

lesions shows some unusual anatomical configurations, as well as less destruction than expected, and raises the question of whether infant brains with lesions are capable of growth not seen in normal brains. On the behavioral tasks, a comparison of infant and adult lesions revealed the expected sparing for one task, equal impairment on another task, and a different pattern of performance for a third aspect of behavior. These observations gain in strength when it is seen that each is supported by one or the other of the next two papers.

Harlow and his colleagues present a detailed and complex analysis of the effects of frontal lesions, made at five different ages, on two well-studied tasks. As predicted, sparing appeared for delayed response, with increasing deficit appearing with the later lesions; most unexpectedly, the learning-set task appeared to be impaired, the more so the younger the age at injury (cf. Hebb's conclusions on intelligence in humans). Because of difficulties in interpreting some of the results, Harlow *et al.* conclude that the data neither confirm nor deny Harlow's hypothesis concerning the relation between age at injury and impairment, but suggest, at least, that any theory of localization of function must give serious consideration to the age variable.

Kling and Tucker, working with combined lesions in their analysis of frontal lobe function, also report that a delayed-response task showed the expected sparing but that a related task, delayed alternation, did not. More interestingly, the sparing on delayed response depended not on the vicarious function of unrelated cortical areas but on the integrity of the caudate nucleus, which has cortico-topic connections with the prefrontal lobes. These authors discuss the problems of rearing infants with different lesions, and mention some interesting observations on motor performance after extensive lesions of various types, but the brief descriptions are tantalizing rather than substantive.

In a broad-ranging paper in which a psychologist looks at the data available from developmental neurology, Lenneberg undertakes the difficult assignment of assessing the effect of age on the outcome of disorders of the central nervous system at the human level. Perhaps because of the attempted breadth, the paper is very superficial (with a disproportionately large number of references to nonprofessional journals), but there

are nevertheless two points to be gleaned from the discussion. First, Lenneberg notes that there are pathological changes in the brain associated with injury in infancy for which there are no good parallels in the adult. Second, perinatal lesions of the motor system produce symptoms that change with development (also reported by Kennard for monkeys); as Lenneberg says, the child "grows into his symptoms" (p. 165). This observation suggests that the nature of the impairment may be related to the developmental level at which the observations are made, a point raised somewhat parenthetically by Kling and Tucker and indirectly related to the problem raised by Harlow *et al.* of the confounding of age at injury with age at testing.

The papers presented in this symposium indicate a considerable development in thought from the rather vague notion that the infant brain is plastic. Sparing still seems to be the salient effect, and it is likely that much of the sparing will ultimately be accounted for by neuronal growth and reorganization within a physiological system, as implied in several of the papers. (Ex-

citing results have already begun to appear delineating the nature of such growth and reorganization.) An explanation for greater impairment after infant injury will probably have to be sought through an analysis of psychological processes, perhaps along the lines suggested by Hebb in his analysis of the factors in intelligence. A question that has not yet been raised, but must be considered in developmental studies, is whether the course of development after infant lesions is influenced by the nature of the organism's interaction with the environment. If sensory input normally plays a role in the maintenance and development of sensory systems during the neonatal period, is such input necessary for neural reorganization to take place after infant lesions? Can impairments be reduced by educative procedures? Such questions, of obvious theoretical and practical significance, are more likely to be answered now that serious efforts are being directed toward an analysis of the consequences of lesions in infancy.

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African Societies: Authority and Advancement

Social Theory and African Tribal Organization. The Development of Socio-Legal Theory. KENNETH S. CARLSTON. University of Illinois Press, Urbana, 1968. xi + 462 pp. \$10.

A common characteristic of American academic culture is a wish to accentuate the positive. This is particularly noticeable to American scholars who, having been nurtured in the comparatively gentle and supportive seminars found in most U.S. universities, suddenly find themselves confronted by British colleagues many of whom are not reluctant to be red in tooth and claw. Our native tradition is to begin any discussion or critique with strong praise for the relatively sound parts of the position under consideration and only then, having made obeisance to a dominant value, to turn to the attack.

If I were resolved to follow this tradition, I would have to begin this review of Carlston's new book by examining his discussions of 13 African societies. This part of his book occupies 282 of the 439 pages of text and represents an enormous amount of

reading and synthesis on the author's part. One of the reasons given for including these ethnographies is to make the results of scattered and sometimes rather opaque reports of original research on African tribal peoples available to Western readers, and if this is taken to apply only to "general" readers Carlston achieves the objective fairly well despite some questionable omissions and some episodic failures to pick up what seem to be obviously important aspects of the societies and cultures whose descriptions he digests for us.

An example of such an omission is provided by the treatment of the Nayakusa of East Africa. Perhaps the most important single point in the political organization and religion of this society is that the members of the royal group, who occupy all chiefly and certain priestly positions, control the powers that bring or withhold fertility, while the commoners, from among whom come all village headmen and certain other kinds of priests, uniquely have the powers to kill or sicken with witchcraft or to prevent witchcraft

from achieving its baleful ends. This leads to an interdependence between the royals and the commoners and is a key element in the working of their political system and in the integration of a society composed of two groups which consider themselves historically distinct. Carlston, although he discusses both politics and supernatural belief at some length, gives little that would allow the reader to infer the presence of this supernaturally based and politically crucial interdependence.

However, the ethnographies in *Social Theory and African Tribal Organization* are interestingly written and sound enough to allow the reader to gain some understanding of some of the best-described societies in Africa. This statement is as far as I can go in being positive about Carlston's latest efforts. The remainder of his book is made up of a presentation of his "theory of the organization of action"; a "statement of findings: principles and propositions" which includes about 250 inductively derived propositions based upon the 13 ethnographies found in the body of the book and 8 more briefly summarized in two appendixes; and a chapter entitled "modern implications" in which the author gives his views on the problems facing developing nations, especially African ones, and his solutions for these problems.

His theory of organization is rather diffuse, but a paragraph from the text may give some idea of its tone and level if not of its precise substance, which is rather elusive.

In tribal societies, kinship relations are predominantly the means for creating structures of social action. However, pluralistic societies also appear characterized by a variety of types of social structures based on other criteria than kinship relations, such as age and the performance of specific functions. Modern societies are characterized by the movement of individuals to attain valued goals through the instrumentality of the organization. The course of human history has been a movement from kinship to organizational structures of social action. It has been a movement from acceptance of the father or the father-figure, as the repository of authority, to the acceptance of the official or executive, as the holder of authority. It has been a movement from role performance in institutions to role performance in organizations [p. 15].

"Organizations," it needs to be added, are present when "impersonal authority in the form of the office [is used] to coordinate action and to control conflict" (p. 16).

Carlston's basic position seems to be

that social advancement is attained through authority's being in the hands of other than kinsmen, and his endless division of the population of the earth into "tribal" and "modern" (with a residual category of "pluralistic" appearing from time to time) is based primarily upon whether or not authority is vested according to kinship or according to "impersonal" criteria. This is a very old idea in anthropology, going back to the 19th-century speculative anthropologists, of whom Maine and McClellan (both lawyers like Carlston) are among the best known, but it is not a very fruitful one. This is so partly because coordination of action by impersonal authority is found in such simple societies as that of some groups of Bushmen (who are not complex in technology, social structure, or much else) and partly because there is little profit in saying that "advancement" comes in moving from one form of organization to another (to do this is only to state one's preferences) without specifying the conditions under which such movement occurs and does not occur.

If the author had used his ethnographic data to test his theory of organization in some way, it might have been possible to evaluate the 113 "elements of a theory of the organization of action" he presents, but he does not do so explicitly, and even implicitly it is hard to relate much of the theory to most of his findings and impossible to see how his findings contribute to his basic position concerning the organization of action. His findings, like his "elements," are only vaguely related to one another, and neither the findings nor the elements have anything obvious to offer as an augmentation of our understanding either of African tribal society or social theory.

As loosely related to one another as may be the theory to the data, and the theory to the findings, the relation of the "modern implications" to any data at all is even less easy to discern. In general, tribalism, with its loyalties to kinsmen and fellow villagers, is seen as a very serious obstacle to the development of the African nations, and Carlston's prescriptions for overcoming the obstacles are, in general, summarizable as getting rid of tribalism and its consequences. His stereotypes about tribes and tribalism are so numerous as to make it impossible to list them all, so it will have to suffice to note that he is under the impression that

"tribesmen" are more like one another than they are like "modern men" in having very narrow loyalties and being full of envy, fear, conformity, and resentment. For the African states to become really effective "organizations for action," according to the author, who offers us no explicit information about the states and who seems quite uninformed about modern national politics in Africa, their citizens must abandon all their tribalistic ways and become modern men in their orientation. All one can say of this is that there is no basis for believing that Africans, or anyone else, can be usefully divided into modern and tribal men, and that the author's modern implications, like his theory, are compounded of elements which are already known, oversimplified, or false; or various combinations of the three.

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An Agricultural People

Tiv Economy. PAUL BOHANNAN and LAURA BOHANNAN. Northwestern University Press, Evanston, Ill., 1968. xiv + 265 pp., illus. \$8.75. Northwestern University African Studies, No. 20.

This is an interesting, informative, and well-written book which describes and analyzes ways in which the Tiv people of Nigeria produce and allocate the goods and services important to their subsistence requirements and socio-cultural means and ends. It should prove a useful contribution to African studies, ethnology, and economic anthropology. It does not represent anything especially new in these fields. Most of its data and concepts have appeared in varying form in other works by the authors, who carried out fieldwork among the Tiv from 1949 to 1952. But it is good to have all this material combined so effectively in one place.

Tiv Economy presents, clearly and carefully, a wealth of detail about pertinent aspects of Tiv life and livelihood, especially means and ends of food production and distribution. It also provides limited but adequate background information on relevant aspects of Tiv social structure. The authors are adept in delineating Tiv "folk" concepts, the ways in which the Tiv express, understand, and conceptualize their world, beliefs,