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## A Cognitive Reinterpretation of Stanley Milgram's Observations on Obedience to Authority

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Stanley Milgram's (1974) observations on obedience to authority have exerted a great deal of influence on such diverse disciplines as social psychology, holocaust studies, and political science. In Milgram's basic paradigm, a subject walks into a laboratory believing that he or she is about to take part in a study of memory and learning. After being assigned the role of a teacher, the subject is asked to teach word associations to a fellow subject (who in reality is a collaborator of the experimenter). The teaching method, however, is unconventional—administering increasingly higher electric shocks to the learner. Once the presumed shock level reaches a certain point, the subject is thrown into a conflict. On the one hand, the strapped learner demands to be set free and appears to suffer pain, and continuing the experiment may pose a risk to his or her health. On the other hand, the experimenter, if asked, insists that the experiment is not as unhealthy as it appears to be, and that the teacher must go on. In sharp contrast to the expectations of professionals and laymen alike, some 65% of all subjects continue to administer shocks up to the very highest levels.

Milgram's classic experiments have come under severe attack. Some critics argue that their validity hinges on the acting ability of the learner and experimenter,

and that most subjects were probably able to sense the unreality of the situation. Others question the relevance of these laboratory results to the larger world. Still others question the ethics of the basic experimental design. Milgram, for his part, insists that these and other misgivings are traceable to the unsavory nature of his results: "Underlying the criticism of the experiment is an alternative model of human nature, one holding that when confronted with a choice between hurting others and complying with authority, normal people reject authority" (Milgram, 1974, p. 169).

Although Milgram's observations attracted much criticism and praise and have somewhat altered our views of the human condition, the interpretation he provided for his results has received scant attention—the debate focuses for the most part on the reality and extent of obedience, not on its underlying causes.

According to Milgram (1974),

The essence of obedience consists in the fact that a person comes to view himself as the instrument for carrying out another person's wishes, and he therefore no longer sees himself as responsible for his actions. Once this critical shift of viewpoint has occurred in the person, all of the essential features of obedience follow. [Thus] the major problem for the subject is to recapture control of his own regnant processes once he has committed them to the purposes of the experimenter. (pp. xii, xiii)

In addition to this presumed agentic state, Milgram explained, a variety of factors lock the subject into the situation. These include situational factors such as politeness and awkwardness of withdrawal, absorption in the technical aspects of the task, the tendency to attribute impersonal quality to forces that are essentially human, a belief that the experiment serves a desirable end, the sequential nature of the action, and anxiety.

It seems reasonable to suppose that something like the constellation of factors above accounts for the subjects' obedience. At the time Milgram made his fascinating observations, such an explanation appeared highly probable and fairly complete. However, unlike Milgram's observations, the evidence in favor of this explanation is fairly circumstantial. The best that can be said, for instance, about Mil-

gram's key postulate of the agentic state is that it makes sense and that, if true, it may account for the data.

Certain developments in cognitive psychology that came to their own after 1974 suggested the presence of another key causative factor. Before making the connection between obedience and cognition, we need to familiarize ourselves with these developments. For the sake of brevity, I shall describe here only a few recent experiments that seem most directly applicable in this context (Nissani, 1989a, 1989b; Nissani & Hoefler, in press; Nissani & Maier, 1990).

These experiments were patterned after, and provide striking confirmation of, earlier observations (Festinger, Riecken, & Schachter, 1964; Karmiloff-Smith & Inhelder, 1975; Kuhn 1974; Milgram, 1974, 1984; Ross & Anderson, 1982). In these more recent experiments, subjects were recruited to evaluate the efficacy of a self-contained instructional manual. Before they could provide the needed appraisal, they were told, they needed to acquire a first-hand experience of its content by studying it and following the instructions it provided for about four hours. At some point in the teaching process, the manual introduced a false volume formula for a sphere—a formula that led subjects to believe that spheres were 50% larger than they actually were. Subjects were then given an actual sphere and asked to determine its volume, first by using the formula and then by filling the sphere with water, transferring the water to a box, and directly measuring the volume of the water in the box. The key question was, Would subjects believe the evidence of their senses and abandon their prior beliefs in the formula, the competence of the experimenter, and the legitimacy of the entire setup? Preliminary observations (Nissani, 1989a, 1989b) suggested to the subjects that the task was far more difficult than expected: No subject decisively rejected the false formula or declined to use it in subsequent tasks. In later experiments, various attempts were made to ease the conceptual transition called for by this experiment. In one variation (Nissani & Hoefler, in press), all subjects held a PhD in a natural science and were employed as research

scientists and professors in two major research universities. A special section, involving measurements of a second ball, was introduced and constructed with the deliberate aim of helping these scientists break away from the false formula. In another variation (Nissani & Maier, 1990), the discrepancy concerned the circumference of an ellipse, thereby ruling out the possibility that earlier results were ascribable to the difficulty of dealing with three-dimensional concepts. But none of these variations substantially altered the initial results:

The preliminary observations reported here suggest that the importance of conceptual conservatism has been underestimated in the psychological literature and that the insistence that the phenomenon constitutes one of the major impediments to progress in the history of ideas could very well be correct. In particular, although conceptual conservatism has received the attention of experimentalists, although its importance in human affairs has been long recognized and although the results reported here are based on a small sample, the qualitative outcome of this study—all subjects clung in practice to an observationally absurd formula and none rejected it outright even on the verbal level—are surprising. Even when we deal with ideologically neutral conceptions of reality, when these conceptions have been recently acquired, when they came to us from unfamiliar sources, when they were assimilated for spurious reasons, when their abandonment entails little tangible risks or costs, and when they are sharply contradicted by subsequent events, we are, at least for a time, disinclined to doubt such conceptions on the verbal level and unlikely to let go of them in practice. (Nissani, 1989a, pp. 23–24).

These results poignantly suggest a rather counterintuitive conclusion that could not be fully appreciated by Milgram 16 years ago: Transitions from one belief to another are not as smooth as common sense or intuition would suggest. For instance, attempting to provide a retrospective explanation for his failure to reject the false formula of the sphere, one of the subject-scientists wrote "It is difficult to imagine that one could be deliberately deceived in an exercise like this" (Nissani & Hoefler, in press).

Consider the typical subjects in Milgram's basic paradigm. They came to participate in a scientific investigation at an impressive, well-equipped laboratory at Yale University. They had every reason to believe that the experiment was conducted by responsible people. They had never before heard of tortures, killings, inhumanity, or immorality associated with modern scientific experiments. In fact, not only Milgram's subjects, but all of us, share this eminently reasonable belief. We know that university scientists are working under various legal and ethical constraints, and

that barbarism of any kind is simply out of the question. Milgram's subjects walked into the experiment taking for granted the responsibility and basic morality of the entire setup. As in the case of subjects in a conceptual shift experiment, the experimental evidence contradicted this belief. Disobedience in such a setting presupposes a conceptual shift: Milgram's subjects had to discard their belief in the morality of the experimenter. "I knew you wouldn't let anything happen" to the learner, one of Milgram's subjects said in an effort to explain his obedience (Milgram, 1974, p. 83). In contrast, one disobedient subject treated the experimenter "as a dull technician who does not see the full implications of what he is doing" (Milgram, 1974, p. 48).

If this conclusion is correct, Milgram's opinion that "people can't be counted on to disobey malevolent authority" and that "they obey as long as the command comes from legitimate authority" (Milgram, 1974, p. 89) is either incorrect or only partially correct. Rather, what people cannot be counted on is to realize that a seemingly benevolent authority is in fact malevolent, even when they are faced with overwhelming evidence that suggests that this authority is indeed malevolent. Hence, the underlying cause for the subjects' striking conduct could well be conceptual and not the alleged "capacity of man to abandon his humanity . . . as he merges his unique personality into larger institutional structures" (Milgram, 1974, p. 188).

Some of Milgram's own data support this interpretation:

1. Milgram's results are surprising. Laymen and social scientists alike were unable to foretell the extent to which subjects would obey the experimenter. Likewise, laypersons and social scientists were unable to predict the behavior of subjects in conceptual shift experiments (Nissani & Hoefler, in press). It is entirely possible that both inadequate forecasts are traceable to a single factor—underestimating the excruciating difficulty of abandoning a strongly held, eminently reasonable belief.

2. In one of Milgram's variations, subjects were led to believe that the experiment was conducted by a private research firm. This single difference decreased obedience rate from 65% to 48% (Milgram, 1974, p. 69). This is consistent with the conceptual shift interpretation: Because private research firms are less prestigious than Ivy League schools, it is easier under these conditions to abandon the belief in the experimenter's essential decency.

3. In another experimental variation, a single element of betrayal and patent injustice was introduced, leading obedience to drop from 50% to 40% (Milgram, 1974, p. 66). This result is again consistent with the conceptual shift interpretation proposed here.

A new experimental variation in Milgram's protocol could readily test the purely moral conflict Milgram's observations have so far failed to capture. As in other variations, the authority figure must be portrayed as legitimate. But, by the time the teaching session begins, this figure must appear as highly callous and irresponsible. If successful, this variation would create a genuine conflict between willing obedience to malevolent authority and the voice of conscience. The data from Milgram's own experiments, the near-unanimous consent of Milgram's survey respondents, and the cognitive data underscoring the difficulty of discarding reasonable beliefs, strongly suggest that obedience in such situations would be substantially lower than it was in Milgram's basic paradigm.

I hope that this crucial experiment will be undertaken by one or more readers of these lines.

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