urban unions can send a million workers into the streets if bread prices rise.

Roger W. Fox, in his comment on Brown's paper on pricing policies, provides a simple calculation that sets out the issue neatly. If Pakistan were to adopt the incentive food price policies recommended by Brown and others in this volume, its internal price would rise (to world market levels), thus inducing higher production and lower consumption. Because both blades of the scissors would be cutting, the effects would be so substantial that Pakistan would change from a net importer to a net exporter of wheat. From a production standpoint it would have solved its food problem. But what about consumption? Fox calculates that it would drop 5 to 10 percent in total and 20 to 25 percent among the lower-income groups. He concludes that this "would not be politically acceptable, and that the Pakistan government would quickly introduce measures to keep consumption near previous levels." In other words, there are equity consequences that are not adequately dealt with in the price policies recommended by Brown.

Schuh's paper provides the major attempt in the book to come to grips with such economic-efficiency-equity tradeoffs. Schuh's main point is that "many policies designed to deal with 'basic needs' and/or equality have strong resource-allocation effects both within the agricultural sector and between the agricultural sector and the rest of the economy, often with serious adverse effects on output." He illustrates his argument with two primary examples: price and food policies in India and trade and exchange-rate policies in Brazil. In both situations the governments have undervalued agricultural output, causing much poverty to be concentrated in rural areas. For both situations Schuh urges more concern for investment in human capital and for raising labor productivity than for land productivity. Such a recommendation does not come to grips with the problem. Schuh's failure to see the income distribution consequences of resource allocation recommendations is simply the mirror image of politicians' failure to recognize the resource allocation implications of their equity policies.

How then can poverty be alleviated? Schuh in particular, and the other authors in general, are saying that higher food prices in the short run are needed to provide lower food prices in the long run and that sharply improved incentives for agricultural production will ultimately raise productivity and incomes sufficiently for poverty to be eliminated. The difficulty is that, as Harry Hopkins said during the New Deal, "people don't eat in the long run; they eat every day or they starve."

It is correct, and important, to point out that there are social costs attached to a cheap food policy, and this book makes these costs abundantly clear. It is a different matter to presume that no benefits accrue to cheap food policies beyond those ephemeral returns the economist labels "political." Cheap food keeps the poor from starving in many countries. The challenge to societies is to find ways to deal with both issues simultaneously, and for this challenge the book provides little guidance.

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Eyewitness Reliability

The Psychology of Person Identification. BRIAN R. CLIFFORD and RAY BULL. Routledge and Kegan Paul, Boston, 1978. xiv, 254 pp. $20.

Honest but mistaken identification by prosecution witnesses was the prime cause of two recent miscarriages of justice in England. In view of the serious questions raised by these two cases, a committee was appointed to look into the law and procedures relating to identification. The committee, chaired by Lord Devlin, held its first meeting in May 1974, and in April 1976 it reported with a number of recommendations.

The failure of the Devlin committee to make adequate use of psychological evidence in arriving at its recommendations constituted one of the chief stimuli for the writing of *The Psychology of Person Identification*. In the book, Clifford and Bull cover an impressive array of psychological insights that can be brought to bear on the conduct of lineups (or "identification parades," as they are called in England) and the practice of the courts in matters concerning eyewitness testimony.

The more meaty chapters are introduced with some historical and recent ideas from cognitive and social psychology. The authors take a stand from the start on human cognitive functioning. Instead of decoupling the memory system from other systems, they support the now widely held view that perception, memory, language, and thought are intimately connected. All must be considered in a full explanation of eyewitness recognition, or of any intellectual task for that matter. And just as perception and memory are inseparable from each other, so they both are inseparable from a person's social existence. Since person identification is typically carried out in a social context, it cannot be understood without considering such factors as stereotyping, prejudice, and social values.

In discussing recent research in traditional cognitive psychology that might bear on person identification, the authors begin by gnawing on some bones that other psychologists have elsewhere thoroughly chewed over, including such questions as: (i) What causes forgetting—decay, interference, retrieval failure, motivations? No one theory, they argue, can explain all the facts of eyewitness testimony. (ii) Do verbal and visual memories involve the same or different processes? It doesn't seem necessary, they think, to argue for separate processing systems. (iii) Are faces processed differently from other visual information? Their answer is: "The evidence is at best not strong and highly equivocal" (p. 49).

Now the socially relevant material begins. The possibility is examined that witnesses may have stereotypic expectancies and notions about the kinds of physical appearance criminals have. People hold stereotypes about the "typical" criminal's attractiveness, body build, age, and manner of dress. Yet it has never been shown that these stereotypes have any validity.

An important chapter thoroughly dissects the research on identification by means of the human face. A useful point here is that even though memory for faces as tested in the laboratory can be quite good, one should not assume that real-life person identification will be equally good. In fact, simulated-crime studies customarily yield very much lower estimates of a person's ability to recognize a previously seen face. The unexpectedness of the latter situation is undoubtedly a partial cause of the poorer performance.

Identification by other means, such as the voice, has been studied less often than identification by face. This parallels the finding that police and judicial procedures for recognition of persons by the way they speak are not as firmly laid down as those for facial recognition. Interest in this subject is on the rise, however, spurred particularly by those wishing to develop spectrographic voice identification techniques.

The whole interrogation environment,

the identification parade in particular, is a crucial determinant of accurate recognition of people. But we must not ignore the importance within that environment of the individual witness, who after all is doing the recognizing. The Devlin Report was pessimistic about distinguishing between a valid account and an invalid one. Clifford and Bull are optimistic; they believe that there are cognitive and personality factors that can be used to predict which individuals are likely to be the more reliable witnesses. The evidence they provide, however, is flimsy.

The Psychology of Person Identification serves us well in at least three ways. First, it brings together a good deal of the work of British psychologists. Although it by no means covers only research from across the Atlantic Ocean, the book makes it evident that British researchers are engaged in important projects designed to elucidate the effects of certain social, situational, and personality factors in eyewitness testimony. Second, the book offers a good source of references.

Third, the book presents a fairly balanced picture of the reliability of eyewitness memory. One trap that researchers who study eyewitness testimony and who push for reform often fall into is that of regarding all eyewitness accounts as unreliable. However, it is not true that all eyewitness accounts are untrustworthy. If a robbery victim spends two hours in good lighting with an assailant and then identifies him or her the next day under equally "ideal" circumstances, we may not wish to lump the identification in the "inherently unreliable" category. It is important for psychologists to stress that some identifications, not all, occur under unfavorable conditions and to shed light on the nature of those conditions. While Clifford and Bull occasionally give in to the temptation to regard all eyewitness memory as inherently poor, they allow for the finding that visual memory is often quite good, and they think that some conditions are more favorable than others. Armed with knowledge about these conditions, the authors make recommendations throughout the book for reducing falsifications and enhancing accuracy and completeness in testimony. They suggest, for example, that "testimony be confined to that given in a spontaneous report and in answer to questions which are framed with as little suggestibility as possible" (p. 157), that "group discussion with witnesses is an ill-advised procedure" (p. 162), and that "two parades be used, only one of which contains the suspect" (p. 198). These recommendations are sound and can easily be implemented by law enforcement officers and others with a genuine interest in the improvement of justice in our society.

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Elasmobranchs

Sensory Biology of Sharks, Skates, and Rays. EDWARD S. HODGSON and ROBERT F. MATHEWSON, Eds. Office of Naval Research, Arlington, Va., 1978 (available from the Superintendent of Documents, Washington, D.C.). xii, 666 pp., illus. $13.25.

The study of elasmobranch biology has been stimulated by financial support from the Office of Naval Research, beginning in the 1950's. This volume is the fourth summary of the subject to be published since 1963. The volume differs from its predecessors in that it focuses on sensory biology. There are sections on vision (four papers), chemical senses (two), mechanical and acoustical senses (three), electrical senses (two), and ecology and behavior (four). There is a foreword by R. K. Geiger, a preface by the editors, a perspective by Perry W. Gilbert (the only author who turns up in all four publications), and a retrospect by Bernard J. Zahuranec. The volume is well produced and is a good buy.

Not much in the volume is new; the papers are mainly literature reviews written by researchers active in their respective fields. Taken as a whole, however, the volume will come as a surprise to persons unfamiliar with elasmobranchs beyond the lab exercises of a comparative anatomy course, wherein sharks are portrayed as simply organized primitive vertebrates that survive, somehow, in spite of themselves.

Samuel H. Gruber and Joel L. Cohen find that elasmobranchs have eyes that are highly developed, in contrast to earlier statements that shark eyes have a "sluggishly mobile iris without nerve supply," a "shallow anterior chamber without annular ligament or Schlemm's canal," and a "retina, with few exceptions, provided only with rods"—statements that in their view "are no longer correct."

R. Glenn Northcutt finds that in elasmobranchs the ratio of brain weight to body weight is comparable to that of birds and mammals and that "the common conception that chondrichthians are small-brained creatures is clearly false." Focusing on interspecific variation in brain structure, he finds that "comparison of elasmobranch brain evolution with that of other vertebrate groups reveals a number of similarities: increase in brain size, restricted olfactory projections to the telencephalon, expansion of the striatum, and expansion and differentiation of the nonolfactory telencephalic pallium."

R. Curtis Graeber confronts the problematical subject of behavior and central nervous system integration and asserts that "substantial evidence indicates that sharks can learn certain types of instrumental discrimination tasks as rapidly as most mammals. . . . They also respond quickly to standard classical conditioning procedures."

In a more traditional vein, Barry L. Roberts ponders the mysteries of the lateralis system, which have been complicated in recent years by the discovery of an efferent innervation, apparently inhibitory, of the lateral-line organs.

Arthur A. Myrberg, Jr., reviews once again the interesting findings of his group that "sound plays an important role in the lives of sharks. It is used by them to locate food sources and possibly even other objects, such as competitors and predators."

My prize, if I had one to award, would go to Ad. J. Kalmijn, whose experiments have shown that elasmobranchs have "the highest electrical sensitivity known in the animal kingdom" and that they "can detect and take prey by the exclusive use of their keen electric sense, not only under favorable laboratory conditions, but also in their electrically more intricate oceanic mileu."

And my hat goes off to A. K. O'Gower and A. R. Nash for their efforts to confront the animals in their own environment, during a three-year study of inshore populations of *Heterodontus* in Australia.

The eight other papers in this volume deal with eyes (J. G. Sivak), chemoreception (E. S. Hodgson and R. F. Mathewson; Herman Kleerekoper), telemetry (Donald R. Nelson), electroreception (M. V. L. Bennett and W. T. Clusin), Indian Ocean sharks (A. John Bass), Pacific folklore (Hodgson), and fasting in confinement (Frederic H. Martini).

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