention on both counts, but to do so requires a prior consideration of the preceding elements in the proposition. So let's begin at the beginning.

What is meant by "progressively more complex reciprocal activity"? Perhaps an analogy will help. It's what happens in a ping-pong game between two players as the game gets going. As the partners become familiar with each other, they adapt to each other's style. The game starts to go faster, and the shots in both directions tend to become more complicated, as each player, in effect, challenges the other—what in poker is called "raising the ante."

And who is "raising the ante" most—the child or the adult? The research evidence indicates that, in the beginning it is the infant who is calling most of the shots, who is, so to speak, "teaching" the parents, or other caregivers.

Almost all adult human beings have been shown to be very adept learners in this situation, males no less than females—provided, of course, that they are willing and able to pay attention to the teacher, and go to school almost every day for quite a long time. And there's the rub! For in contemporary societies, it is becoming increasingly difficult to maintain regular attendance and the high level of alertness that learning requires. In short, while virtually everyone has the needed aptitudes, the learning proc-


³ The research on which these propositions are based is summarized and cited in a series of scientific reviews by the author included in the reference section at the end of the article.
ess is not easy. Indeed, microphotographic studies of parent-infant interaction reveal it to be extraordinarily and increasingly complex as the process evolves.

This increasing complexity is brought about in two ways. Not only does the same game become more complicated, but new games are added—by both parties. This phenomenon is seen especially clearly in early childhood. For example, a longitudinal study in which children were followed from birth through the eighth year of life, revealed a progressive sequence in the young child's responsiveness and initiatives toward others. Thus at birth infants are especially responsive to vestibular stimulation (being picked up and held in a vertical position close to the body), which has the effect of soothing the baby so that it begins to engage in mutual gazing. By three months, visual exploration extends beyond proximal objects, and it is the mother's voice that is most likely to elicit responses especially in the form of reciprocal vocalizations. From about six months on, the infant begins actively to manipulate objects spontaneously in a purposeful way and to rearrange the physical environment. By now, both vocalization and gesture are being used to attract the parents' attention and to influence their behavior. In addition, there is a growing readiness, across modalities, to initiate and sustain reciprocal interaction with a widening circle of persons in the child's immediate environment. The sequence reaches a new climax with the emergence of language as a medium of social interchange. By the age of two or three, it is the informal play between child and adult that becomes a major vehicle of cognitive, emotional, and social development.

Crucial to the establishment and maintenance of this progressive trajectory is the ready responsiveness by a familiar adult to the young child's initiatives, as well as introduction by the adult of activity-engaging objects and experiences that are appropriate to the youngster's evolving capacities. In the absence of such adult responsiveness and presentation of opportunities, general psychological development is retarded, particularly for children who have been exposed to biological, economic, or social stress.

By now it should be clear that what is made possible by "progressively more complex reciprocal interaction" is a process of mutual "education"; the child is "teaching" the adult, and the adult is "teaching" the child. There is an all-important caveat here, however, signalled by the quotation marks I have placed around each of these traditional pedagogical terms. For the kind of teaching that takes place in this context is quintessentially informal, and even unconscious. The young child is not "trying to teach" the caregiver to respond in a particular way; he or she is simply expressing an evolving repertoire of behavioral initiatives and reactions. Nor can the adult caregiver foresee what the young child will do and thus plan in advance how he or she will respond to the young child's actions. The most the adult can do is to be ready and willing to react, and to do something that will attract or hold the child's attention.

In sum, we are not dealing here with education in its traditional meaning of f
duction is particularly characteristic of English. In number of other languages, a broader construct exists that encompasses both formal and informal aspects of child rearing; for example, "éducation" in French, "Erziehung" in German, "vospitaniye" in Russian.
mal instruction. The point is to be borne in mind when we discuss the design of pol-
icies and programs for enhancing child development.

Moreover, as I have already noted, informal education is no less demanding than
its formal counterpart; it too takes a long time. Neither the young child nor an adult
caregiver can learn much from each other if they get together only now and then for
short periods with frequent interruptions. Hence, the specification, as a second key
element in Proposition I, of joint activity "on a regular basis over an extended period
in the child's life"

Thus far, it would appear that any person who repeatedly engages in progressive-
ly complex reciprocal activity with a child will be equally effective in furthering the
child's physical and psychological development. The final clause of Proposition I, how-
ever, imposes some restrictions in that regard; specifically, the person must be some-
one with whom the child develops a strong, mutual, irrational emotional attachment,
and who is committed to the child's well-being and development, preferably for life.

What do I mean by "an irrational emotional attachment?" There is a simple
answer: "Somebody's got to be crazy about that kid, and vice versa!" But what does
"crazy" mean? It means that the adult in question regards this particular child as
somehow special—especially wonderful, especially precious, even though objectively the
adult may well know that this is not the case. It is the illusion that comes with love—
an illusion that flows in both directions. For the child, the adult is also special—some-
one to whom the child turns most readily in trouble and in joy, and whose comings and
goings are central to the child's experience and well-being.

What is the relevance of such a mutual emotional relationship for processes of
"progressively more complex reciprocal interaction" between child and adult? The
research evidence indicates that such interaction requires high levels of motivation,
attentiveness, sensitivity, and persistence on the part of both participants, and that
these requisite qualities are more apt to arise, and to be sustained, in relationships char-
acterized by strong mutual emotional attachment.

Moreover, once such a strong mutual attachment is established, it tends to
endure for a long time, thus enhancing the likelihood of a continuing pattern of recipro-
cal interactions at successively more complex levels through the child's life. There is
also a reciprocal relationship between the two parts of Proposition I. Thus one reason
why mutual attachments tend to endure for a long time is that the recurring patterns of
reciprocal interactions that they encourage in turn enhance the intensity of the mutual
emotional tie.

In sum, it can be said that human development takes place in the context of an
escalating psychological ping-pong game between two people who are crazy about each
other.

As already implied in the preceding exposition, once the processes stipulated in
this first proposition become established, they activate and enhance additional potentials
for development. Prominent among these are responsive and active orientations not
just toward persons but toward certain other features of the child's immediate environ-
ment. One of the earliest and strongest potentials to become activated in this way is
the subject of the next proposition.
Proposition II

The establishment of patterns of progressive interpersonal interaction under conditions of strong mutual attachment enhances the young child's responsiveness to other features of the immediate physical, social, and—in due course—symbolic environment that invite exploration, manipulation, elaboration, and imagination. Such activities, in turn, also accelerate the child's psychological growth.

For young children today, how available are objects and settings that meet the developmental criteria set forth in Proposition II? Consider, from this perspective, the wide array of manufactured toys, games, and play equipment produced in modern technological societies; to name a few: battery-powered play vehicles; automated figures of animal, humans, and monsters galore; playgrounds with special equipment for children of different ages; in the same vein, graduated series of puzzles, construction sets, and board games; and, of course nowadays, all manner of audiovisual devices and computer games offered as appropriate for successive age levels. Many of these products are quite expensive. Moreover, upon examination, many hardly fulfill the requirements stipulated in Proposition II; specifically, they do not invite exploration, manipulation, elaboration, or imaginative activity on the part of the child. They fail primarily because they are so rigidly structured as to allow little opportunity for introducing any spontaneous variation. To be sure, many products of modern technology do meet the criteria stipulated in Proposition II, or can be designed to do so, and it is these that should be made praised and recommended to parents, professionals, and the public at large.

Objects and settings that do meet the specified developmental criteria are by no means limited to products of modern technology. Thus they are as readily found in traditional and transitional cultures as in the so-called "post-industrial" societies. To cite a few examples: objects, in nature,—both animate and inanimate, large and small—like domestic animals, stones and shells, trees and caves; objects that can be put inside one another, or used to build things (and tear them down again); anything that can make rhythmic and musical sounds, such as pots, pans, and soupspoons; materials that can be used to draw, paint or mold shapes and forms. More broadly, whatever induces sustained attention and evolving activity of body and mind, such as songs, dances, stories, dolls and stuffed animals that become friends, picture books, and—of course—real books that can be read and then newly re-imagined, and retold on one's own.

But some children may not respond, even when provided with a wide range of objects and opportunities for activity. One obvious prerequisite is that the environment must include materials that are appropriate to the child's developing physical and psychological capacities. In addition, we have also seen that the youngster's active orientation toward the physical and symbolic environment is powerfully mediated by prior and persistent patterns of interpersonal interaction in the context of a strong, enduring emotional relationship with one or more adults, almost always including the child's parents. These ongoing experiences remain a potent liberating and energizing force.
not only in relation to the physical environment but to the social world as well. Thus they enable the child to relate to other persons beyond the immediate family—including peers as well as other adults—and to involve them effectively in meeting the child's own developmental needs. At a broader level, the child's newly acquired abilities make it possible for her or him to benefit from experiences in other settings, most notably to learn in school.

In short, the informal education that takes place in the family is not merely a pleasant prelude but a powerful prerequisite for success in formal education from the primary grades onward. This empowering impact reaches further still, for, as evidenced in longitudinal studies, it appears to provide a basis—but offer no guarantee—for the subsequent development of the capacity to function responsively and creatively as an adult in the realms of work, family life, and citizenship.

This does not mean, however, that the absence of early opportunities for interactive experiences in the context of a mutual emotional attachment precludes the possibility of later achieving adult effectiveness. As I stated earlier, there are other routes to the acquisition of competence and character. The problem is that they are much less efficient, and much more expensive both in time and money.

In sum, taken as a whole, the research evidence indicates that, when the elements stipulated in the first two propositions are provided on a continuing basis, the positive effects on children's development are indeed substantial. Accordingly, a society that seeks the well-being and development of its children, is well-advised to provide them with the kinds of environments and experiences specified in these two propositions.

But there is a catch. The research findings also reveal that the developmentally-fostering processes of interaction between child and environment described in Propositions I and II operate efficiently only under certain conditions existing in the broader environment in which these proximal processes occur. The remaining three propositions deal with the nature of these enabling and disabling circumstances. Thus the next proposition sets a qualifying proviso to Proposition I.

**Proposition III**

The establishment and maintenance of patterns of progressively more complex interaction and emotional attachment between caregiver and child depend in substantial degree on the availability and involvement of another adult, a third party who assists, encourages, spells off, gives status to and expresses admiration and affection for the person caring for and engaging in joint activity with the child.

It also helps, but it is not absolutely essential, if the third party is of the opposite sex from that of the person dealing with the child. Isn't science wonderful! We've rediscovered the wheel!

The research evidence in support of this proposition comes mainly from studies of a phenomenon that constitutes one of the main changes taking place in contemporary family life—the rapid rise in the proportion of single-parent households in both the
developed and developing world. The overwhelming majority of such homes are those in which the father is absent and the mother bears full responsibility for the upbringing of the child. A large number of investigations of developmental processes and outcomes in families of this kind have now been conducted across a range of cultural and social class groups, including socialist countries and some developing nations as well. In general, the findings lead to two complementary conclusions. First, the results indicate that children growing up in such households are at greater risk for experiencing a variety of behavioral and educational problems, including extremes of hyperactivity or withdrawal, lack of attentiveness in the classroom, difficulty in deferring gratification, impaired academic achievement, school misbehavior, absenteeism, involving in socially-alienated peer groups, and—especially the so-called "teen-age syndrome" of behaviors that tend to hang together—smoking, drinking, early and frequent sexual experience, a cynical attitude toward work, adolescent pregnancy, and, in the more extreme cases, drugs, suicide, vandalism, violence, and criminal acts. Most of these effects are much more pronounced for boys than for girls.

More intensive investigations of these phenomena have identified as a common predisposing factor for the emergence of such problem behavior; namely, a history of impaired parent-child interaction and relationships beginning in early childhood.

Not all single-parent families, however, exhibit these disturbed relationships and their disruptive effects on development. Systematic studies of the exceptions have identified what may be described as a general "immunizing" factor: children of single-parent mothers are less likely to experience developmental problems in those families in which the mother experiences strong support from other adults living in the home, or from nearby relatives, friends, or neighbors, members of religious groups, and, when available, staff members of family support and child care programs. Interestingly enough, the most effective agent of "third party" support (in the minority of instances in which such assistance is provided) appears to be the child's father. And what counted most was not the attention given to the child, important as this was, but the assistance provided to the mother herself by serving as a back-up in times of crisis, doing errands, spelling her off, sharing responsibility for discipline, and providing needed advice and encouragement. It would seem that, in the family dance, "it takes three to tango."

The developmental risks associated with a one-parent family structure are relatively small, however, in comparison with those involved in two other types of environmental context. The first, and most destructive of these is poverty. Because many single-parent families are also poor, this places them and their children in double jeopardy. But even when two parents are present, research in both developed and developing countries reveals that in households living under stressful economic and social conditions processes of parent-child interaction and environmentally-oriented child activity are more difficult to initiate and to sustain. Much more effort and perseverance on the part of parents is required to achieve the same effect than in families living under more favorable circumstances, particularly when, as is often the case, the mother is the only parent or even the only adult in the home.

To be sure, research also indicates that when the mother, or some other adult
committed to the child's well-being, does manage to establish and maintain a pattern of progressive reciprocal interaction, the typically disruptive impact of poverty on development is significantly reduced. But the proportion of parents who, despite their stressful life circumstances, are able to provide quality care is, under present conditions, not very large. And even for this minority the parent's buffering power begins to decline sharply by the time children are five or six years old, and are being exposed to other impoverished and disruptive settings outside the home.

What is the impact of poverty on children's development? The answer to this question has already been given, for the consequences are similar to those for single parenthood in the absence of a third party, but the risks are substantially higher and the effects more pronounced, typically persisting well into adulthood (except in those as-yet infrequent instances in which opportunities for continuing rehabilitative experiences become available).

It is not only the poor, however, for whom developmental processes are now at risk. In today's world, the well-educated and the well-to-do are no longer protected; over the past two decades other highly vulnerable contexts have evolved that cut across the domains of class and culture. Recent studies reveal that a major disruptive factor in the lives of families and their children is the increasing instability, inconsistency, and hecticness of daily family life. This growing trend is found in both developed and developing countries, but has somewhat different origins in these two worlds. Yet the debilitating effect on child rearing processes and outcomes is much the same. I begin with examples from the so-called post-industrial world, since they may be more familiar.

At the UNESCO seminar mentioned earlier, I offered a description based on observations of the American scene. Here are some excerpts from my notes for that occasion.

In a world in which both parents usually have to work, often at a considerable distance from home, every family member, through the waking hours from morning till night, is "on the run." The need to coordinate conflicting demands of job and child care, often involving varied arrangements that shift from day to day, can produce a situation in which everyone has to be transported several times a day in different directions, usually at the same time—a state of affairs that prompted a foreign colleague to comment: "It seems to me that in your country, most children are being brought up in moving vehicles."

Other factors contributing to the disruption of daily family life include long "commutes" to and back from work; jobs that require one or the other parent to be away for extended periods of time; the frequent changes in employment; the associated moves for the whole family or those that leave the rest of the family behind waiting till the school term ends, or adequate housing can be found; and last but far from least, the increasing number of divorces, remarriages, and re-divorces. (Incidentally, the most recent evidence suggests that the disruptive effects of remarriage on children may be even greater than those of divorce.)
A parallel disorganization of family life in third-world countries has been reported in a number of field studies, but was perhaps best described by participants from the developing world at the 1982 UNESCO seminar. These colleagues spoke of the breakdown of family traditions and of the reinforcing role of tribal customs and community life through the disruptive inroads of Westernization and urbanization.

The nature of the developmental outcomes of family hecticness? Once again, the observed consequences are educational impairment and behavior problems, including long-term effects that now also encompass children of the well-educated and the well-to-do.

It is obvious that to deal with such deeply-rooted societal phenomena as poverty and the hectic pace of daily life will require nothing short of a restructuring of the social order. Nevertheless, the destructive impact of both these forces on the competence and character of future generations is so enormous that their elimination must be given the highest priority at the national and international level, a point to which I return in my concluding remarks.

But such an undertaking is a long-term endeavor, and children can't wait. There are some immediate and practicable short-term strategies that can reduce the social disarray and human damage produced by both destructive forces. The general nature of these strategies is indicated in the next proposition.

Proposition IV

The effective functioning of child rearing processes in the family and other child settings requires: establishing ongoing patterns of exchange of information, two-way communication, mutual accommodation, and mutual trust between the principal settings in which children and their parents live their lives. In contemporary societies, these settings are the home, child care programs, the school, and the parents' place of work.

Why, you may ask, the parents' workplace? The answer from research is that today one of the principal sources of stress and disarray in the lives of families and their children lies in the conflict between the needs of the family and the demands of the job.

There is an interesting observation in this regard. In whose job does stress have the greater disruptive effect on the child—the mother's or the father's? The answer may appear counter-intuitive—the available evidence points to the father. Why? The most apt response to this question was given by distinguished American sociologist, Robin M. Williams. Commenting upon this differential effect of stress on the job, he pointed out: "It's because the mothers absorb it all, and the fathers don't even know that there's anything to be absorbed."

Practically speaking, what kind of mutual accommodations can be made between the two domains of family and work? Particular policies and measures will of course differ from one society to the next, but here are a few examples:
—Flexible work schedules
—Availability of part-time jobs (for both men and women) without loss of job benefits and opportunities for advancement.
—Establishment at each work organization of a Family Resources Office or Specialist that
  (1) serves as an ombudsman in relation to family-work issues;
  (2) maintains a file of nontechnical publications and resource materials relating to child development and parenthood;
  (3) provides referral to family services available in the community.
  (4) serves as a stimulus and resource for introducing cost-effective policies and practices in the workplace that can reduce unnecessary stress resulting from the conflicting demands of work and family life, with due regard to the primary need of the work setting to fulfill its productive and service responsibilities.

What is the *quid pro quo*? Studies indicate that such measures reduce absenteeism, and job turnover, and lead to improved employee morale and quality of performance.

The fifth and final proposition lays out the principal directions to be pursued in policies and practices aimed at enhancing child development and family life in contemporary societies.

*Proposition V*

The effective functioning of child rearing processes in the family and other child settings requires: public policies and practices that provide place, time, stability, status, recognition, belief systems, customs, and actions in support of child rearing activities not only on the part of parents, caregivers, teachers and other professional personnel, but also relatives, friends, neighbors, coworkers, communities, and the major economic, social and political institutions of the entire society.\(^5\)

With the statement of Proposition V, I complete my effort to convey the general findings of recent research on factors affecting early child development as they relate to the revolution in family life that has been taking place around the globe. In order to link research to reality, the implications of these findings for policy and practice have been incorporated into the presentation of the five propositions summarizing the principal conclusions indicated by the scientific evidence. These implications deal with priority principles and processes applicable at successive levels, beginning the child in the family and in other care settings, and then proceeding to more distant contexts of the workplace, the community and the society at large.

But one obligation remains. I have yet to address implications for policy and

\(^5\) Examples of policies and practices of this kind appear in publications listed in the reference section at the end of this article.
action on the part of international agencies and organizations, with specific reference to UNESCO.

What can UNESCO do? The first step to action, in my view, is education, or, to put it more diplomatically, the dissemination of information—making known what research and experience have taught us, not only about the awesome nature, scope, and consequences of the forces that now threaten the well-being and development of children world-wide, but, more importantly, about the existence and actual operation in many places around the globe of successful counter-strategies that can be implemented on a broad scale at comparatively low cost.

The first and primary target of this information effort should be persons holding high leadership positions both in government and in the private sector. To the greatest extent possible, this information should be initially conveyed not through printed reports but in face-to-face meetings of leaders with senior UNESCO personnel and appropriate resource specialists.

These more private meetings would then be followed by a special dissemination effort designed to reach all levels of the world's population via all available mass media.

The content of both types of communication would be based on the materials assembled and interpreted through the continuing work of the UNESCO conferences and projects being devoted to this topic. In this regard, I trust I am not speaking out of turn in hailing your initiation of a new major effort putting together all of the relevant resources of UNESCO in behalf of the world's children and their families. I refer to the inclusion in the next six-year medium-term plan of an intersectoral project on "The Young Child in its Family Environment." The project provides an excellent context for the dissemination effort I have just described.

There are now new grounds for believing that such a major undertaking could have considerable impact. The new element in the picture is the increasing recognition and concern on the part of national leaders world-wide with respect to two rapidly escalating economic problems. The first is the enormous cost of providing for, or—alternatively and more frequently—neglecting the growing segments in national populations of so-called "uneducables" and "unemployables." The second relates to the quality and dependability of the available work force in an age of increasing economic competition not only among developed but also developing nations.

But this is neither the preferred nor the most potent dynamic that will bring success to the effort. The most powerful force is the new hope to families and nations across the world of seeing children seemingly fated to a life of failure and pain bloom into competent and caring human beings.

In conclusion, in behalf of my colleagues, I should like to express special appreciation to UNESCO—a kind of haven in a still-heartless world that, over the years, has given those who work with children and families around the globe the encouragement and the opportunity to share experiences and mutual support, and to build workable plans and programs for achieving a more human world for future generations.
REFERENCES

I. Research Reviews


II. Policies and Programs


