

East Side, West Side: Growing Up in Manhattan

The Family Research Project, a ten-year follow-up study of parents and children in New York, identifies factors that predict childhood behavior

BY ROBERT J. TROTTER

Psychologists and social scientists are often accused of "proving the obvious" as if that were a great waste of time and money. But take a simple statement like: Spare the rod and spoil the child. This aphorism sums up a whole theory of child rearing that is obvious to a great many people. On the other hand, the opposite is also true to many people who say: Spare the rod and *save* the child.

With such diverse points of view being obvious to so many people, it becomes even more obvious that some solid facts on child rearing practices are needed. One large-scale study that may provide such data is the Family Research Project. It was described last month in New York at the meeting of the Kittay Scientific Foundation (SN: 4/10/76, p. 232) by principal investigator Thomas S. Langner. Co-authors of the report were Joanne C. Gersten and Jeanne G. Eisenberg, all of Columbia University's School of Public Health.

The project, including planning, has been in progress for 10 years. Three sociologists, three psychiatrists, a psychol-

ogist and a social worker gathered extensive information on more than 2,000 children and their parents in Manhattan. Two groups were studied. The first consisted of 1,034 children aged 6 to 18 from a cross section of Manhattan households between Houston and 125th Streets. This sample was 56 percent white, 29 percent Spanish-speaking, 14 percent black and 1 percent other. The second group consisted of 1,000 children who were members of households receiving Aid to Dependent Children. About equal thirds of black, white and Spanish-speaking households were randomly selected from welfare roles in the same geographic area as the first sample. Each age group made up nearly one-thirteenth of each sample, and males and females were about equally represented.

Mothers in the selected households were interviewed for two to three hours at the start of the study and again about five years later. Children were rated by at least two of the psychiatrists using a computer summary of 654 items of be-

havioral information provided by the mothers. In addition, 357 children were given psychiatric examinations, and an additional 314 were interviewed directly. These data were supplemented by a search of school and agency records (welfare, social services, police, etc.).

From the original 654 items, 18 comprehensive dimensions of child behavior were drawn up. These were: conflict with parents, dependence (on parents), fighting, regressive anxiety (has many fears, often wakes up in a panic), mentation problems (mixes up words, has trouble remembering things), competition (with parents), delinquency, self-destructive tendencies (talks about death or killing self), undemandingness, conflict with siblings, isolation (plays alone, doesn't keep friends), repetitive motor behavior (whirls, spins, bangs head), noncompulsive (never rechecks things, not concerned with being on time), sex curiosity (masturbates often, likes to see parents undressed), training difficulties, weak group membership, delusions/hallucinations, and late development (began to walk late).

These behavioral dimensions were then subjected to a hierarchical cluster analysis. This is a procedure which in a sense, explains Langner, "tells the computer to take the first child's profile over these 18 dimensions and search until it finds a mate which is closest to this child. Then the two children form a group which seeks a third child, until certain internal limits are exceeded, whereupon a new group is formed and goes recruiting."

This type of analysis allowed the researchers to place the children, according to their behaviors, in identifiable groups. The breakdown of the first or cross-section group went like this: 16 percent sociable (to the nearest whole percent), 12 percent competitive-independent, 34 percent dependent, 16 percent moderate backward isolate, 12 percent aggressive, 4 percent severe backward isolate, 1 percent organic, 2 percent other. In other words, about one-third of the children in a typical cross section of Manhattan were psychologically or mentally impaired in some way. And 13.5 percent were rated by psychiatrists as severely impaired, requiring immediate attention.

The next major part of the study consisted of identifying the factors that contribute to the behaviors of these children. The researchers admit that the numbers of variables involved is astronomical and that some had to be ignored. Langner says, "We didn't control for genetic history, aspects of the physical environment, diet, pre- and perinatal history, and so on, and left out many important variables for such reasons as time, money, lack of skills, lack of instruments and research bias."

Instead of trying to cover all angles, the Family Research Project concentrated on the characteristics of parents and their marriage, child-rearing practices and a

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Predictor	Content	Behaviors predicted
Punitive Parents	Parents spank child with a strap or stick and often use deprivation of privileges	<ul style="list-style-type: none"> ● Fighting ● Conflict with parents ● Regressive anxiety ● Delinquency
Mother Excitable-Rejecting	Mother often screams at child, is very changeable in handling child and regards self as an excitable person when handling child	<ul style="list-style-type: none"> ● Conflict with parents ● Regressive anxiety ● Fighting ● Sex curiosity ● Isolation ● Self-destructive tendencies ● Conflict with siblings ● Mentation problems ● Competition ● Impairment of school functioning
Cold Parents	Parents rarely hug and kiss the child or show affection easily to the child	<ul style="list-style-type: none"> ● Conflict with parents ● Fighting ● Conflict with siblings ● Undemanding ● Delinquency
Mother's Physical and Emotional Illness	Mothers health is poor. Mother has periods when she can't get going, feels weak all over and is often bothered by nervousness	<ul style="list-style-type: none"> ● Regressive anxiety ● Fighting

but they will still not be able to compete in the public utility market. By 1995, however, he says, complete solar conversion power stations may cost only \$1,100 per peak kilowatt to construct, a rather large figure by today's standards, but probably pretty close to the costs (in constant 1977 dollars) of other utility plants by that time.

While sponsoring research to reduce the costs, the program will also try to build potential markets, so that by 1985 some 500 megawatts of solar cell panels are being manufactured each year, and by the turn of the century, enough panels each year to produce 50 billions of watts.

Last year, slightly more than half of the program's \$22.4 million budget went to the Jet Propulsion Laboratory to support work on silicon cells, since this is the most advanced technology and will be the key to meeting the 1985 goals. This year, the administration has requested \$32.8 million and Congress may add another \$4

million. It is expected that as time progresses more funds will be channeled into polycrystalline cells and other options. The Sandia Corp. is now responsible for overall system and engineering analysis of the program and for work on systems using solar concentrators. The National Aeronautics and Space Administration (NASA) is in charge of setting up facilities for testing new devices and establishing standards of acceptance, through its Lewis Research Center. NASA is also in charge of setting up applications to demonstrate devices and establish markets.

The head of the Research and Technology Section of the Solar Energy Branch at NASA-Lewis, Henry W. Brandhorst Jr., emphasizes that the efforts of his group have already begun to bear fruit. Beginning three years ago, NASA provided solar cells to the National Oceanic and Atmospheric Administration (NOAA) to power remote meteorological stations in West Virginia and California. A measure of

success has been that the one on Mammoth Mountain, Calif., has continued to function satisfactorily even when covered with several inches of ice. The Forest Service has also begun to use solar voltaics—first to aid communications by powering radio repeater stations in the back country, and more recently, to extend the time rangers can remain in the wilderness. Walkie-talkie batteries can be recharged with solar cells carried on the ranger's backpack. The Coast Guard has begun using solar cells on buoys, a very large potential market. The Defense Department is looking at possible applications in battery charging, water pumping and even using solar electricity to provide 20 to 30 percent of the power of a wilderness military base.

Clearly the age of direct solar conversion has arrived, and with the progress promised for the next decades—based on recent research breakthroughs—the end is nowhere in sight. □

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number of demographic variables. All factors were correlated with the 18 dimensions of child behavior and ranked in order of their reliability as predictors of those behaviors. (See table for listing of most important predictive family characteristics and behaviors they predict.)

Because most of the factors had immediate as well as long-lasting effects, they were examined from both perspectives during the longitudinal study. Punitive parenting, for instance, ranked fourth as a predictor of concurrent or present behavior, but when looked at for its effects five years later, it was by far the most powerful factor in terms of predicting long-term behavior. "It is important to know both of these relationships," says Langner, "since prevention and intervention may have both short- and long-term goals. Punitiveness has more unique contributions to behavior over time, and these were of larger size than any other familial predictor available." This was especially true in the area of aggression and antisocial behavior.

Even though child abuse is not something one would normally brag about, 7 percent of the cross-sectional group and 21 percent of the welfare mothers reported using a stick or strap to beat their children. And while only 25 of the parents studied had been reported as child abusers, Langner says several hundred of the children could easily be considered abused. "Stopping child abuse, using group methods for known abusers, and especially discussing punishment with potential parents in high school and during the first pregnancy with fathers present," says Langner, "is a high priority goal for preventing mental disorder in children for both the short and long term."

In addition to family characteristics, race and ethnic background were considered and found to be powerful predictors

of concurrent behaviors. Being Spanish-speaking was linked with five behavior dimensions: isolation, weak group membership, mentation problems, training difficulties and compulsiveness. Being black was linked with mentation problems, demandingness and impairment of school functioning. The five-year follow up showed that being Spanish-speaking had long-term predictive power for weak group membership, compulsiveness and dependence. It also predicted less regressive anxiety and less conflict with parents (when compared with being white). Long-term behaviors associated with being black were dependence and repetitive motor behavior as well as less conflict with parents. Being white predicted more conflict with parents.

Other factors were also found to be predictive but were associated with fewer behaviors. Moving a great deal, perhaps as a result of uprooting, was related to fighting and delinquency. High rent was linked to conflict with parents and siblings, perhaps, suggests Langner, "mostly a reflection of a middle class atmosphere permissive for intrafamilial expression of anger." Having a large number of children in the household was related to reduced competition and impairment of the children's school functioning. And the number of natural parents (mostly father missing) was related to delinquency.

For a final ranking, the factors were listed in order of predictive power by averaging both short-term and long-term forecasting ability. The highest ranking predictors are being Spanish-speaking, having punitive or cold parents, being black and having an excitable-rejecting mother. Langner asks: What can be done about this list of devils? How can they be cast out?

To Langner, some of the answers seem quite obvious. "Physical punishment

must be stopped or mitigated," he says. "Child-beating is almost unheard of in some cultures, so it must be amenable to social intervention by legal strictures and by the creation of an atmosphere condemning it." Coldness, he says, is perhaps more difficult to change, but going through the motions of hugging and kissing a child can sometimes stimulate a parent to develop more real warmth. Not only conditioning, but discussion of parental behavior and its origins is helpful and possibly not too expensive in group form through PTA's and pregnancy classes. Similarly, the excitable mother can be exposed to behavior therapy, and group reinforcement will help, especially if mother-child pairs with similar problems are brought into the group.

Birth control is already cutting down on family size, but bulldozing of neighborhoods, Langner says, should be minimized since it is the poorest who must move before the blade. Children lose friends, while facing new schools and unfamiliar surroundings. Loss of parents, particularly fathers, is due primarily to divorce, abandonment and separation. Support for marriage via employment, counseling and particularly changes in the welfare system, could reduce the major portion of broken homes.

What can be said of the high risks of black and Puerto Rican children? What is left of the race and ethnic variable, says Langner, "can be part diet, part parasitic infestation and many other things, but most of all it is likely to be discrimination and the low self-esteem that goes with it."

Depending on one's point of view, the Family Research Project may indeed be proving the obvious. But whether it proves or disproves anything, it at least provides an impressive body of data that should probably be considered before general statements are made about what is obvious in terms of child rearing. □