powerful they don't have to defeat their enemies in overt battle, that to a great extent organized society is one massive preemptive strike against the powerless. The problem is not in discovering this fact but in incorporating it into our general theories instead of allowing our knowledge of it to coexist uneasily with the pluralist formulations which it goes far to undermine.

The volume also includes studies of American policy in Asia and Latin America which offer literate and informed criticism, but neither of these breaks much new ground and, save for their substantive conclusions, could have appeared in *Foreign Affairs* or some other general periodical. David Underhill's study of the Columbia student uprising of 1969 tells us what we should already know, that sometimes you cannot get data on what is really important in social conflicts and that specific problems must be viewed in the context of general "historical" knowledge as well as in terms of available problem-specific data. Insofar as we need to be reminded that this is the case, we are indeed in bad shape intellectually; but however useful the reminder may be, it can hardly be counted as a methodological breakthrough.

Alan Wolfe's concluding essay, an attack on the profession as a whole, epitomizes the strengths, weaknesses, and confusion of the caucus critique. Entitled "The professional mystique," it accuses political science of being dominated by a small professional elite, narrow in its range of ideological viewpoints and overly tied to outside governmental and private interests of a conservative nature. He argues that there is no sense in trying to organize the radicals in the profession (despite the paradoxical existence of the caucus) because there are so few, and notes that political science is the only social science discipline wherein a right-wing group (styling itself as moderate) has organized to counterbalance the new left tendencies represented by the caucus. Ironically, many of the criticisms made by Wolfe and by the left generally parallel those long made by many of the right-wing members of the profession: social irrelevance, formalistic and jejune methodology, dominance of the profession by a narrow, behavioralist elite. Perhaps the real problem is not conservative domination of the profession but the tendency of any social institution to generate a self-sustaining elite, to downgrade dissenting viewpoints, and to ally itself with outside established powers. Indeed, can any organized profession be expected to behave otherwise? Is not a "radical" political science profession a contradiction in terms?

But if Wolfe's criticism of the profession as such is essentially utopian, the volume's attacks on the ways in which political science deals with social reality have more merit. The plain fact of the matter is that the attempt to construct social science, including political science, on the model of the physical sciences—or what some imagine to be the model of the physical sciences—has largely been a failure. One need not be an ideologue of the left or right to discern this in the papers given at professional meetings or published in professional journals, which are in many or perhaps most cases culturally unsophisticated, intellectually vapid, and scientifically trivial. The great issues of politics have been left untouched not so much because of a quasi conspiracy in favor of the status quo as because of a trained incapacity to think in a creative, innovative, interdisciplinary way about social matters, an incapacity fostered by the entire process of professional socialization, now beginning even at the undergraduate level.

Where then does the caucus—and the profession—go from here? In *The Structure of Scientific Revolutions* Thomas Kuhn argues that new scientific paradigms are not so much the result of the conversion of those committed to the old as of the elders' replacement by the young committed to the new. But by no means all the young are on the left. Of those who are, many will voluntarily abandon the profession in disgust. Others, given present market conditions, will find it difficult to obtain and retain jobs and will be under even greater pressure to conform. Still others may freely decide to adopt the conventional wisdom. The passage of time alone cannot be counted on to guarantee "an end to political science."

But perhaps change will come about in a simpler and more subtle fashion than either the Kuhn or the caucus model implies. Perhaps it is not manifestoes or organizations or the self-conscious establishment of new methodologies that are needed to revolutionize political science. Wolfe concludes his discussion of professionalism by noting that the "true professional . . . has a vocation . . . the promotion of his own radical truth." If everyone concerned would personally search for relevant truth rather than for pseudo accuracy about the trivial, if the discipline as a whole would tolerate a methodological pluralism which recognizes that techniques are instruments, not ends in themselves, present discontents may mark not the end of political science but a radically new and hopeful beginning.

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Great Plains Economies

Northern Plainsmen. Adaptive Strategy and Agrarian Life. JOHN W. BENNETT. Aldine, Chicago, 1969. xviii, 354 pp., illus. $9.75.

The anthropological method of comparing several cultures existing simultaneously in the same laboratory is decades old, yet rarely has it been utilized with the competence and concern for theoretical issues seen in *Northern Plainsmen.* Studying Indians, ranchers, farmers, and Hutterites, John Bennett has described the evolution of the four adaptive strategies used on the Great Plains of west-central Canada. By using the region's history, he reveals the intricacy of changing adaptations to the environment and to surrounding cultures. Bennett presents both an analysis of contemporary adjustment and, more crucially, a model of how the Great Plains cultures became what they are. The static picture that often results when cultural ecology is used as a descriptive device has been largely avoided by Bennett. Furthermore, he actually outlines processes of culture change and generalizes from them, making this one of the few monographs where the dynamics of ecological adjustment are clearly described.

The environment in this study is the semiarid plains, with an economy tied to national, capitalist culture since Anglo settlement. In any era since the settlement, the technology has tended to be modern. From this setting, a number of processes are singled out as having general validity for this and similar agrarian regions. Niche specialization, or the matching of economy to environment, has occurred in this area of the Great Plains during the last 75 years, or three generations. From trial-and-error experimentation throughout the area to the establishment of stable loci of production, the region has moved

into an era of more successful systematic exploitation. Cooperation and competition are the complementary aspects of a process that has created ever closer economic integration in the area. It has worked to make the local people efficiently interdependent and at the same time ever more skillful at utilizing the national bureaucracies and national businesses to serve their local needs. A corollary to this is competitive replacement, a process in which the more efficient managers of the environment come to dominate in the area. Bennett also enunciates what is perhaps his most interesting process, behavioral selection: given adaptations produce and are fostered by specific attitudes. Initial agrarian settlement produced "cautious, conservative, risk-avoiding" strategies coupled with close attention on the part of any one man to all forms of experimentation tried by his neighbors. More prosperous conditions have favored innovation and sophisticated technical adjustment to economic and ecological variables, and hence have led to a change in world view focusing on boldness and experimentation.

The initial period of settlement in marginal and variable agrarian environments involves high out-migration and a high rate of replacement followed by a leveling out of population much nearer the region's real carrying capacity. As a result, a demographic aspect of behavioral selection is high tolerance for migration. Carrying capacity is ultimately raised and population loss halted by cooperative, communal enterprises, perhaps funded federally or by a centralized church, but governed and owned locally. After creating this model, Bennett makes a number of suggestions for greater success in the region, largely centering around the last process. It is refreshing to see such an unpostured and balanced example of pertinent anthropology.

Northern Plainsmen has a number of shortcomings in its use of theory. Bennett correctly sees that cultural ecology must be linked to a consideration of adaptive processes to take advantage of the time span his laboratory provides. His effort is only partially successful. The volume is organized around particularistic accounts of the four cultures in the area, not around a thorough examination of the cultural processes behind the particular adaptive strategies. Cultural ecology could be linked here with concepts from systems theory so that more variables could be measured, the relations between causal variables and crucial events could be determined more accurately, and more precise predictions could be made. And last, Bennett is a cultural materialist and has written a book demonstrating the fruitfulness of that assumption and the research strategy based on it. A result of this, however, is conceptual poverty in the parts of the book dealing with cognition and ideology. Bennett has written a superb chapter on the Hutterites and yet does not consider the precise relationship that must exist between their world view and their economics. The same deficiency is found in the treatment of ranchers and farmers. The Hutterites have produced the most successful adaptation to the region. It is based on explicit notions of utopian socialism. Farmers and ranchers are moving to a more secure adaptation through cooperative and communal efforts also. Isn't it clear that religion and world view play more than a subsidiary role in these evolving and coinciding adaptive strategies? Isn't it clear also that evolutionists and cultural ecologists must begin to see these as variables in their analyses?

The book has a fine bibliography on all aspects of agrarian life that have been treated by the social sciences.

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Cortical Connections

The Bisected Brain. MICHAEL S. GAZZANIGA. Appleton-Century-Crofts (Meredith), New York, 1970. xiv, 172 pp., illus. $10. Neuroscience Series, vol. 2.

The author is one of the main contributors to the second decade of research on the remarkable effects of cutting the commissures joining the cerebral hemispheres. Begun by R. W. Sperry and his students in the early '50's (the group to which Gazzaniga later belonged), studies with the "split-brain" preparation demonstrated the critical role in integration played by horizontal connections, that is, those lying entirely within one level of the neuraxis. It is now clear that cortico-cortical connections between the hemispheres (and, by implication, within a hemisphere) transmit information important to perception, learning, memory, and motor control.

These discoveries came at a time when leading investigators were stressing the vertical organization of the nervous system and were questioning the earlier principle of levels of neural integration. Communication within a given level among cell groups belonging to separate vertical systems was considered to have little functional significance. This theoretical bias seemed to be supported by empirical results; not only did disconnections within a hemisphere appear innocuous, but section of the corpus callosum (the main fiber system between the hemispheres) failed to reveal any clear effect beyond that of preventing the spread of epileptic activity from one side of the body to the other.

The corpus callosum was thus considered to be a pathway playing no essential part in normal interhemispheric integration. The question was reopened by the Sperry group with a brilliant series of studies showing that in commissurotomized cats and monkeys interocular and intermanual transfer of learned discrimination habits is prevented if the training conditions are such that the sensory input is restricted to one hemisphere. During the later phases of this research, a series of epileptic human cases with surgical section of all endbrain connections between the hemispheres (including the anterior commissure, left intact in earlier patients) became available for study. The beneficial effects of the operation exceeded those that were expected, since not only were seizures confined to one side but their frequency was appreciably diminished, probably by reduction in reverberatory activity.

Conversely, however, deficit phenomena came to light which either were not present or were missed in cases studied previously. The existence and form of the disconnection syndrome in man are now firmly established, an old controversy in neurology being thereby settled. It is in the delineation of this syndrome that Gazzaniga has made his major contribution. In this book he describes and interprets, somewhat more completely than in the previously published reports, the deficits found in three of the newer cases, those with the least preexisting extracallosal brain damage and with uncomplicated recovery from the surgery.

Because of specialization of the hemispheres in the human brain (the left for speech and the right for spatial organization of function), the effects of disconnection in man are bizarre. For example, the patient cannot describe an unseen object held in his left