the queens mate and with whom. This in turn suggests that we should find out more about the dispersion of colonies. We also want observations on the behavior to one another in the colony of social insects of different degrees of genetic relationship. This information might well be obtainable for some species in favorable circumstances.

The situation in the theory of population dynamics is much the same. We have a number of models and have an idea what to look for. Testing the theory may take some time but is not at all impossible in principle.

There are of course many other topics on which there has been a dramatic increase in our knowledge. Most of our knowledge of the influence of pheromones on social life, including the chemical identification of specific substances, has been obtained in the last 25 years. In termites pheromones are crucial in the determination of caste, but in the other groups they are more prominent in their influence on behavior. A whole new subject—one to which Wilson has also made many contributions—has grown up from the study of the substances used by ants to mark their trails. The old idea that ants interpret their world and also communicate more by smell than by sight or sound is beginning to have a real foundation.

A curious footnote to studies of this sort has to do with caste determination in the honeybee. It has long been known that larvae, whatever their source, if less than three days old turn into workers if put in worker cells but into queens if put on the royal jelly in a queen cell. Yet it has so far proved impossible to identify the substance in the royal jelly which has this effect. The jelly is a great mixture of substances, its main constituent seems to be purely nutritive, and the active constituent is still unidentified.

The study of social insects has always provided a very rich field for the naturalist, but it has now been developed to the point where many of the problems have become suitable for the attention of geneticists, physiologists, and biochemists. For specialists in those fields who need a guide to the facts and their background and suggestions for problems to which their skills might be applied, Wilson's book will be an ideal source. For the entomologist it is inspiring reading as well as an important textbook.

O. W. RICHARDS
Department of Zoology,
Imperial College, London

Families

Class Context and Family Relations. A Cross-National Study. LEONARD I. PEARLIN. Little, Brown, Boston, 1971. xvi, 224 pp. $7.95.

Although dramatic images and impressions of the subject are generously distributed by the Italian film industry, there has been no systematic sociological study of urban family life in Italy. Pearlin's book is welcome as a complement to the available stock of materials on Italian peasant and village family patterns and for its revealing focus upon similarities and differences between the middle class and the working class. In addition, the conceptual framework is inviting, for the author wants to explore the effects of conditions and experiences outside the family upon its internal relations. How, for example, do the working conditions of the father influence parental values, aspirations for education, the imposition of discipline, and the expression of positive feelings toward the children?

Still another merit of the book is that it offers comparisons of data from Italy with those from the United States, by the frequent juxtaposition of patterns exhibited in Turin in 1962 with those found in an earlier, similar investigation conducted in Washington, D.C., by one of the author's colleagues at the National Institute of Mental Health. The Turin materials consist of responses gathered in interviews with 861 mothers and fathers who have fifth-graders in school. The sample was stratified to provide equivalent representation of middle- and working-class respondents and of boys and girls, and to eliminate the bulk of recent migrants, many of them peasants from the south.

Social class differences in Turin take on a shape remarkably similar to that found in Washington, D.C. While many child-rearing values are shared across country and class, it is typical in both countries for middle-class parents to give higher ratings to "dependability," "self-control," and "consideration for others," whereas working-class parents feel more strongly about "obedience" and "being neat and clean." Pearlin summarizes this by arguing, as Melvin Kohn argued earlier in *Class and Conformity* (1969), that middle-class parents stress "self-direction" and working-class parents especially value "conformity to external regulation." For another example, it is reported that in both Washington and Turin middle-class parents express more positive feelings (hugs, kisses, praise) toward their children than do working-class parents. Similarly, in both places one finds a positive association between social level and parental aspirations for a college education for the children, although in Italy the class differences are much more pronounced.

Some of the reported findings bring in additional sources of variation in child-rearing patterns. In both countries and in both classes mothers employ physical punishment more than do fathers, and, surprisingly, employed mothers more than housewife-mothers. Mothers also express affection more actively than do fathers, but this difference in sex role behavior is more pronounced in the middle class.

How are the class differences in family patterns to be explained? Pearlin's answer is: in good part by the conditions, requirements, and experiences of the father in his job. Fathers who work with things rather than ideas, are closely supervised at work, and have little chance to rely on their own initiative come to prize obedience and conformity in their children; fathers who work with people or ideas and rely largely on themselves at work come to place a high valuation on self-control in their children. Similarly, if a father exercises a lot of power at work, or is closely supervised, he brings home an image of interpersonal relations that helps him feel it is proper to employ physical punishment freely in disciplining his children. Some of Pearlin's findings are quite intriguing; for instance, both Washington and Turin fathers who are dissatisfied with their jobs or feel unsuccessful in them tend to shift the expression of affection from their sons over to their daughters.

All in all the research was well-conceived and carried out, the analysis of data is performed with skill—even with gusto—and the writing style is usually quite concise. There are shortcomings, to be sure. Many of the tabular materials to which Pearlin gives serious attention and prolonged interpretation reveal statistical associations between variables which would occur by chance much more frequently than at the usually accepted rate of 5 percent or less, so the author is subject to the charge of overinterpreting his data. The quality and interest of the various chapters is quite uneven; chapter 8, "Husbands and wives," and chapter 9, "Kinship relations," are not as good

as the others. Finally, in seeking to stimulate the reader's interest in his work Pearlin comes close to setting up a straw man. Far from being uncommon, which is the impression he gives, there is a substantial accumulation of published research on how life outside the family affects life inside the family. We have several studies, for example, on how economic depression and the unemployment of men influence the inner life of the family. Surely this kind of experience would with a little imagination qualify as a type of "unsatisfactory working condition" and help to enrich the author's understanding of the pattern he considers a salient feature of his book.

H. KENT GEIGER
Department of Sociology,
University of Wisconsin, Madison

Handicapped Children

Education, Health and Behaviour. Psychological and Medical Study of Childhood Development. MICHAEL RUTTER, JACK TIZARD, and KINGSLEY WHITMORE, Eds. Wiley, New York, 1971. xiv, 474 pp. $9.75.

Subject matter for considerably more than one volume is contained within this book, which reports the findings of a series of surveys conducted in 1964 and 1965 to ascertain the prevalence of intellectual retardation, educational backwardness, physical disability, and psychiatric disability among the 9-to-12-year-old children living on the Isle of Wight. A second main feature of the study is an analysis of differences of various kinds between the children identified as handicapped and a randomly selected control population. The book is organized not by these features, however, but according to the individual handicaps studied, with the result that the overall presentation is somewhat confused and redundant.

The plan of the prevalence study is straightforward. Methods were developed for the overall screening of the population, and cut-off criteria for the possible presence of handicap were established. Individual examinations were then conducted on children so identified to determine the actual presence or absence of disorder. The findings on individual examination, as well as a series of cross-checks which were made throughout the data, permitted the making of some fairly sound estimates of both Type I and Type II errors, with the result that one child in six was considered to have a chronic handicap of moderate or severe intensity.

The operational criteria for each type of disorder examined, the survey instruments, and the techniques of individual assessment are precisely described. Moreover, the appendix contains a full discussion of the difficulties encountered by the team in the actual execution of the study. These factors are of considerable importance to those concerned with replication—and the issue of the necessity of replication arises strongly when the study is considered critically. Although the Isle of Wight, because of its sophisticated facilities and its well-defined geography, is an epidemiologist's paradise, it is, as the authors themselves point out, a most atypical community. Its generally high standard of living, the better-than-average intellectual level of its children, and the absence from it of large urban centers limit the generalizability of the findings to other areas in Britain, to say nothing of other countries. The authors argue persuasively that intensive local studies to assess local conditions are prerequisite for the sound planning of services, and suggest that their study be considered as a model and a prototype. The time, effort, and expense involved in extensively generating data that have little more than local applicability approach a prohibitive level, however, and suggest that other ways of rationalizing the planning of services for the handicapped must be sought. This is a problem to which the authors devote little attention. Moreover, their discussion of the applicability of their findings to the improvement of health services on the Isle of Wight itself is scanty and superficial.

However, the data of the surveys make up only a small portion of the book. By far the largest sections are devoted to a comparison of the individually determined characteristics of the children identified as intellectually, educationally, physically, and emotionally handicapped with those of a control sample who were also individually examined. The randomly selected control group contains a certain proportion of children who were also identified by the screening instruments as requiring individual examination. The authors argue that the inclusion of such children in the control group need not be of concern because it can only result in an underestimate of differences. But they overlook a much more important consideration in the use of a randomly selected control group, which is that the children with disability are being compared with children who reflect the social structure of the entire community rather than of the disabled children themselves. Since many, if not all, of the disorders investigated have a social class distribution, it is difficult to determine in the absence of social class controls the extent to which differences between the groups with respect to such factors as family size, ordinal position, neurologic impairment, developmental deviation, and the like are associated with the disorders, not just with social class. The use of a stratified control sample would have obviated these difficulties, and the degree of stratification required would have provided a measure of the social class distribution of the handicaps under investigation.

Education, Health and Behaviour contains a wealth of background information on handicaps in children which is carefully presented, thoughtfully discussed, and extensively documented. These features commend it, despite stylistic and methodologic weaknesses, as an extremely useful reference volume, to educators, psychologists, physicians, and all others who have as their primary charge the welfare of children.

MARGARET E. HERTZIG
Rockland Children's Psychiatric Hospital, Orangeburg, New York, and *Department of Psychiatry, New York University Medical Center, New York City*

Nuclear Body

The Nucleolus. HARRIS BUSCH and KAREL SMETANA. Academic Press, New York, 1970. xviii, 626 pp., illus. $29.50.

This volume offers an encyclopedic mass of facts dealing with the nucleolus. The facts are well presented. Details are easily found. An unusual feature of the book is that so much of the experimental material, whether obtained in the electron microscope or by biochemical techniques, comes from the authors' laboratory. The work carried out by this group is so extensive and has so many aspects that one can only marvel at the determination (and the material facilities) that made it possible.

This work coupled with a thorough review of the literature yields a wealth of information on the nucleolus. The presentation of the facts is facilitated