Island. All these contributions portray some aspect of aboriginal life before or at the point of earliest contact and then proceed to discuss what happened as a result.

In the introduction to Capell's excellent paper, we learn that "there seems to have been an indigenous population of about three hundred thousand, divided into some six hundred tribes, each speaking its own language." But today "many—perhaps more than half [of the] languages have disappeared entirely." No doubt some of the disappearance of native language has been due to the disappearance of the speakers as a result of introduced diseases. Cook concludes that few of the most devastating diseases were indigenous and that most of them were a result of introduced changes beginning since 1824 when aborigines were induced to settle in permanent camps, were exposed to new human contacts and thereby new infections, and were enticed by wage work to change their diet. The late botanist F. R. Irvine concludes that almost all dietary changes have been for the worse.

Clearly, the best focused and most comparable first-hand observations in this anthology are the seven portrayals of what is happening to aboriginal life today. "Today" refers to any baseline date from 1900 to 1967. Together these vignettes offer the basis for an emerging portrait of the acculturation front in the Australian suburbs and hinterlands. Here we read a familiar story recorded by Spicer in *Cycles of Conquest* for the Indians of the American Southwest. The Indians variously endured community reorientation, the gradual extinction of their native languages, political and economic isolation, and a confusion of administrations and policies. Under a variety of programs, all more or less dedicated to the replacement of indigenous customs and institutions, the descendants of these people managed to pull together a new way of life which may be described as a fusion, an incorporation, or even a compartmentalization of different cultural behavior.

Similarly, aborigines as discussed in the papers by the Berndts, the Watermans, J. Wilson, Long, Capell, K. Wilson, and Worms all made adjustments that were not simple replacements of indigenous behavior. Initially government and mission stations, mining and cattle camps, and settlements on the fringes of Australian cities seem to have functioned as collection centers, draining the open country of aboriginal occupants. Bands of aborigines came to these places for rations, for part-time jobs, and for a variety of other reasons, often remaining there until they died. After a decline in population there was a rapid increase, and larger numbers of people were found at these places than were ever collected in one spot in the "bush." Children born at these stations grew up knowing no other area, no other way of making a living, and no other language but the one dominant in the settlements. There was a breakdown of the gerontocracy, a change in the subsection grouping, an alteration of the marriage rules and initiation rites, and greater numbers of people attending more ceremonies of greater variety than ever before. But such communities, the majority of which have no economic base, are transitional to something that is yet to emerge. Today, they appear to serve as learning depots, as places where people have increased opportunities to validate their behavior in terms of other cultural systems.

Thus, *Diprotodon to Detribalization* offers an array of material for many yet-to-be-written books on aboriginal culture change. It begins with a full summary of change theory, and by its title emphasizes a change in the influence of forces leading to the replacement and creation of new life forms. The environment is always changing and species that have the greatest built-in variety have the greatest chance for survival. We must pay increasing attention to what man is doing to himself in destroying this variety.

RICHARD D. JONES
Department of Anthropology,
San Diego State College,
San Diego, California

Social Mobility Models

Chains of Opportunity. System Models of Mobility in Organizations. HARRISON C. WHITE. Harvard University Press, Cambridge, Mass., 1970. xvi, 418 pp., illus. $15.

Despite the vast production of sociological literature very few sociological works manifest both conceptual originality and analytic power. *Chains of Opportunity* belongs to this select group. Like White's earlier research this book emphasizes the complex and interrelated character of social structure, and the constraints this interrelatedness places upon the operation of social processes.

White develops these themes by proposing a new orientation to the old phenomenon of social mobility. The typical mobility study analyzes successive distributions of a demographically defined population over highly aggregated social categories often demarcated in terms of status. This, White suggests, is not a very fruitful procedure, especially if the ultimate objective is construction of sociological theory. A more propitious approach—and the one pursued throughout *Chains of Opportunity*—involves examination of "mobility by a well-defined population of eligible men among a system of fixed jobs independently demarcated." White illustrates the appropriate methodology with a detailed investigation of mobility patterns among clergy of the Episcopal, Methodist, and Presbyterian churches.

Central to the new perspective is the concept of opportunity. White identifies the structure of opportunity, not the ambitions of individuals, as the principal generator of mobility. Thus a satisfactory theory must first and foremost explicate the logic of opportunity as it operates in specific social contexts.

White briefly describes four general mobility systems, but analyzes only one—the "tight system"—in detail. The tight system is characterized by a slight surplus of jobs over men, which means that men in the system almost always have jobs but jobs may go temporarily unfilled. To analyze the logic of opportunity as it occurs in tight systems, White introduces the notion of a "vacancy chain." A vacancy chain may be interpreted as the path a vacancy describes as it moves through a system of fixed jobs. Suppose, for example, A a bishop of the Episcopal Church retires, thus creating a vacant bishopric. Then B rector of large church in New York fills the vacancy resulting from A's retirement. Next, C rector of small New Haven church occupies the vacancy created by B's promotion. Finally, D a newly ordained seminary graduate replaces C in the New Haven position. This sequence of events yields the following vacancy chain: a vacancy initially appears in a bishop's position; from there it moves into a large New York church; then it transfers to a small New Haven church; lastly it leaves the system altogether.

Vacancy chains, White argues, expedite the analysis of mobility processes in tight systems. When expressed in terms of vacancy chains the invariant properties of mobility supposedly assume a relatively simple form. Furthermore vacancy chains express the duality between men and jobs which White believes to be an essential feature of occupational mobility, and also take cognizance of connections between the movements of different men in a system of fixed jobs.

Having developed the vacancy chain concept White proceeds to formulate and test a large variety of mathematical models based upon it. These models fall into three general categories: models depicting the movement of vacancies in a system of jobs, models describing the overall evolution of mobility systems, and models portraying the careers of men. White also devotes considerable space to comparing vacancy models with other formulations.

The most empirically relevant vacancy models are those that describe the circulation of opportunities in a fixed job system. These models partition jobs into broad status categories. A cohort of vacancies arrives in the system each year. These vacancies circulate independently, their movements obeying a finite Markov chain in which the external world appears as an absorbing state. All vacancies presumably complete their movements and leave the system within the space of a single year.

Using these models White derives predictions for length distributions of vacancy chains. These predictions are compared with vacancy chain distributions observed in the Episcopal, the Presbyterian, and the Methodist churches during several different time periods over the last 60 years. Generally speaking, quite close agreement exists between observed and predicted distributions, especially for the Episcopal and Methodist churches.

In addition to specific analyses of mobility, *Chains of Opportunity* offers, at least by implication, a general philosophy of sociological model building. Its methodological stipulations underscore the systematic nature of social organization, or put differently, the interactive and contingent character of social action. Social structure transmits the impact of local events throughout the social system. To obtain valid causal theory one must "trace social processes at a microscopic level of social structure." Moreover model building must rely upon theoretical insight rather than mathematical virtuosity. According to White,

> . . . mathematical style and complexity have little to do with the essential nature of a model. More often than not technical elaboration of a model is a blind alley that distracts attention from the main theoretical issues.

The present reviewer believes *Chains of Opportunity* will (or at least should) exercise a seminal influence on the analysis of social structure. This is perhaps the first work that uses the concept of social system not as a heuristic device or a quasi-theoretic slogan but as an effective tool for empirical investigation of social processes. The system models proposed by White are not sickly transplantations from other disciplines but original constructions based squarely upon striking structural insights. The vacancy chain notion is more than a new concept; it betokens an entirely new way of perceiving the social world. Often sociology inadvertently adopts conventional modes of conceptualizing reality. This usually means a motivational as opposed to a structural orientation toward human action. The vacancy chain notion makes possible an analysis of action in strictly structural terms. White's work furnishes an object lesson in deciphering the logic of social structure and clearly reveals the potentialities that lie dormant in sophisticated forms of structural analysis.

The most serious defect of this book rests in the author's rather hasty rejection of models other than his own. White denies the possibility of detecting simple lawful patterns in the flow of men, and comes close to asserting a universal propriety for vacancy models. Neither the empirical evidence produced nor the arguments advanced justify such conclusions. White is undoubtedly correct in chastizing mobility theorists for neglecting the constraints imposed by the structure of opportunity and for entirely overlooking the duality between men and jobs. But both ideas can be incorporated into mobility models that postulate essential regularities in the flow of men. Bartholomew and also Gordon and Newell have proposed mobility models of approximately this kind. White illegitimately converts criticisms based upon particularistic features of these formulations into a rejection of the entire genre.

Given due consideration of opportunity constraints and man-job duality, the question of whether lawful pattern lies in the flow of vacancies or in the flow of men (or in some other alternative) appears contingent upon the nature of the particular system under scrutiny. If, for example, job controllers exert strict regulation over the candidate selection process, important uniformities might indeed occur in the flow of vacancies. If regulation of the candidate selection process by job controllers is lax, the main uniformities may reside in the flow of men. A hypothesis of this sort might explain why vacancy chain models fit data from the relatively centralized Episcopal and Methodist churches better than data from the decentralized Presbyterian church.

One can cite other shortcomings: the Markovian nature of vacancy movements is not adequately justified; the constraints exercised by manpower distribution on vacancy chains receive short shrift; the author places excessive reliance upon equilibrium solutions; several of his proposed mobility models rest upon highly arbitrary assumptions; he occasionally uses strained mathematical arguments when simulation would seem more appropriate. These, however, are minor defects. It is to be hoped that neither they, nor the author's less than elegant writing style, nor the volume of mathematical notation will prevent this important book from attracting the broad readership it deserves.

THOMAS F. MAYER
Department of Sociology and
Institute of Behavioral Science,
University of Colorado, Boulder

Medical Genetics

Genetic Disorders of Man. RICHARD M. GOODMAN, Ed. Little, Brown, Boston, 1970. xviii, 1010 pp., illus. $38.50.

As the editor of this book says, "It is practically impossible for the physician today, regardless of specialty, to avoid contact with some aspect of medical genetics." Unfortunately, the average physician is seemingly unaware of the contribution that medical genetics can make to the practice of medicine, especially in the prevention of disease. This book is intended as a guide and reference work for such a practitioner.

The book is a compilation of dissertations by 21 different authors. The papers are arranged in two parts, one headed An Introduction to Genetic