

The Science of Human Learning, Society, Culture, and Personality

THE past decade [the 1940's] has witnessed a revolutionary development in the psychological and social sciences. A number of disciplines that had previously pursued independent courses in the analysis of particular facets of man's individual and social behavior have been discovered to dovetail into one another so neatly that they are well on the road to being fused into a single integrated science. The first major steps in achieving this integration were made at the Institute of Human Relations at Yale University, but the movement has spread to other institutions and is being pressed forward with especial vigor by the Department of Social Relations at Harvard University.

This development has been widely misunderstood as a mere pooling of separate scientific skills and techniques on cooperative research programs. The significant fact, however, is that the integration has taken place at the level of theory. At least four

previously distinct systems of theory have been found to interdigitate so that each supports the others and is in turn illuminated by them. These four are the theory of learning and behavior developed by experimental psychologists, the theory of social relationships and social structure developed by sociologists and social anthropologists, the theory of culture and cultural change developed by anthropologists with significant assistance from sociologists, and the theory of personality and its formation developed by psychoanalysts and psychiatrists.

There is as yet no general agreement as to an appropriate name for the emerging unified science. Such terms as "human relations" and "social relations" slight the psychological components and, to some, suggest application rather than theory. The "science of human behavior" carries too strong a connotation of behaviorism and too weak an implication of important social and cultural factors. The general term "social science" seems to exclude psychology. In default of an apter expression, we shall, with tongue in cheek, use "lesocupethy"—coined from LEarning, SOciety, CUlture, and PErsonality THEorY. Perhaps it will irritate some reader into proposing a more satisfactory name.

The position of "lesocupethy" in the hierarchy of the sciences poses no difficulties. It is rooted in biology as the latter is rooted in chemistry. But as biology is differentiated from chemistry by complications introduced by living matter, so is "lesocupethy" distinguished from biology by complications resulting from the interaction of learning and society.

In themselves, learning and society represent two of a considerable number of major types of adjustment which have been independently developed several times in the course of organic evolution. Other examples include parasitism, symbiosis (e.g., plants which depend for pollination upon bees, which in turn depend upon the nectar of the plants for food), and aerial locomotion (independently achieved by insects, pterodactyls, birds, and bats).

The most basic type of behavior mechanism with which nature has equipped its living species is instinct. The organism is provided

by heredity with a structural organization whereby it automatically responds to stimuli by specific forms of behavior which through natural selection have become established as adaptive in the life conditions typically encountered. Being essentially rigid, however, instincts cannot help the organism if conditions diverge from the typical. To meet this situation and prevent wholesale extinction of species under fluctuating conditions, organic evolution has developed inherited mechanisms of learning in all but the simplest species. These supplement instincts by enabling the individual organism to modify its behavior adaptively within a greater or lesser range of varying conditions. A notably flexible mechanism of learning is hereditary in all mammalian species. Experimental psychologists who have made intensive studies of animal learning agree that the basic mechanism in man differs in no significant respect from that in other higher mammals. The fundamental principles of acquired behavior are thus mammalian rather than specifically human, and can be illuminated by experiments with rats and dogs just as experiments with fruit flies have advanced the knowledge of human genetics.

Social life is another major type of adaptation which organic evolution has repeatedly produced. Gregarious species are exceedingly numerous, but the most startling superficial resemblances to man are found among the social insects—bees, wasps, ants, termites. In most instances natural selection has created social aggregations by equipping a species with hereditary mechanisms which have the effect of attracting individuals instinctively to one another. Sex is one example. Another is the sweet juices exuded by certain social insects for the delectation of their fellows. Brought into association in some such way, the members of a society enjoy advantages not available to isolated individuals—for example, mutual protection, insurance, enhanced power, and the benefits of a division of labor.

Although neither learning nor society is peculiar to man, in conjunction they have produced something unique in nature—a new level of complexity in natural phenomena which demands for

its understanding a distinctive body of scientific theory. The inherited mechanism of learning and the hereditary bases of social life will ultimately yield their secrets to biological science, but the products of their interaction will require the special sciences that compose "lesocupethy," at least until the millennium when all biology has been reduced to chemistry and all chemistry to physics.

Except in man, what the individual of any species learns in his lifetime dies with him. Every individual in every generation starts from scratch. All or most of what he learns he acquires for himself. He derives little or no benefit from the experience of others, even if his species is one of those characterized by social life. In man, however, most of the behavior acquired by any individual, in whatever part of the world or period of history he may live, has previously been learned and found adaptive by other and older members of his own society, and he in turn transmits this behavior, together with any adaptive modifications acquired through his own life experience, to other and younger members of his social group. The interaction of learning and society thus produces in every human group a body of socially transmitted adaptive behavior which appears superindividual because it is shared, because it is perpetuated beyond the individual life span, and because in quantity and quality it so vastly exceeds the capacity of any single person to achieve by his own unaided effort. The term "culture" is applied to such systems of acquired and transmitted behavior. Since cultures change with the varying and cumulative experience of individuals in social groups, it becomes possible to say of man, as of no other species with the hereditary capacity to learn, that societies as well as individuals learn. Social learning is synonymous with cultural evolution.

In social species other than man, the forms of social organization are primarily determined by the biologically inherited mechanisms which produce association. They are therefore the same in all societies of the species, except for minor modifications dependent upon ecological or demographic factors. Among fur seals, for example, one does not find some groups with matriarchal and

polyandrous families, nor among honeybees some hives with kings and male workers. In man, however, extreme differences in social organization are common, even in tribes of the same subrace, language, and geographical area. Among the Siouan tribes of the Western Plains, for example, the Omaha are patrilineal and the Mandan matrilineal, and among the Malayan tribes of Sumatra the Batak are patrilineal and the Minangkabau matrilineal. The conclusion is therefore inescapable that in man—alone among the social animals—society itself is largely learned, i.e., is the product of cultural rather than of biological evolution. To be sure, biologically conditioned social bonds are not wholly absent. Thus lactation helps to link mother and child, and sex to bind husband and wife, in the organization of the human family. No biological or innate basis is discernible, however, for the overwhelming proportion of the social ties which produce the complex organizational structures characteristic of human groups.

Since human society is never a spontaneous expression of biological potentialities but must always be learned as a part of culture, it follows that man must be molded to his society much as a colt is broken to harness. He must, in short, be “socialized.” In all societies this is largely accomplished during infancy and childhood, when the culture of the group is implanted by inculcation, and the unsocial or antisocial impulses with which the child is born are disciplined and redirected to fit him for the social roles he must fill as an adult. Conflicts are thus inevitably set up in the developing child between his biologically inherited impulses and the demands of his society as these are imposed upon him by his parents and later by others. The manner in which these conflicts are resolved by the individual, reflecting the concrete circumstances under which the social disciplines are impressed upon him, largely determines his “personality.”

It should by now be abundantly clear that learning, society, culture, and personality are far indeed from being separable entities, even though until recently they have mainly been studied in isolation by psychology, sociology, anthropology, and psychoa-

nalysıs, respectively. Their interrelationships are so intimate that leaders in all four fields are coming more and more to recognize that they form the subject matter of a single integrated science. So significant are the interrelationships that they deserve somewhat fuller exposition.

Since society, culture, and personality are all learned, students of any of these phenomena must constantly bear in mind the fundamental principles of learning as these have been worked out by such behavioristic psychologists as Hull. Unless they do so, their conclusions will suffer in clarity if not in validity.

Knowledge of the structure of society is equally fundamental to the students of learning, culture, and personality. It forms an essential part of all normal situations in which human beings learn. Unless he reckons with it, the behavioristic psychologist can never explain adult human learning, however accurately he may account for the acquisition of habits by rats and other nonsocial animals. Culture only exists in, and is borne by, organized human groups, and the anthropologist who ignores the latter can tell us little of significance about the former. Since personality is largely the product of group pressures, the psychoanalyst should reckon with all important aspects of a society's structure. In our own society, for example, if he deals only with the family situation, and overlooks such significant structures as those of status and prestige, his interpretations will fall far short of completeness.

Culture is deeply relevant to the study of learning, society, and personality. Most of what any human individual learns is already part of the culture of his group, and the cultural habits that he already possesses in large measure predetermine his behavior in any new learning situation. The psychologist can ignore culture when he studies the behavior of rats or dogs, but if he does so when his subject is man, his explanations may be wide of the mark. Since social interaction always takes place within a framework of social structure, which is regularly a part of culture, sociological generalizations made without reference to culture are likely to be meaning-

less. Culture is crucial to the analysis of personality, not only because traits of the latter are often socially shared but also because the disciplines through the imposition of which personality is formed are largely prescribed by the culture.

Personality is no less significant than is culture for an understanding of human learning, since the reaction of any individual in a learning situation is likely to reflect significantly his resolution of the conflicts arising during his socialization and the unconscious anxieties and hostilities generated thereby. Society, too, reflects personality factors. Thus, as the sociologist Sumner showed long ago, human societies are characterized by "antagonistic cooperation" because of the conflict between individual impulse and social pressures, and they exhibit the phenomenon of "ethnocentrism" because the hostilities generated but suppressed by in-group disciplines are displaced toward other groups in such forms as race prejudice, religious intolerance, and national rivalries. Personality also affects culture. It appears, for example, to be a significant factor in the development of what is called "national character." Moreover, as Kardiner and Linton have shown, certain aspects of culture, such as religious beliefs, tend to be reflections or projections of attitudes commonly engendered during the socialization process.

During the early attempts at the Institute of Human Relations, in 1935-42, to assemble the theories of learning, society, culture, and personality into a single integrated discipline, two very important discoveries were made. The first was that the four theoretical systems, although developed in relative isolation, fitted together almost as well as the adjacent pieces of a jigsaw puzzle. The gaps and inconsistencies were unexpectedly few. Other systems of theory fitted much less well—some because of dubious validity, others because of their more limited scope or more pragmatic character. Economic theory, for example, appeared to be related primarily to the conditions prevailing in a restricted group of complex societies during a limited period of history, and thus to be

culture-bound rather than universal. It had, for this reason, afforded little help to anthropologists in understanding the economic behavior of primitive peoples.

The second major discovery was that each of the four systems shed new light on the others and often converted ambiguity into clarity. Thus, learning theory demonstrated that personality is really learned, despite Freud's persistent invocation of "instinct," and it corroborated Malinowski in his insistence that culture is always functional and does not persist through sheer inertia. Personality theory showed that the concept of "drive" as well as of "stimulus" is necessary in order to comprehend the motivation of learning, and it illuminated the view of Sumner that the elements of culture are emotionally charged rather than neutral or devoid of affect. The theory of social structure revealed that Freudian psychology rests on sociocultural as well as on biological or physiological assumptions, being concerned with the products of learning under conditions presented by family organization and the imposition of social sanctions. Culture theory demonstrated that psychological principles are never competent to explain any social phenomenon unless account is taken, not only of behavior mechanisms, but also of the historically determined conditions under which these mechanisms operate, particularly the so-called cultural base and the prevailing structure of social relationships.

The manner in which the four originally independent systems of theory have been found to dovetail gives confidence in the essential validity of each, and the new insights that each has brought to the others confirm the impression of their essential unity. Recent work by anthropologists like Gillin and Hallowell, sociologists like Merton and Parsons, psychologists like Mowrer and Sears, and numerous others reveals that the integrated discipline which we have dubbed "lesocupethy" is approaching maturity. It is perhaps best exemplified to date in the volume *Social Learning and Imitation*, by Miller and Dollard. I have myself recently shown, in *Social Structure*, that there are some problems of social science—e.g., the incidence of incest taboos—that are capable of solution only when

findings from all four of the constituent disciplines are applied conjointly.

The juxtaposition of the several behavioral sciences has also revealed areas in which intensive research is urgently needed. One such is related to the fact that much of human behavior is ideational, depending upon the use of linguistic and other symbols. What the Gestalt psychologists have called "insight," and others "intelligence," is known to be of enormous importance in learning. When exhibited by human beings this is believed to involve a transfer of trial-and-error behavior from the motor organs to an ideational process utilizing implicit linguistic symbols, the individual resorting to a motor response only after he has "thought out" a promising solution to the problem facing him. That this symbolic process can use other than verbal tools is demonstrated by the fact that the anthropoid apes as well as man exhibit insight or intelligence. At present it can only be assumed that the same principles of learning are involved in ideational as in motor behavior. This conclusion must, however, be established or revised by experimental methods, for until this is done the exact bearing of learning theory upon personality and culture, in both of which symbolic behavior plays a highly significant role, will remain uncertain. In any such research the participation of experts in linguistics and semantics will be as essential as that of psychologists.

The disciplines that compose "lesocupethy" have in common the fact that they all deal exclusively with acquired behavior. It is readily admitted that biological factors bear directly upon human behavior in diverse ways. Learning is obviously affected by the physiological condition of the individual. Society, as already noted, has biological underpinnings in such phenomena as sex and lactation. Culture is possibly influenced in some small measure by racial heredity, and, as Gillin has pointed out, definite limits are set to its variability by man's innate endowment. Constitutional factors certainly play a prominent role in psychotic aberrations and very likely also in normal personality. The interpretation of all these and other comparable influences, however, is a task of the

special biological sciences. "Lesocupethy" is concerned only with what is left when these are factored out. That this is a major assignment there can no longer be any doubt.

Incidentally, there is not yet sufficient recognition of the fact that vastly more is scientifically known about the acquired than about the innate factors in man's social behavior. Precise knowledge of the latter must in many cases await the full development of human genetics, which in the very nature of the case cannot be achieved until several generations have elapsed. By that time the integrated science of acquired behavior should have developed a hundred-fold.

In all fields of science there are segments of verified knowledge which have not yet been integrated with the basic theoretical system of the discipline. In the social and psychological sciences there are comparable segments—most notably perhaps in sociology, economics, linguistics, and social psychology—which "lesocupethy" has not as yet assimilated. Thus far, however, there is in this field little evidence of major alternative theories, verified but unreconciled, concerning the same body of phenomena, comparable to the wave and corpuscular theories of light. Can it be that man's social behavior is actually less complex, not more complex, than the subject matter of physical science? And is it not perhaps possible that we may have more of the essential answers to the basic scientific problems even earlier in the former field than in the latter?

The union of disciplines which we have called "lesocupethy" is a pure science. Its objective is the maximal theoretical understanding of the peculiar ways of men. It does not directly seek the solution of any practical problem. Naturally it has much in common with such applied sciences as psychotherapy, social work, education, industrial relations, and colonial administration, just as the physical and biological sciences are applied in war, engineering, industry, agriculture, and medicine. Admittedly the applied sciences continually add substantial increments of knowledge to the pure sciences upon which they depend. Nevertheless, history has

shown, and both industry and government now recognize, that the support of research in pure science frequently yields richer dividends through the application of newly discovered basic principles than are obtainable by a direct attack upon specific practical objectives. It is therefore not inconceivable that the cultivation of "lesocupethy" as a pure science may lead more quickly to a solution of international conflict, economic insecurity, industrial strife, family disorganization, and individual mental disorders than research oriented directly toward the solution of these pressing problems.

But whether or not such high aims are realized, the emergent integration of the basic theoretical systems of the social and psychological sciences undoubtedly represents one of the great turning points in the history of science. In significance it may prove the equal of the contributions of Darwin and Mendel in biology. In kind, however, it perhaps resembles more closely the extraordinary integrating achievement of Einstein in the field of physical science.