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BEHAVIOR AND EXPERIMENT IN SOCIAL PSYCHOLOGY¹

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IN THE recent rapid expansion and progress of general psychology one field, it seems, has been sadly neglected and has been allowed to remain in a rationalistic and pre-experimental stage. This field is social psychology. Text-books still cling to the faculties of imitation, crowd consciousness, gregarious and other alleged social instincts. Even the great era of structuralism has left no worthy trace. In spite of florid accounts of mob mind, not one important piece of introspection has been produced to show the influence of the group upon individual consciousness. As for the services of behaviorism, there has been only a schematic notice of social conduct without a really genuine observation. True social psychology is a science of the future; its data are at present unrecorded.

It will be well to glance briefly at the factors which have impeded experiment in social science. The first of these we may term the "fallacy of the group." The group is not an elementary fact. Analysis must go beyond it to the behavior of the individuals of whom it is composed. Concepts, therefore, which denote characteristics only of groups are of little service. In the terminology, for example, of Professor Bentley, "congregate" signifies a body of persons physically associated, "assemblage" denotes a group with only a psychic bond, such as a community reading its morning news or a body of churchgoers anticipating the Sunday morning sermon. Aside from convenience such classifications do not seem to be vital, because as psy-

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chologists we are interested little in forms of social aggregation but much in the social behavior of the individual which underlies all aggregation.

Little more can be claimed for the neat phrase "polarization" used by Dr. Woolbert to characterize the unity of the attention of an audience to a speaker. Such a term forcibly restricts the sphere of the social influence. It also seizes upon the crowd as a whole, neglecting the important fact, to wit, the nature of the response in each individual. The crucial question would be: how does his response when the individual is in the group differ from that when he is alone? Is polarization merely the sum of individual responses, or are there inter-individual adjustments in progress?

The writers cited are merely examples. They by no means stand alone in the tendency of over-stressing the rôle of the group. To trace the fallacy further, one frequently encounters the statement that a crowd or mob under the sway of a leader is a unit. So it is. But this unity from the psychologist's standpoint is accidental. Similar reservoirs of energy have been tapped in the members of a crowd, and there is released a set of similar responses. The result is the appearance but not the reality of unity. The one-ness lies not in the response of individuals to one another, nor even in their participation in a common idea, but solely in their uniform response to the leader. We cannot accept the implication that each mind feels itself a part of one great whole, or that there is a depersonalization of self-consciousness and a rise of crowd-consciousness. The war has proved that the social psychology of the soldier must be studied, not in the crowd phenomena of company or regiment, but in the specific reactions and interactions of persons. Or again, in the present industrial conflict, it is of little value to speak of conflict between groups or classes, each polarized by imitation, suggestion and the like, and motivated by the instinct of pugnacity. True causes must be sought by the scientific method, that is by the scrutiny of individual cases in which direct or indirect social stimulation has produced definite responses.

We may conclude then that the greatest incubus in social psychology is the unwarranted emphasis placed upon the group. We have been so busy talking about group types, group interests, group consciousness, and degree of group solidarity, that we have forgotten that the locus of all psychology, individual or social, is in the neuro-motor system of the individual. There can be no effect at large which is not exclusively an effect upon separate persons. To borrow the

phrasing of an old adage, if we take care of the individuals, the groups will take care of themselves.

Along with group psychology we must banish also categories of instincts which are supposed teleologically to equip the human being for the life adjustments of society. There may well be innate physiological patterns of response which in the interaction between organism and environment develop into perfected life-serving habits; and it is to be expected that these patterns, embodying fundamental drives, will come into play with objects of the social environment. But certainly in no further sense than this are we equipped at birth with mechanisms of social utility. For example, the self-preserving reactions exhibited in anger at the thwarting of bodily movements appear to be innate. They are in evidence very shortly after birth. The new-born infant however is equally angry or pugnacious whether it be a person or a blanket which confines his movements. The only reason why he later comes to use the fighting response toward persons and not toward things is because he has found by trial and error that such a response is effective only toward the former class of stimuli. In like manner self-assertion and self-abasement may be shown, if innate at all, to be instinctive only in physiological pattern and not in social significance. Alleged instincts of gregariousness and imitation are signal offenders in the ascription of nativity to the learned reactions resulting from the play of truly innate impulses upon objects of a social character.

Certain writers, in fact, following the lead of McDougall, have reflected no credit upon the latter by the employment of the psychologically monstrous term "social instincts." We must repeat that the word "social" has no significance except as denoting a certain type of environment and the part played by it in the post-natal behavior of the organism. Professor Dunlap has already pointed out the evil of mixing purpose with scientific explanation. The use of the term just mentioned seems to me a most flagrant injection of teleology into the developing germ cell. The innate equipment of the child, whatever it may be, is individual in every sense of the word; it is only the subsequently learned reactions which may be termed "social." From this we may deduce that for the data and laws of social psychology we must search primarily in other fields of behavior than that of instinctive response. What these fields may be will be discussed presently.

Even at the risk of commonplace we must insist that rationalism

can never take the place of observation and experiment. We must have the individual not in the background of our minds, but directly before us reacting to social stimuli. One observation of a baby's first laugh, or of the early use of language, is worth more than treatises on instinct and emotion. That idol of speculation lauded since Descartes, self-consciousness, must be worked out in terms of the behavior complex. It has been maintained that the consciousness of self, and its formation upon the experience of other selves, are of deep social import. This is seriously to be questioned. Consider, for example the cry of anger in the new-born infant, already mentioned. It is pre-eminently to such an organization of response that the term "self" should be applied. In actual life, whether individual or social, the *consciousness* of self is generally conspicuously absent. Indeed, to determine what causal relation it bears to social behavior is a problem for mystics. Self consists not in reflection but in adjustment of the organism to the inanimate and social sphere in which it moves.

After all this detraction it is incumbent upon us to suggest a program which shall keep social psychology abreast of the times. Shall we not say, then, that social psychology studies those responses of the individual which are conditioned in whole or in part by the social surroundings? The responses referred to fall under two heads: (1) those which are caused directly by social stimuli, and (2) those which are brought out by non-social stimuli, but are modified by the presence of accompanying social factors. At the outset the question arises whether any stimulation is wholly devoid of social aspects, and whether by consequence individual and social psychology can be separated. Professor G. H. Mead has pointed out that social stimuli are at least as early and as important as purely inanimate stimuli in the life of the organism, and that they condition meaning, thought and action throughout life. The interdependence of thought and language again reveals the inextricable social warp in the human fabric. Granting this, is it not therefore still more imperative to trace the developmental course of social behavior?

Genetic considerations aside, we can however discern a rough practical difference between social and non-social objects of stimulation. If I sit down to a meal in solitude, I respond to the food as a non-social stimulus. If however, I were a cat watching the movements of a mouse, or if I were perchance a cannibal cajolling my prospective dinner, then I would be reacting to a social stimulus. It is quite intentional that our two illustrations should rest upon the same under-

lying impulse, the obtaining of food; for social psychology, as stated before, deals not with instinctive drives, but with responses which, although perhaps based upon such drives, are called out selectively by a particular feature of the environment, namely the behavior of other individuals of our own or a similar species. The same innate impulse may initiate two activities which result in securing food; but one of them is material for social psychology while the other is not.

In the examples stated the response is direct; the behavior of one's fellow is the specific cause of the reaction. Suppose, however, I were eating at a dinner party. Then my response to the non-social stimulus (food) would be *modified* by the behavior of the others present. Such behavior may afford an incidental visual or auditory stimulation, or it may exist and be reacted to as a set of attitudes which I *believe* are assumed by my commensals. In any case a modification of conduct is produced by introducing social factors into the environment, and is measurable, as we shall show later, by experimental methods.

We may therefore define social stimulation as the stimulation resulting from the behavior of others which arouses a definite response. And we may recognize, without a claim to sharp distinction, the two types of whole and of partial causation in the response which the total situation evokes. It is my purpose briefly to develop the possibilities of these two types, and, in the case of the latter, to present a summary statement of experimental results already achieved.

To begin with the first, the direct response to social stimulation, we must descend in the animal series at least as low as the arthropods. Professor Hobhouse cites the observation of a hermit crab stalking an insect. The crab approached stealthily from behind, dropping down inconspicuously when his prey showed slight uneasiness or inclination to turn. Here is a case of fine adjustment of action which is not to be found in any of the reactions of the crab except those evoked by animate behavior. Its importance in connection with food-getting is apparent. Ants respond to stimuli from their fellows in very definite ways. There are movements and strokes of the antennae which elicit reactions respectively for food-seeking, for avoidance of danger, and for combat. It is in these specific interactions of lower animals, and not in their much discussed "societies" that we should seek the comparative data of social psychology.

Not only are definite movements and signs effective as social stimuli; we must admit also attitudes or motor settings toward acts or

gestures of a definite sort. The posture of the head, the tensing of certain muscles, the incipient frown or smile—these, as subtle forerunners of acts soon to ensue, acquire high value as social stimuli. Mammals and birds respond to such attitudes in their own kind or in human beings in characteristic ways. An intelligent cat will read and react to attitudes of fear, anger, or affection in a person to whom he is accustomed. Professor Mead aptly describes the shiftings and mutual adjustments at the opening of a dog fight as a “conversation of attitudes.” Handicuffs of boys in play are of the same type. A blow somewhat smarter than usual may arouse a posture or expression of anger, and immediately before overt manifestation of the tendency, there is a response in the assumption of a like attitude by the play-fellow.

Some remarkable cases of social behavior are to be observed in the food-getting activities of monkeys. Dr. Kempf reports a case of strategy in which monkey E used a misleading form of behavior in order to seize food from a wary monkey (D) who countered all other forms of approach by a wholesome suspicion. E would search about in the sawdust of the cage, apparently searching for food of his own, but cautiously glancing back over his shoulder and casually working his way backward as he searched until within grasping range of D's morsel of food. Other monkeys speedily learned to respond to E's strategic behavior; but D, who was evidently a socially stupid monkey, never made the adjustment.

Efficient behavior of this sort is the more remarkable in contrast with the apparent lack of reasoning power in the conduct of monkeys in puzzle boxes, and in imitation experiments. Practically all cases reported show that their method is the primitive one of trial and error in manipulation; and only a few investigators have found evidence of grasping a solution by observing the experimenter's movements. On the other hand, in the behavior of E, there appears a re-grouping and apparently a new integration of simple habits, such as scratching for food, shuffling about, and grasping, which are remarkably well adapted to the solution of a complex problem. Although Dr. Kempf could not ascertain the origin of this trick, it was doubtless either self-originated or learned from another monkey. In either case we find that when the elementary habits of non-social response can be made to serve biological ends as social stimuli, they are organized into complexes for producing reactions in others in a manner closely rivalling the adaptability of human beings.

Many of the earliest adjustments of the infant also are social in character. Actuated by hunger or other basic impulses, babies show a facility in being stimulated by maternal behavior to definite modes of response which far outstrips their adjustments to inanimate objects. At a later age gestures, facial expressions, and words, if connected with infantile interests, enter with astonishing readiness into the action system of the child. How quickly he learns to respond to signs of commendation, disapproval, playfulness, and prohibition! We should recall also in this connection the case of Clever Hans and the social brilliance displayed by so comparatively stupid a species as the horse in responding to scarcely discernable cues of movement afforded unwittingly by spectators.

Facts such as we have been discussing prove that educability through social interaction is earlier and finer than through experience with non-social objects. When stimulus and response are social, the adaption to new and diverse situations is surprising. If we consider intelligence to be the measure of adaptability to new and difficult, but crucial, situations, may we not then attribute to an animal or person a *social intelligence* far in advance of his intelligence in dealing with the world in general?

This viewpoint must be presented with a word of caution. It is not meant that in social intelligence we find nervous or mental operations of a character different from those employed in adaptations of a non-social sort. It must be agreed that the baby learns to respond to the soothing tones of the mother in the same way that a dog learns to associate the sound of a tuning fork with his food. I desire to affirm merely that social stimuli are prepotent at an early age and throughout life, and that they therefore in large measure make possible that life adaptation which we call intelligence.

The social phenomena we have been discussing, namely those directly evoked by the behavior of a member of the same or a related species, can be investigated in at least two ways. The first is by the observation of their genesis in children, and the determination of the first forms of reaction to behavior and the building up of complex social adjustments on the basis of increasingly complex social stimuli, such as movement, expression, attitude, gesture, and sound. The second comprises the experimental study of the individual's reaction to social attitudes, emotional expressions, pantomime and conversation. The field to be sure is vast and the settings difficult of control; but the returns will be commensurate value.

In most summary manner allow me now to refer to the possibilities of the second class of the data of social psychology. In this case a response which is made primarily to a non-social stimulus is influenced by social factors present in the situation. In this category belong the influences brought to bear upon individual behavior by the presence of co-actors in the shop, the workroom, the school, the office, the library, the trade union, the club, and the professional organization. It is the condition also which obtains in the audience or congregation, in public assemblies, and in the crowd and mob. In all these situations the individual reacts directly not to the behavior of the other individuals, but to some stimulus wholly or mainly non-social, such as a task, a book, a lecture, a set of rules, a political speech, or a riot. He is however influenced in that reaction by the overt or implicit evidence of the behavior of the others toward the same object or toward him. In a crowd or audience one finds an inseparable complex of social stimulations of both the direct and the contributory sort.

The fundamental tendencies of incidental social influence are readily open to experimental investigation. It is necessary only to arrange tasks or experiences to be performed or undergone during one set of trials by a number of subjects working together, and in another set by the same subjects working alone. In this way the nature and quantity of social influences upon individual response may be determined. Prior to 1915 practically all research on this problem had been done in Germany by August Mayer, Meumann, Moede, and others. The purpose was not primarily social but to determine the merit of work done by children in school compared with the work done at home, or in seclusion. A short summary of these results may be found in an article by Professor Burnham in *Science*, N. S. 1910, Vol. 31. Mention should also be made of the excellent experiments on social influence by Dr. H. T. Moore and by Dr. A. P. Weiss, already reported at these meetings.

During the last few years I have conducted a series of experiments in the Harvard Laboratory along similar lines. The subjects were adults, and the tests and experiences included multiplying, cancellation, a reversible perspective test of attention, free chain association, thought process in the form of written argument, estimations of weights and of the pleasantness of odors, and emotional influences. The results corroborated those of earlier investigators in the occurrence in the group of a more vigorous exertion of attention and an increased output of mental work in attention tests, multiplying, writ-

ing associations, and producing arguments, than occurred when the subjects worked singly. There was a tendency also for the superior individuals to be less favorably influenced than the inferior by the stimulus of the co-workers.

In the association tests there was a decrease in the number of associations of the personal, or ego-centric sort written in the group condition, together with a more frequent reference to objects in the immediate physical and social environment. Whether this fact indicates again a response in the nature of a social attitude is not certain, but it is a suggestive possibility.

One of the most interesting results was brought out in the social influence upon judgments. Both affective judgments (i. e. the estimation of odors) and non-affective, such as weight estimation, were characterized in the group by an avoidance of extremes, both high and low. Extremes of a graded series were estimated more conservatively in the group than when judging alone. The explanation that this fact results merely from distraction is disproved by the further result that in the case of weights, where precision could be determined, the judgments were equally accurate together and alone. Here again there appears an attitude or tendency to response characteristic of behavior influenced by concurrent social stimuli. The precise cause of this attitude of social conservatism, and its genesis and individual variation, are probably significant problems in the field of direct response to social stimuli.²

The experiments which have been described deserve attention mainly as pioneer ventures into a field which by reason of its daily familiarity in human experience has been too much taken for granted and too little explored or understood. Many more experiments are required in which the type of common task or experience and the number, character, and mutual relations of the individual subjects can be instructively varied. In summary, the time has come to abandon speculations about types of groups, social organization, self and crowd consciousness, instinct and imitation. When social psychologists focus their attention upon the behavior of the individual under direct and incidental stimulation from the behavior of others, then the most vital questions of the social order will find their solution.

²The results of these experiments are soon to be published in detail as a series of articles under the general head: "The Influence of the Group."

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