

Understanding Behavior in the Milgram Obedience Experiment: The Role of Personality, Situations, and Their Interactions

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Among the far-reaching implications that have been drawn from Milgram's obedience research is that situations powerfully override personal dispositions as determinants of social behavior. A focused review of the relevant research on the Milgram paradigm reveals that the evidence on situational determinants of obedience is less clear than is generally recognized; contrary to the commonly held view, personality measures *can* predict obedience; another kind of dispositional variable, enduring beliefs, is also implicated in the obedience process; and approaches suggested by interactionist perspectives can provide some integration of the literature. The article concludes with a discussion of the broader inferences about obedience and social behavior called for by this review and the enduring significance of Milgram's obedience research.

It is now 30 years since Milgram first began his series of experiments to study the dynamics of obedience to authority (Milgram, 1963, 1964a, 1964c, 1965a, 1965b, 1965c, 1967, 1974). Despite the passage of time, their position of prominence in psychology has not faded, as citation counts (e.g., Institute for Scientific Information, 1981; Kasmer, Haugtvedt, & Steidley, 1988; Perlman, 1984), peer opinion (Diamond & Morton, 1978), or even an informal perusal of recent introductory-level texts will reveal.

The continuing salience of the obedience work can be attributed to its many distinctive features. First, of course, is the unexpected enormity of the basic findings themselves—that 65% of a sample of average American adult men were willing to punish another person with increasingly higher voltages of electric shock all the way to the maximum (450 volts) when ordered to by an experimenter who did not possess any coercive powers to enforce his commands (Milgram, 1963). When asked to predict the outcome of the obedience experiment, neither a group of Yale seniors (Milgram, 1963) nor a group of psychiatrists (Milgram, 1965c) were even remotely close to predicting the actual result: Their predicted obedience rates were 1.2% and 1.25%, respectively.

Second, Milgram's obedience studies are distinctive because they represent one of the largest integrated research programs in social psychology: Milgram conducted at least 21 variations of his basic experimental paradigm (see Milgram, 1974, p. 207).

Third, very few works can match the obedience studies in the

fervor with which they have been debated. Over the years, the obedience research has been a target of both criticism (e.g., Baumrind, 1964; Bettelheim, cited in Askenasy, 1978; Kelman, 1967; Masserman, 1968; Mixon, 1971; Orne & Holland, 1968; Warwick, 1982; Wrightsman, 1974) and praise (e.g., Askenasy, 1978; Brown, 1986; Crawford, 1972; Elms, 1972, 1982; Etzioni, 1968; Kaufmann, 1967; A. G. Miller, 1986; Ring, 1967; Ross, 1988; Zimbardo, 1974). More than any other research in social psychology, the obedience experiments have been embroiled from the beginning in a number of controversies in which they have played a central and enriching role. These include the ethics of research (e.g., Abse, 1973; Baumrind, 1964; Bickman & Zarantonello, 1978; Elms, 1982; Errera, 1972; Harris, 1988; Holmes, 1976; Kelman, 1967; Milgram, 1964b, 1973, 1974, 1977b; Ring, Wallston, & Corey, 1970; Schlenker & Forsyth, 1977; Sieber, 1984; Warwick, 1982), the social psychology of the psychological experiment (Holland, 1967; Milgram, 1968, 1972; Orne & Holland, 1968), and the deception versus role-playing controversy (Baumrind, 1964; Cooper, 1976; Forward, Canter, & Kirsch, 1976; Freedman, 1969; Geller, 1982; Ginsburg, 1979; Greenwood, 1983; Hendrick, 1977; A. G. Miller, 1972; Mixon, 1971). With regard to the latter, it is especially noteworthy that the strongest evidence in favor of role-playing as an alternative to the deception experiment comes from three role-playing versions of the obedience experiments that have found levels of obedience comparable to the originals (Geller, 1975, 1978; Mixon, 1971; O'Leary, Willis, & Tomich, 1970). An insightful examination of the obedience research emphasizing the controversies surrounding it can be found in A. G. Miller (1986).

Fourth, Milgram's obedience research is unusual in its relevance to disciplines outside of psychology. It has been discussed in publications devoted to topics as wide ranging as communication research (Eckman, 1977), philosophy (Patten, 1977), political science (Helm & Morelli, 1979), psychiatry (Erickson, 1968), education (Hamachek, 1976), and Holocaust studies (Berger, 1983; Sabini & Silver, 1980), and has even appeared in books of readings of English prose (Comley, Hamilton, Klaus, Scholes, & Sommers, 1984; Eastman et al., 1988).

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Finally, the breadth and durability of interest in the obedience research is due, no doubt, to the fundamental and far-reaching implication about human nature that has been drawn from it—the apparent power of situational determinants to override personal dispositions. But whether or not broad lessons about the primacy of situational determination can be drawn from the obedience research hinges on a clearer understanding of just what has and has not been demonstrated in the Milgram-type experiment itself and how to best account for it. The goal of this article is to contribute to that understanding. Specifically, I will draw on the accumulated research on the obedience paradigm with a focus on the findings that bear most directly on the broad extrapolations about situational versus dispositional influences on social behavior that have been made from it.

First, I will review the evidence on situational determinants of obedience. The obedience experiments are widely regarded as among the prime examples of how behavior is powerfully responsive to situational variations. Yet, a survey of the relevant research and a closer look at Milgram's own studies will reveal that a more modest and differentiated perspective on the matter is called for. Second, I will review the evidence on personality correlates of obedience. As the flip side of the usual situational emphasis given to the obedience experiments, the role of personality has typically been given short shrift in discussions of the research. As will be seen, the evidence suggests that personality variables can predict obedience. However, some of the findings are either contradictory or weak and the evidence for theoretically dictated personality-obedience relationships is mixed. Third, I will examine the role of another type of dispositional variable—enduring beliefs. Specifically, I will show that enduring beliefs about ceding versus retaining personal control seem to be salient and predisposing factors in obedience to authority. Fourth, I will examine the contribution of a person by situation interactional approach toward understanding obedience. The primary value of interactionism is not in the number of interactional studies of obedience promoted—which turn out to be few. Rather, I will argue, it is in the identification of potential situational and dispositional moderators that can enhance the prediction of obedience to authority. I will conclude with a discussion of the broader implications for understanding obedience and social behavior called for by my analysis and the enduring significance of Milgram's obedience research.

Situational Determinants of Obedience

The obedience work has had a special appeal among social psychologists because of its congruence with and influence on the dominant approach (at least, until recently) in social psychology—the preference for looking at features of the immediate situation, rather than the characteristics the person brings into it, for causal explanations of behavior (see Blass, 1977a, 1984b). Over the years, the findings of the obedience studies have been held up as examples, par excellence, of the controlling power of the situation (e.g., Gaertner, 1976; Ross, 1977, 1988; Shaver, 1985; Zimbardo, 1974; but see also Sabini & Silver, 1983). For example, Helmreich, Bakeman, and Scherwitz (1973) stated:

The upset generated by a Milgram or a Zimbardo . . . in part stems from ethical concerns. But another part of their power lies precisely in their demonstration of how strong situational determinants are in shaping behavior. No resort to a correlation between "those" people who do "evil" things is allowed: the subjects were randomly assigned. (p. 343)

Actually, it is no surprise that the "message" of situational determination is so often drawn from the obedience studies, because Milgram himself emphasized such a perspective on his research. Thus, for example, in his final article dealing with obedience, Milgram (1984; also in Milgram, 1987) stated that "the crux of Milgram's inquiry is a set of experimental variations which examine the variables which increase or diminish obedience" (p. 446), echoing similar statements in his earlier writings (e.g., Milgram, 1964c, p. 9; 1965c, p. 60; 1974, p. 26). One of the strongest statements in this regard comes toward the end of Milgram's (1974) book:

The disposition a person brings to the experiment is probably less important a cause of his behavior than most readers assume. For the social psychology of this century reveals a major lesson: often, it is not so much the kind of person a man is as the kind of situation in which he finds himself that determines how he will act. (p. 205)

It should be noted, however, that in emphasizing situational determinants Milgram did not question the validity of personality traits as had some of the situationists early on in the history of the trait-situation debate (see Blass, 1977a, 1984a). In fact, in the paragraph preceding the above quote, Milgram (1974), after noting that he found only weak or inconsistent evidence concerning individual-difference correlates of obedience, stated: "I am certain that there is a complex personality basis to obedience and disobedience. But I know we have not found it" (p. 205).

Given the widespread agreement that the obedience experiments represent a powerful demonstration of situational influences, it makes sense to ask just how correct that consensus is from the vantage point of over 25 years of accumulated research on the Milgram obedience paradigm.

There is no question that modifications in the physical and social arrangements in the setting of the obedience experiment can have powerful effects. Thus, for example, Milgram found that when two confederates playing the role of subjects refused to continue partway into the shock series, the vast majority of subjects followed suit, with only 4 out of 40 giving the highest shock (Milgram, 1965a; 1974, Experiment 17, pp. 116–121). Closeness of the authority to the subject also had a pronounced effect. When the experimenter left the laboratory after the start of the experiment and then gave his orders over the phone, there was a significant drop in obedience. Only 9 out of 40 subjects, as opposed to 26 out of 40 in the comparison baseline condition, were fully obedient (Milgram, 1965c, 1974, Experiment 7, pp. 59–62). In every study that has compared a self-decision condition (i.e., where on each trial the subject can choose whether or not to shock and/or what shock level to give) with the more standard condition in which the subject is required to give the next higher voltage level on each subsequent trial, the self-decision condition finds a significant drop in the amount of punishment administered (Bock, 1972; Milgram, 1974, Experiment

11; Kilham & Mann, 1974; Mantell, 1971; Shalala, 1974; Shanab & Yahya, 1977, 1978). When certain incongruities in social structure are introduced into the obedience experiment, the amount of shocks subjects are willing to give is greatly diminished. Thus, not a single subject gave the 450-volt shock (a) when the experimenter called a halt to the experiment but the victim wanted to continue, (b) when the authority took the role of the victim and then wanted the shocks to stop, or (c) when one experimenter ordered a halt to the proceedings and another experimenter commanded the subject to continue (Milgram, 1974, Experiments 12, 14, and 15).

Yet, with a number of other experimentally manipulated variables, the evidence is either contradictory or inconsistent with the demonstrated effects of these variables in other related behavioral domains. Milgram (1974, Experiment 13) found that when another "subject" assumes authority in the absence of the experimenter, subjects are significantly less obedient (only 4 of 20 administered the maximum shock), presumably because a peer's commands do not carry the same force and legitimacy as those of the higher-status experimenter. The findings of Shalala (1974), in an obedience experiment with low-ranking military personnel at Fort Knox as subjects, support these results. Shalala found that when a peer (a private) served as the experimenter rather than a lieutenant colonel, there was a significant drop in obedience to the order to shock the learner. Yet, in two experiments in which the experimenter's authority was "delegitimized," his ability to command obedience still remained substantial. Both Rosenhan (1969) in the United States and Mantell (1971) in West Germany conducted obedience experiments that contained a condition in which the experimenter is discovered to be merely an undergraduate working without professional supervision. The findings were very similar to each other. In Rosenhan's experiment, 53% of the subjects gave the maximum shock, whereas 52% of Mantell's subjects did so. In both experiments, 85% of the subjects in the baseline condition were fully obedient, a significantly higher rate than the 53% and 52% rates found in the "delegitimation" conditions in the two experiments. Yet these latter figures still represent a majority of subjects obeying the experimenter, and these figures are not significantly lower than those found by Milgram in the condition comparable to Mantell and Rosenhan's baseline conditions (i.e., 62.5%, the voice-feedback condition, Milgram, 1965c; 1974, Experiment 2, p. 35).

Both common sense and evidence from studies on aggression (e.g., Baron, 1971, 1973; Rogers, 1980) suggest that under certain conditions the possibility of future retaliation by the recipient of electric shock should reduce the amount of punishment the subject would administer. The only study using the Milgram obedience paradigm to examine the role of retaliation was a doctoral dissertation by Costanzo (1976). Subjects in her retaliation condition were told that after the completion of the first session, they would switch roles with the victim. Hence, presumably, these subjects anticipated retaliation. For subjects in the no-retaliation condition, this information was omitted from the instructions. Anticipated retaliation had no effect whatsoever on obedience; overall, 81% of the subjects obeyed the order to give the maximum shock.

Another example of an experimental variable not showing effects in the obedience experiment, though one might expect

them on the basis of findings in other behavioral domains, comes from obedience studies in which the subject gets to observe a model before his or her own turn to participate. The imitative effects of models have been demonstrated with both negative (e.g., Geen, 1978) and positive (e.g., Rushton, 1979) forms of social behavior. Yet, an obedient model does not seem to add to the authority's power to elicit obedience. The previously mentioned study by Rosenhan (1969) contained a condition in which the subject first watched an obedient, though protesting, model continue to 450 volts. The rate of obedience in this condition was 88%, a trivial increase over the rate of 85% in the baseline, standard condition. In another condition, a disobedient, "humane" model stopped after 210 volts, telling the experimenter that he had to discontinue because the learner was in too much pain. Here the model's influence was more discernible: The obedience rate of the observing subjects was only 58%. The difference between this rate and the 85% obedience rate in the baseline condition approaches significance, $\chi^2 = (1, N = 39) = 3.54, p = .06$, by my analysis. (All subsequent data analyses of Milgram's findings reported in this article are also mine.) Powers and Geen (1972) also found that an obedient model had a less pronounced effect on a subject's level of obedience than a disobedient one. The strongest evidence against the facilitative effects of an obedient model comes from an experiment conducted with Australian college students by Kilham and Mann (1974). Their focus was on comparing obedience in subjects when they merely had to transmit the experimenter's orders versus when they played the standard role of having to shock the victim (executants). When a subject was in the transmitter condition, a confederate played the role of executant. When the executant was a real subject, a confederate played the role of a transmitter. The latter was, in essence, an obedient model. Despite having this feature of modeled obedience, this experiment yielded the lowest obedience rate reported in the literature for a standard condition—28%. It should be noted that although the lack of an effect of an obedient model in the Rosenhan (1969) study might have been due to a ceiling effect, that possibility is clearly not applicable to the Kilham and Mann results.

We have looked at a number of situational determinants whose role in influencing obedience has been studied. The evidence concerning these effects is, as has been shown, mixed and certainly not as uniformly pervasive as the widespread and consensual situational emphasis given the obedience studies in the literature would suggest.

Our survey of various situational factors has taken us, in some instances, to variants of the obedience experiments conducted by researchers other than Milgram. But the data that are among the most persuasive in raising doubts about the all-powerful role claimed for situational effects comes from among the earliest and most central findings reported by Milgram, the four-part proximity series (Milgram, 1965c; 1974, Experiments 1-4, pp. 32-43). In this set of experiments, Milgram tried to vary the degree of salience of the victim to the subject. The first condition was the *remote* condition—the first obedience study reported by Milgram (1963)—in which the subject received only minimal feedback from the learner, who was situated in an adjacent room. This feedback was in the form of pounding on the wall following the 300 and 315 voltage shocks. The second

condition, the *voice-feedback* condition, introduced tape-recorded vocal protests that increased in intensity as the shocks increased in voltage. The third condition, the *proximity* condition, reduced the psychological and physical distance between teacher and learner even further by seating the learner within a few feet of the teacher. Now, the learner was not only audible but also visible to the subject. The final condition, in which the subject's involvement in punishing the learner was most direct and unambiguous, was the *touch-proximity* condition. Here, the victim received "shocks" only when he placed his hand on a shock plate. After 150 volts, he refused to do so, and the subject had to force the learner's hand down onto the shock plate in order for him to get the punishment. As the victim was made increasingly salient to the subject, obedience dropped. Sixty-five percent of subjects gave the maximum shock in the remote condition, 62.5% in the voice-feedback condition, 40% in the proximity condition, and only 30% in the touch-proximity condition. Milgram described these results as follows: "Obedience was significantly reduced as the victim was rendered more immediate to the subject" (Milgram, 1965c, p. 62; 1974, pp. 34-36). Milgram did not supply any results of data analyses to accompany this statement. My own analysis yields $\chi^2(3, N = 160) = 14.08, p < .01$, for the overall effect across all four conditions.

However, closer scrutiny of condition-by-condition differences reveals a puzzling set of results. The first one, not even requiring a test of significance, is the fact that the remote and voice-feedback conditions yielded almost identical rates of obedience. In the remote condition, 26 subjects out of 40 administered the maximum shock, whereas 25 of 40 did so in the voice-feedback condition. This occurred even though, in the voice-feedback condition, the evidence of the learner's suffering is much more prolonged, pronounced, and unambiguous and therefore much harder to put out of mind than in the remote condition. Specifically, the voice-feedback condition consisted of the introduction of vocal complaints from the learner beginning after the 75-volt shock was administered and continuing with rising intensity and urgency. For example, after receiving the 180-volt shock, the learner cried "I can't stand the pain" and at 270 volts, his response was described by Milgram as "definitely an agonized scream" (Milgram, 1974, p. 23). In the remote condition, by contrast, the voice of the victim was not heard at all, the only complaint taking the form of banging on the wall on two occasions—after the 300- and 315-volt shocks were administered.

Also not significant was the difference in obedience rates between the proximity and touch-proximity conditions, the third and fourth experimental variations in the four-part proximity series. In the proximity condition, 16 of 40 subjects were fully obedient, whereas the obedience rate was 12 of 40 in the touch-proximity condition, $\chi^2(1, N = 80) = .879$. Again, the small decrease in amount of obedience does not seem to be commensurate with the amount of increased involvement in the punishment of the victim. In the proximity condition, the teacher and learner were seated near each other; in the touch-proximity condition, after 150 volts, the teacher was in physical contact with the learner, having to force the latter's hand onto the shock plate in order to administer the shocks. Milgram described an experimental session in this condition as follows:

"The scene is brutal and depressing: [the subject's] hard, impassive face showing total indifference as he subdues the screaming learner and gives him shocks" (1974, p. 46). Altogether in the four-part proximity series, the following differences in obedience rates are significant: remote versus proximity condition—26 out of 40 versus 16 out of 40, $\chi^2(1, N = 80) = 5.01, p < .05$; remote versus touch-proximity condition—26 out of 40 versus 12 out of 40, $\chi^2(1, N = 80) = 9.82, p < .01$; voice-feedback versus proximity condition—25 out of 40 versus 16 out of 40, $\chi^2(1, N = 80) = 4.05, p < .05$; and voice-feedback versus touch-proximity condition—25 out of 40 versus 12 out of 40, $\chi^2(1, N = 80) = 8.50, p < .01$. It was also possible to conduct a further analysis, using maximum shock levels administered as the dependent measure, because Milgram (1974) provided a frequency distribution of break-off points for each of the conditions. Table 2 in Milgram (1974, p. 35) shows a continuous drop in subjects' break-off points as one goes from the remote condition ($M = 27.00$) through the voice-feedback ($M = 24.53$) and proximity ($M = 20.80$) conditions to the touch-proximity condition ($M = 17.88$). A one-way between-groups analysis of variance reveals that the overall effect across the four conditions is highly significant, $F(3, 156) = 11.09, p < .0001$. A follow-up test of between-condition differences, using the Newman-Keuls procedure, yields exactly the same pattern of results as was found for the obedience-rate scores; that is, the differences between the remote and voice-feedback conditions and between the proximity and touch-proximity conditions were not significant, and all others were.

Furthermore, the reliability of one of the significant effects within the proximity series can be questioned. Miranda, Caballero, Gomez, and Zamorano (1981) carried out an obedience experiment in Spain that was modeled closely on Milgram's procedures (e.g., they inscribed the same fictitious manufacturer's name on their "shock generator" as Milgram had used on his machine). These researchers did not find any difference in level of obedience between a voice-feedback and a proximity condition, contrary to Milgram's findings. It should be noted, however, that the small number of subjects used (24 altogether), ceiling effects, and possible cultural differences in responsiveness to situational cues could have all operated against obtaining an effect.¹

The question of reliability aside, does the pattern of results in the proximity series make sense? Milgram suggests a number of mechanisms that might account for the effects of changes in visibility and proximity of the victim to the subject (e.g., empathic cues, denial, and narrowing of the cognitive field) (see Milgram, 1965c, pp. 63-65; 1974, pp. 36-40). But why variations in amount and intensity of feedback (Experiment 1 vs. 2) or absence versus presence of physical contact (Experiment 3 vs. 4) did not also have effects still remains a puzzle.

There are additional findings of Milgram that are also problematic for the contention that situational factors are the preeminent determinants of obedience to authority—those of Experiment 5, the new baseline condition (Milgram, 1974, pp. 55-57, 60; also reported earlier in Milgram, 1965a). Experiment 5 was

¹ The latter factor is considered in more detail later in the section on interactionism.

similar to Experiment 2, the voice-feedback condition, with the addition of information indicating that the victim had had a heart condition. (There was also concurrently a change in location from a fancy laboratory to a more modest one.) The victim first revealed the heart problem while he was being strapped into the "electric chair." Then, the victim made further mention of it at three different voltage levels. For example, after "receiving" 330 volts, he shouted "Let me out of here. Let me out of here. My heart's bothering me. Let me out, I tell you . . ." (see Milgram, 1974, pp. 55-57). Logically, one would expect a victim with a heart condition to be perceived as being at greater risk than a victim who, though also protesting vehemently, does not mention a heart problem. Thus, the stimulus situations are clearly different in the voice-feedback and the new baseline conditions and yet the rates of obedience are very similar—62.5% and 65%, respectively. To sum up, the kind of findings just reviewed lead to the following question. Beyond the revelatory nature of situational obedience effects—that actions that were thought to be inflexibly rooted in one's conscience are more malleable than expected—one can ask: How much about the situational determinants of obedience has been demonstrated in an orderly way? Just how far has our knowledge of situational determinants been advanced when two knocks on the wall (Experiment 1), continuous screaming and pleading (Experiment 2), and the addition of complaints about the heart (Experiment 5) by the victim all yield similarly high obedience rates (62.5%–65%)? When the heart-complaint condition conducted by a new experimenter (Experiment 6) yields only a 50% obedience rate, which is the same order of magnitude as the Bridgeport replication (Experiment 10; 47.5%)? When making the victim visible and seating him close to the subject significantly reduces obedience (Experiment 2 vs. Experiment 3; 62.5% vs. 40%) but the introduction of the requirement of using direct, physical force does not cause any further substantive lowering of obedience (Experiment 4; 30%)?

In order to understand such a pattern of results and to be able to generalize from them, one has to be able to specify the underlying features of the situation that do and do not lead to changes in rates of obedience and to conceptualize them in terms of more molar constructs. If one cannot do this, not only will one be unable to use these findings to predict obedience in other settings, but an adequate explanation of the findings themselves—other than in terms of some idiosyncratic details of each experimental variation (e.g., elegant vs. more functional laboratory at Yale; a "dry, hard, technical-looking" vs. a "soft and unaggressive" experimenter; Milgram, 1974, Experiment 6, p. 58)—will remain elusive.

Role of Personality in Obedience

Although many studies of obedience, following Milgram's lead, have focused primarily on situational factors, there are a number of obedience studies that have incorporated personality variables either as the main focus of the research or in addition to an experimentally manipulated variable.

Before examining the findings of these studies, however, it is necessary to ask what the basis is for expecting personality or other stable dispositional variables to be predictive of obedience. The answer is straightforward: In most cases where

there are significant situational effects on obedience, the behavior of all subjects is still not accounted for. That is, even when a significantly higher proportion of subjects are obedient in experimental condition A than B, there are typically subjects who deviate from the overall pattern (i.e., subjects in condition A who are disobedient and ones in B who are obedient). In other words, that there are individual differences in obedience is a fact because in most obedience studies, given the same stimulus situation, one finds both obedience and disobedience taking place. Thus, attempts at finding personality correlates of obedience-disobedience can be seen as efforts aimed at "capturing" individual differences in reactions to authority within a systematic framework or construct. As I will show, individual differences in obedience have sometimes yielded to and other times eluded capture by measured personality variables.

One would not expect a personality measure that has only a tenuous theoretical relationship to the target behavior to be an effective predictor of that behavior (Blass, 1977a). Thus, it is no surprise that Eysenck's measure of introversion-extraversion was not found to be related to obedience in a previously mentioned experiment modeled closely on Milgram's procedures conducted in Spain (Miranda et al., 1981), because relationships to authority are not a salient feature of the construct (see Wilson, 1977, pp. 180-181).

A personality variable that is quite clearly theoretically relevant to obedience to authority is authoritarianism, a personality syndrome seen by its authors as made up of nine interrelated variables, one of which is *authoritarian submission*, defined as a "submissive, uncritical attitude toward idealized moral authorities of the ingroup" (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950, p. 228). Thus, quite appropriately, the first published study that examined the relationship between personality and obedience in the Milgram paradigm (Elms & Milgram, 1966; see also Elms, 1972) found obedient to be significantly more authoritarian on the F-Scale than disobedients. Participants in that study were 40 subjects from among the 160 participants in the four-part proximity series who had gone "against the tide" of situational pressures: 20 were drawn from among those who had been defiant in the remote or voice-feedback conditions and another 20 came from the group of subjects who had been obedient in the proximity or touch-proximity conditions. The two groups did not differ significantly on the standard MMPI scales, but defiants scored significantly higher on a social responsibility scale derived from the MMPI.

More recently, a dissertation by F. D. Miller (1975) studied obedience to an order for self-inflicted pain—that the subject should grasp some live electrical wires for 5 min while working on arithmetic problems. There was a small but significant correlation between subjects' degree of authoritarianism, as measured by a 10-item version of the F-Scale, and obeying orders to shock oneself, with the more authoritarian subjects being more obedient. This relationship was apparently quite tenuous, as it washed out when a dichotomous rather than a three-step measure of obedience was used. And, finally, the work of Altemeyer (1981, 1988) on his construct of right-wing authoritarianism (RWA) has relevance for the authoritarianism-obedience relationship. Altemeyer's RWA scale incorporated a reconceptualization of authoritarianism—it consists of only the three attitudinal clusters of authoritarian submission,

authoritarian aggression, and conventionalism, rather than the nine dimensions of the original F-Scale—as well as psychometric refinements (i.e., balanced item wording and high interitem correlations). Altemeyer found that scores on the RWA scale correlated significantly with the average intensity of shock administered in a self-decision verbal-learning task (1981, pp. 200–202). Next to the shock box was another one that had a large red push button on it. A warning above it read: "Danger. Very severe shock. Do not push this button unless you are instructed to do so." When the experiment was over, the experimenter ordered the subject to push the red button "to administer an extra strong shock as punishment for not trying" (Altemeyer, 1981, p. 273). Here, subjects' level of authoritarianism became irrelevant because the vast majority of subjects complied—obedience rates ranged from 86% to 91% across four studies.

Another personality variable, besides authoritarianism, that has potential theoretical relevance for obedience to authority is Rotter's construct of interpersonal trust (Rotter, 1971). Trust is a personality variable that should be relevant to behavior in the obedience experiment according to two theoretical perspectives differing from Milgram's, those of Mixon (1971, 1972, 1976, 1979) and Orne and Holland (Holland, 1967; Orne & Holland, 1968).

Mixon argues that if subjects were sure that the "learner" was being harmed, virtually everybody would be disobedient. Subjects in a scientific study have every reason to expect that safeguards have been taken to protect participants from harm, and they trust the experimenter when he gives the assurance that "Although the shocks can be extremely painful, they cause no permanent tissue damage." Thus, according to Mixon, the assumption that nothing of a harmful nature could take place in a scientific experiment leads obedient subjects to see themselves as inflicting painful shocks but not permanent injury on the "learner." However, they do not question that the shocks are genuine (Mixon, 1976, 1979). For Orne and Holland (Holland, 1967; Orne & Holland, 1968), however, trust that safety precautions have been taken together with the "demand characteristics" of the experimental setting—a cool, unperturbed experimenter urging the subject on despite the victim's protests—tip the subject off that the shocks are not real.

Thus, trust in the benign purposes of the experimenter is the key to understanding the obedient subjects' behavior, according to both Mixon and Orne and Holland, although they disagree about its assumed consequences: For Mixon, subjects' trustfulness leads them to believe that the shocks are painful but not harmful; for Orne and Holland, that they are not real at all. According to their perspectives, one would therefore expect that the more trusting people are, the higher should be their level of obedience. The evidence, however, provides only mixed support for this conjecture. Holland (1967) found no relationship between trust, as measured by Rotter's Interpersonal Trust Scale, and amount of obedience. (Holland also administered the Crowne and Marlowe [1960] Social Desirability Scale but it, too, failed to relate significantly to obedience.) On the other hand, F. D. Miller (1975) found that more trusting subjects—as measured by his Attitudes Toward Experiments and Experimenters scale—were also significantly more likely to follow instructions to receive electric shock than less trusting subjects.

Another individual-difference dimension that has been studied—and shown to have some relationship to obedience—is level of moral judgment as conceptualized by Kohlberg's cognitive-developmental theory. Milgram (1974) reported that among 34 Yale undergraduates who had participated in his pilot studies, Kohlberg found that those who defied the experimenter were at a higher stage of moral development than those who were obedient to his orders. Milgram described these findings as "suggestive, though not very strong" (Milgram, 1974, p. 205; see also Kohlberg, 1969, and Kohlberg & Candee, 1984).

A cognitive correlate of obedience of a different sort was identified by Burley and McGuinness (1977), namely, social intelligence. According to these authors, a person with a high degree of social intelligence "may develop a clearer perception of the situation utilizing the situational cues to guide his behavior." It also involves the ability to "effectively . . . influence the outcomes of situations either via the generation of a variety of output or by the generation of the one correct solution" (Burley & McGuinness, 1977, pp. 767–768). They found that subjects who did not comply with the experimenter's commands to give increasingly more intense shocks on a 15-step shock generator scored significantly higher on a measure of social intelligence than those who did comply. Although the study does open up the possibility that individual differences on an ability or skill dimension might mediate obedience to authority, it is weakened by the fact that the social intelligence test used dates from 1927, and thus is unlikely to be up to contemporary psychometric standards.

Haas (1966) provided evidence that individual differences in hostility can account for variations in obedience. In his study, a group of lower-level company management staff were ordered by top management to critically evaluate their superiors and to specifically indicate which of them they felt should be fired. It was stressed that their recommendations would serve as "the final basis for action." The participants' recommendations were classified into six categories representing different degrees of obedience to the destructive orders of management. These ranged from refusal to participate to full obedience represented by a recommendation to fire. Haas (1966) found a significant positive correlation ($r = .52, p = .01$) between the managers' degree of obedience and their hostility, as measured by the Siegel (1956) Manifest Hostility Scale, a measure composed mostly of items from the MMPI. Altogether, only 6 of 44 persons (13.6%) obeyed the order to recommend dismissals, and 9 (20.5%) refused to participate altogether.

Role of Beliefs in Obedience

There is another group of dispositional variables—besides the personality measures just reviewed—that have demonstrated a significant relationship to obedience to authority. These are measures tapping presumably stable beliefs about the determinants of one's lot in life. There are four relevant studies, with three of them pointing to a link between these kinds of beliefs and obedience to authority. Two of them involved Rotter's (1966) internal versus external control (I-E) dimension and the third used measures of religious orientation.

One of the studies using the I-E scale was F. D. Miller's (1975) doctoral dissertation. In that study, subjects were required by

the experimenter to shock themselves by grasping live electrical wires and to collate booklets and address labels. One experimental variable was the experimenter's apparent social status within the psychology department (high vs. low bureaucratic authority). Miller found that a composite measure of compliance with these three requests varied as an interactive effect of the authority's bureaucratic status and subject's I-E score. Externals obeyed more in a high than a low bureaucratic authority condition, but internals were unaffected by the manipulation of the experimenter's status.

The other study that found interactive effects involving I-E was Holland's (1967) dissertation. In an attempt to apply Orne's demand characteristics perspective to the obedience experiment, Holland (1967) created three experimental conditions. Condition 1 was a methodological replication of Milgram's voice-feedback condition. In Condition 2, subjects were told by one experimenter that they were not regular, naive subjects but rather controls who were "to watch carefully what goes on, what happens to you and what is said to you, so that you can figure out what this experiment is really all about" (p. 101). They were, however, to act as real subjects would so that the second experimenter would not be able to tell that they were just playing the role of naive subjects. In Condition 3, subjects were told that the learner would actually be receiving only one tenth of the voltages indicated by the shock labels and to hide this knowledge from the second experimenter and feign being regular subjects. Holland (1967) reported that although Condition 2 yielded a somewhat lower rate of obedience than the other conditions, the three conditions did not differ significantly among themselves and from Milgram's results in number of subjects who were fully obedient. He also found that the second experimenter could not reliably identify which of the three conditions a particular subject was in. Both of these findings are interpreted by Holland (1967) and Orne and Holland (1968) as supportive of their contention that subjects in Milgram's experiments also saw through the deception but successfully hid their knowledge from the experimenter.

Complicating this interpretation are two additional findings of Holland (1967), however. First is the fact that among the subjects who were rated low in suspiciousness, 70% were fully obedient—a rate similar to Milgram's. Second, when highest voltage administered was the dependent measure, Holland found the subjects in his second condition to be significantly less obedient than those in Conditions 1 and 3 and Milgram's subjects. That is, what appeared only as a nonsignificant trend with number of subjects who were obedient turned into a full-blown statistically significant effect when the break-off point was the dependent measure. Holland also reported that neither Rotter's I-E and trust scales nor Crowne and Marlowe's Social Desirability Scale predicted obedience. However, Holland (1967) did not conduct any statistical analyses factorially combining each personality variable with the three experimental conditions. I was able to conduct such a series of analyses because Holland (1967) provided the raw data for all his subjects in an appendix. Specifically, I conducted a series of 2 (Personality Score: high vs. low) \times 3 (Condition) between-groups analyses of variance in which each personality variable, in turn, was combined factorially with the conditions variable. In one set of analyses, obedience/disobedience² served as the dependent vari-

able; in the other set, the dependent variable was the maximum shock administered. I found a conditions main effect paralleling Holland's findings; that is, obedience, as measured by the highest shock given, was significantly lower in the second condition than in either of the other two conditions. But I also found a significant I-E \times Condition interaction that clearly qualified the main effect. It showed that the drop in obedience in the second condition was largely due to the internals' obedience scores. Externals, however, did not show any drop in obedience at all.³ If one assumes that subjects in Condition 2 felt most coerced and manipulated by the experimenter, this finding is consistent with the results of other studies on the relationship between I-E and social influence. After reviewing such studies, Strickland (1977) concluded:

Internals not only appear to resist influence but react more strongly than externals to the loss of personal freedom. Internals do this in some cases by engaging in behaviors which are oppositional to the responses desired by the experimental agent who is attempting to manipulate or change behavior. (p. 232)

A final study involving the I-E dimension did not find it related to obedience. In a recent obedience study conducted in Austria by Schurz (1985), subjects were instructed to apply increasingly painful "ultrasound" stimulation to a "learner," which at its highest levels on a 20-step continuum could supposedly cause skin damage. Altogether, 45 of 56 subjects (80%) pressed all 20 switches on the switchbox, but neither Levenson's (1974) IPC scale, a three-factor version of Rotter's I-E scale, nor scores on D. N. Jackson's (1967) Personality Research Form were predictive of obedience. However, disobedient subjects had significantly higher pulse rates at the time they refused to continue and a greater tendency to accept responsibility for their actions than the obedient subjects.

The study that used measures of religious orientation in relation to obedience to authority was a doctoral dissertation by Bock (1972). Bock examined the joint effects of different types of authority (scientific vs. religious) and individual differences in religiousness as measured by scales tapping various dimensions of Christian religious orientation.

Bock conducted a "heart-problem" voice-feedback obedience experiment that systematically varied the kind of author-

² In the three analyses of variance in which obedience versus disobedience was the dependent variable, disobedience was coded as 1 and obedience as 2. None of the effects in the three analyses reached significance. Loglinear analyses (logit models) were also conducted on these data and similarly yielded nonsignificant outcomes. In each analysis, the model of equiprobability was nonsignificant, indicating that there was no significant variation across the cells in the design.

³ This pattern was essentially duplicated with obedience/disobedience as the dependent variable. Among internal subjects, only 2 out of 8 were fully obedient in Condition 2, compared with obedience rates of 8 out of 10 and 9 out of 12 in Conditions 1 and 3, respectively. Among externals, however, all three conditions yielded similarly high obedience rates: 7 out of 10, 9 out of 12, and 7 out of 8 in Conditions 1, 2, and 3, respectively. A one-way analysis of variance of the scores of only the internal subjects yielded a significant effect, whereas a similar analysis of the externals' scores did not. These results should be interpreted with caution, however, because the overall interaction *F* did not attain significance ($p < .11$).

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ity the experimenter represented. In the "scientific authority" condition, the experimenter was presented as a graduate student in psychology; in the "religious authority" condition, he was introduced to the subjects (all of whom were Christians) as a minister at a local church. A third condition, the "neutral authority condition," involved a self-decision punishment procedure in which the experimenter introduced himself as a salesman who knew very little about the experiment other than the procedure. Bock found a significant authority main effect such that both the scientific authority condition ($M = 20.68$) and the religious authority condition ($M = 16.92$) yielded significantly higher shock levels than the self-decision condition ($M = 9.24$). The difference in obedience levels between the scientific and religious authority conditions was not significant.

To assess individual differences in religiousness, Bock had his subjects complete three measures. The primary one was King and Hunt's multidimensional measure of religious orientation (King & Hunt, 1972), consisting of separate scales tapping a large domain of Christian religious response including religious beliefs, attitudes, knowledge, and behavior. One factor, for example, is called Creedal Assent, measuring the degree of endorsement of traditional Christian theology. An example of another factor is Devotionalism, which is composed of eight items focusing on inner religious experience. Bock conducted 16 factorial analyses of variance, in each case a different religious dimension being combined with the authority variable. In addition to the authority condition main effect already described, Bock found nine of the analyses to yield significant religious dimension main effects and eight significant Religious Dimension \times Authority Condition interactions.

The interactions indicated that the significant authority main effect (i.e., that both the scientific and religious authority elicited significantly higher amounts of obedience than the neutral authority) was moderated by each of the eight religious dimensions. That is, they revealed that the significant authority main effect did not hold equally across the whole range of positions on the religious variables. Examining the patterns of shock scores elicited by the religious and scientific authorities relative to scores in the neutral authority condition, one finds, generally speaking, that they tend to increase as one goes from the least religious, through the moderately religious, to the highly religious subjects. Taking into account the significant simple effects, the nature of the interactions can be described as follows: Among the highly and moderately religious subjects, the scientific authority was always more effective than the neutral authority, and in most cases, so too was the religious authority. However, among the least religiously oriented subjects either no authority (religious or scientific) was more effective in eliciting obedience than the neutral authority condition (in five cases) or at most only one—the scientific authority—was more effective (three cases).

Bock also administered another measure of religiousness—Allport and Ross's (1967) Religious Orientation Scale (ROS). Besides the significant main effect of type of authority, Bock found a significant Religious Orientation \times Authority Condition interaction indicating that although scores on the ROS did not bear a relationship to obedience in the religious and neutral authority conditions, they did have a differential effect in the scientific authority condition. Intrinsically religious subjects

were most obedient, followed by the indiscriminantly pro-religious and the extrinsically religious, with the indiscriminantly antireligious showing the least obedience. In fact, among the latter, neither the scientific nor the religious authority was any more effective than the neutral authority.⁴

To sum up, the dispositional variables just reviewed tapped, directly or indirectly, beliefs about external controlling influences on one's life. In the case of the religious dispositional variables in Bock's study, the beliefs related to divine influence and authority, whereas in the case of locus of control (studies by Miller, Holland, and Schurz) the source of external influence was more amorphous or varied (e.g., chance, luck, or fate). What three out of four of these studies suggest is that beliefs about ceding versus retaining personal control seem to be salient and predisposing factors in obedience to authority. The evidence, in this regard, is clearest with religious variables, that is, variables centered around the belief that one's life is under divine control: Bock found that the higher scorers on many of the King-Hunt religious variables or the more intrinsically religious on Allport's ROS were more accepting of the commands of an authority. But those who scored low on a number of the King-Hunt measures or were indiscriminantly antireligious as measured by the ROS tended to reject any authority, be it scientific or religious.

The evidence regarding the salience for obedience to authority of beliefs about retaining versus relinquishing personal control over one's life as tapped by Rotter's locus of control measure is somewhat less clear and more complicated. My reanalysis of Holland's results revealed that the drop in maximum shock given in his Condition 2 (problem-solving set) subjects was largely due to the internals' scores in that condition. This finding is consistent with the theoretical view of the internal as one who believes that his or her outcomes are under personal control but is complicated by the fact that it was not duplicated with the same degree of statistical clarity when the dependent measure was the proportion of subjects who were fully obedient. Miller found that externals were more obedient to a higher than a lower status experimenter, whereas internals were not differentially affected by the status of the authority. Again, though this finding is consistent with theoretical expectations based on the locus of control construct, it is potentially limited by the atypical form of obedience involved (i.e., self-inflicted pain). Whether or not there would be a similar status by I-E interaction in the more usual obedience situation remains an open question.

Role of Interactionism in Obedience

The trait-situation debate divided personality and social psychology for many years, beginning with Mischel's (1968, 1969)

⁴ Bock (1972) also gave his subjects a third religious measure, the Inventory of Religious Belief, a 15-item "unidimensional measure of [Christian] doctrinal position" (p. 53). Unlike an earlier study (Bock & Warren, 1972) that found a curvilinear relationship (with religious moderates being most obedient), Bock (1972) found the scale to correlate positively with amount of shock given. However, he did not examine the joint effects of scale score and authority condition in a factorial design.

criticisms of personality traits. However, many, if not most, social and personality psychologists would now consider the trait-situation controversy as having been laid to rest, and the development that has been largely responsible for its demise is interactionism—the perspective that, in its most general sense, stresses the importance of viewing behavior as a product of both personal and situational factors (Blass, 1984a, 1987). Although there are some who have expressed reservations (e.g., Ajzen, 1987; Epstein, 1980; Nisbett, 1977), there is now widespread agreement among personality and social psychologists of a variety of theoretical perspectives (e.g., Bem, 1983; Bowers, 1973; Endler, 1984; Eysenck & Eysenck, 1980; and various chapters in Blass, 1977b, and Magnusson & Endler, 1977) about the desirability of a Person \times Situation interactional approach. Given this wide consensus, it would seem appropriate to examine the relationship between the obedience research and interactionism.

In particular, one can ask: Can obedience to authority be added to the roster of behavioral domains in which the use of interactional designs and findings of personality by situation interactions demonstrate the resulting predictive gain (Blass, 1977a, 1984b)? As one who has used interactional designs and a moderator-variable approach (Blass, 1969, 1974; Blass, Alperstein, & Block, 1974; Blass & Bauer, 1988) and advocated their use in the study of social behavior (Blass, 1977a, 1984b), I was especially attentive, as I reviewed the obedience literature, for personality by situation designs and outcomes.

Despite my vigilance, my search was rewarded with only a modest yield. Even if one includes studies incorporating dispositional variables other than personality measures, there are only eight studies in which a disposition by situation interaction was a possibility, that is, in which an experimental manipulation and an individual-difference variable were combined in a factorial design.

One of these studies (Miranda et al., 1981) that had incorporated a personality variable—introversion/extraversion—yielded no significant effects whatsoever. Four studies (Costanzo, 1976; Kilham & Mann, 1974; Shanab & Yahya, 1977, 1978) had included subject gender as a factor in the design, but only one, the Kilham and Mann study, yielded a significant Subject Sex \times Treatment interaction. Men were more obedient than women only when they were actually administering the shocks (executant role), but there were no male-female differences in obedience when they were simply transmitting the experimenter's orders to the shocker.

Altogether, there were only three studies whose interactional designs served to advance our understanding of obedience to authority. These were the three experiments described in the previous section (Bock, 1972; Holland, 1967; F. D. Miller, 1975) implicating beliefs about external, controlling influences as a predisposing factor in obedience to authority.

Clearly, in terms of the actual number of studies promoted, interactionism has had only limited impact. Its main contribution to obedience to authority lies elsewhere, however. One of the ways that interactionist perspectives have contributed to the resolution of the trait-situation debate is by the introduction of moderator variables to help specify some conditions for improving the predictability of social behavior. That is, theorizing and research precipitated by the trait-situation controversy has

helped identify both situational moderators that can interact with personality variables and personality moderators that can interact with situational variables to yield improved prediction of behavior. Examining this research, one can identify a number of moderator variables that are especially relevant to the obedience experiments. That is, the moderator variable perspective can suggest factors that might account for the difficulties encountered in this article in explaining and predicting obedient behavior in a coherent and consistent fashion by both situational and personal determinants.

Situational Moderators

Strong versus weak situations. A number of writers have argued that strong situations are less conducive for the predictiveness of personality variables than weak situations (Ickes, 1982; Kenrick & Funder, 1988; Mischel, 1977; Monson, Hesley, & Chernick, 1982). Quite clearly, the Milgram obedience paradigm epitomizes a "strong" situation. Its high degree of experimental realism requires subjects to attend to its demands and makes it virtually impossible to respond in a detached, uninvolved manner. Furthermore, behavioral alternatives are unambiguous and limited—the subject can only increase the voltage or quit the experiment. Consistent with the applicability of the strong/weak distinction to the obedience experiment is the fact that dispositional measures of aggressiveness have been shown to be predictive of behavior only in the Buss-type aggression paradigm, that is, self-decision experiments in which subjects can choose from among a set of shock intensities on each trial (Larsen, Coleman, Forbes, & Johnson, 1972; Scheier, Buss, & Buss, 1978; Wilkins, Scharff, & Schlottmann, 1974; Youssef, 1968), a "weaker," less constraining situation than the Milgram paradigm.

Chosen versus imposed situations. One of the tenets of the interactionist position is that not only do situations affect the person, but persons also influence situations by their choice or creation of situations conducive to the expression of their personalities (Bowers, 1973; Olweus, 1977; Stagner, 1976; Wachtel, 1973). A number of researchers (Emmons, Diener, & Larsen, 1986; Feather & Volkmer, 1988; Gormly, 1983; Leary, Wheeler, & Jenkins, 1986; Snyder & Gangestad, 1982) have indeed shown that personality variables can predict situation choices and preferences. Furthermore, it has been shown that dispositional measures are better predictors of behavior within freely chosen situations than in ones not of the person's choosing (Emmons et al., 1986; Snyder, 1983). Even though Milgram's subjects, as well as those in most replications, were volunteers, it is highly unlikely that many would have chosen to be in an obedience experiment had its exact details been disclosed to them beforehand. And once the experiment is under way and its (presumably) distasteful procedures become evident to the subject, "binding factors" (Milgram, 1974, pp. 146–152)—psychological inhibiting mechanisms, such as the incremental nature of the shock procedure—keep subjects in the situation even if they want to leave it. Thus, we have another factor—the fact that subjects did not choose the situation they find themselves in—that can be expected to weaken the link between personality and behavior in the Milgram experiments.

Heightened versus diminished self-awareness. In 1972, Duval

and Wicklund introduced their theory of objective self-awareness, which built on a basic distinction in the individual's focus of attention. According to Duval and Wicklund, a person's conscious attention can be directed either inward at aspects of the self or outward toward his or her surroundings. A heightened state of self-focus has been typically created by laboratory props such as mirrors and television cameras. Research has shown that one of the consequences of a heightened state of self-awareness is to increase the accuracy of self-reports (see Gibbons, 1983, for a review). That is, there is evidence that when subjects complete an attitudinal or personality measure during a heightened state of self-focus, the measure becomes a stronger predictor of behavior than is the case without the manipulation of attention toward the self. The conditions that prevail within the setting of a Milgram obedience experiment are typically conducive of an *inhibition* of self-awareness, rather than an enhancement of it. The subject's attention is focused outward rather than inward, absorbed in the mechanical details of the procedure. In fact, it has been suggested (Carver, 1975) that the considerable amount of physical activity required to work a shock machine might actually artificially depress the subject's self-awareness. (The subject's high degree of task absorption and narrowing of focus, as well as some other experimental details, have even led some writers [Hunt, 1979; Rosenbaum, 1983] to suggest that he or she is very similar to a hypnotized subject.) Also drawing attention away from the self is the subject's attunement to the experimenter's commands and to the learner's answers and complaints. There is some disagreement about the degree to which the experimenter rather than the learner claims the subject's attention (J. M. Jackson, 1982, pp. 22-23; Milgram, 1974, p. 144). What is clear, however, is that features of the typical Milgram-type obedience experiment are anything but promotive of self-awareness. And to the extent that this is true, the conditions are not optimal for the emergence of strong disposition-behavior relationships.

Dispositional Moderators

It has been shown earlier in this article that although situational factors have affected obedience, they have not done so in a coherent and predictable way.

The trait of consistency-variability. A possible solution is provided by the fact that the disposition to be cross-situationally consistent or inconsistent is itself an individual-difference variable. Allport, in 1937, had already mentioned efforts "to determine whether consistency (or its opposite, variability) is itself a consistent attribute of personality" (p. 356). Within contemporary interactionist perspectives, this idea is most centrally embedded in the personality construct of self-monitoring (Snyder, 1974, 1979). According to Snyder, low self-monitors, but not high self-monitors, are expected to show trait-like consistency in their behaviors. The latter are more attuned to situational cues for behavioral guidance, and their actions will therefore be more variable from situation to situation. Thus, the fact that situational manipulations have not always affected obedience in a reliable and predictable fashion could be due to the fact that the samples involved were likely a mixture of high and low self-monitors. On the basis of the theory of self-monitoring, if subjects were divided into high and low self-monitors, one

would expect high self-monitors to show differential responsibility to the situational variations in an obedience experiment, whereas the low self-monitors would maintain a more consistent level of obedience despite changes in some features of the experiment.

Cross-national differences: Modal personality. One can also extend the idea of dispositional moderators to provide a possible explanation for cross-national differences in obedience that I have identified in this article. For example, in the four-part proximity series, Milgram (1974) found visibility of the victim to significantly reduce the level of obedience of his (American) subjects. In Spain, however, Miranda et al. (1981) were not able to replicate this finding. In their study, obedience was equally high in both a condition in which the teacher could see the learner and one in which he could not. Perhaps the modal personality (Inkeles & Levinson, 1969) of Spanish individuals is more cross-situationally consistent than that of Americans, or, more generally, what constitutes equivalence classes of situational stimulus characteristics can be expected to vary somewhat from culture to culture. This idea, that there might be cross-cultural differences in cross-situational consistency and variability, is derived from Kurt Lewin's theorizing about the social-psychological differences he observed between the United States and Germany in the pre-World War II years. Lewin (1948; originally published in 1936) discussed how changes in the immediate situation differentially affected Americans and Germans. He felt that the typical American "shows a greater difference in his behavior in accordance with the given situation than the [typical German]." The latter, he argued, "carries more of his specific individual characteristics to every situation. His behavior will therefore be less modified in altered situations" (pp. 30-31).

A dispositional explanation of a different sort might also account for another cross-cultural difference in obedience. In Australia, Kilham and Mann (1974) found a significantly lower rate of obedience (28%) than Milgram (1974) did in a comparable voice-feedback condition (Experiment 2; 62.5%) with his American subjects, $\chi^2(1, N = 90) = 10.77, p < .01$.⁵ On the basis of Mann's (1973) findings of Australian-American differences in attitudes toward obeying military commands, Kilham and Mann suggested that their finding of lower obedience rates might be due to "national differences in obedience ideology that contribute to a predisposition to obey or defy authority" (p. 702).

Conclusions

The guiding focus of this article was the historically important question of the relative efficacy of personality and situational factors in accounting for social behavior, as applied to the accumulated body of research on obedience to authority using Milgram's paradigm. I believe the findings argue for the two factors being on a more equal footing than past scholarly wisdom would have it. My article has shown that obedience can vary as a function of both personality variables and situational factors but that there are problems associated with both kinds

⁵ Chi-square was computed by me.

of determinants. The findings on personality predictors of obedience revealed some of them to be weak or contradictory and that the evidence for theoretically based personality-obedience links was mixed. One can also argue that some of the evidence (e.g., Haas's, 1966, study with management personnel) is too far afield from the original Milgram experiments to have a bearing on them. The obedience studies focusing on situational determinants revealed that many experimental manipulations were effective, though not always reliably so. Others were not, even though logic or findings from related behavioral domains would suggest that they should be. And among the situational effects that do emerge, there is a lack of coherent and predictable patterns, making the extraction of the relevant underlying dimensions difficult.

Among Mischel's (1968, 1969) criticisms of transsituational personality dispositions or traits was his contention that situational variables are stronger predictors of behavior than individual differences (Mischel, 1968, pp. 81-83; 1969, p. 1014), a position he modified in later writings (Mischel, 1973, pp. 255-256; 1984). One of the first contributions of interactionist writings was to argue and demonstrate empirically that the "proportion of variance" question was a pseudoissue (e.g., Bowers, 1973; Endler, 1973; Sarason, Smith, & Diener, 1975), with persons and situations accounting for equally small proportions of variance.

My detailed analyses of studies dealing with one of the most widely discussed topics in social psychology—obedience to authority—puts some flesh on the figures provided by the "proportion of variance" surveys and analyses. My review has shown that although amount of obedience can vary as a function of situational manipulations and differ among individuals within the same setting, neither the proposed situational dimensions (e.g., immediacy or salience of victim) nor the personality variables studied as potential individual-difference correlates (e.g., authoritarianism) have accounted for the variations in a consistent, orderly, and predictable manner. Situational and personality perspectives on the obedience findings are on equal footing because their problem is essentially the same: discovering the constructs that can account for variations in obedience in a coherent way. In the case of situational manipulations, this translates into finding the appropriate underlying situational dimensions that seem to be operationalized by the experimental treatments. In the case of individual differences in obedience found within the same stimulus situation, it is the question of the measured personality correlate, be it a trait or another type of disposition, that provides the best theoretical and empirical fit for the data.

More broadly speaking, I believe my findings can serve a clarifying and corrective function vis-à-vis situationist perspectives on the determinants of social behavior much like those of others throughout the history of the trait-situation debate (e.g., Bem & Allen, 1974; Block, 1968; Bowers, 1973; Hogan, DeSoto, & Solano, 1977; Kenrick & Funder, 1988; Sarason et al., 1975).

My review also complements a clever statistical approach to this question of whether situational or personality determinants are more powerful taken by Funder and Ozer (1983). The situationist claim regarding the low predictive power of personality traits—with validity coefficients of .20-.30 being described as the norm (Mischel, 1968, p. 78) and .40 as the maximum (Nis-

bett, 1980, p. 124)—carries with it the complementary implication that situational factors are typically stronger predictors. Funder and Ozer (1983) refuted this claim by converting a number of well-known outcomes of situational manipulations—including two of Milgram's (1974)—into linear correlations. Specifically, they computed the relationship between the degree of subject-victim proximity and amount of obedience in the four-part proximity series (Milgram, 1974; Experiments 1 to 4) and found it to be equal to an r of .42, whereas the correlation between presence versus absence of the authority and obedience (Experiments 5 vs. 7) was found to be equal to .36.

Obedience studies involving Person \times Situation interactions, though few in number, did highlight the importance of underlying beliefs—about external, controlling influences—as a salient, predisposing factor in obedience to authority. The small number of interactional studies of obedience reported is probably a result of the historical cooccurrence of two developments. The early and mid-1970s marked both the advent of contemporary interactionism and of federal regulations and American Psychological Association (APA) guidelines on research with human subjects. So just when many personality and social psychologists were becoming sensitized to the value of person by situation designs, the doors were closing on Milgram obedience experiments of any sort. In fact, the last time Milgram-type obedience experiments conducted in the United States were reported in the literature was 1976 (Costanzo, 1976; Holmes, 1976).⁶ Rather than in sheer number of studies promoted, interactionist perspectives have made a contribution by providing some integration of the literature through the suggestion of a number of moderator variables that, when applied to the obedience experiment, helped identify factors (most of them inherent in the features of the Milgram obedience paradigm) that make predicting obedience from situational or dispositional factors difficult.

The complexities of predicting obedience that I have identified in this article do not diminish the enduring significance of Milgram's obedience research. After 30 years, it still remains the prime example of creative experimental realism used in the service of a question of deep social and moral significance. It has been without parallel in social psychology, and perhaps psychology as a whole, as a catalyst of productive scholarly and public debate. Milgram (1977a) once commented admiringly on the fact that the conformity paradigm of Solomon Asch, his mentor, produced many variations: "For me, Asch's experiment rotates as a kind of permanent intellectual jewel. Focus analytic light on it, and it diffracts energy into new and interesting patterns" (p. 152). When one considers the number of issues the obedience work has been applied to, the amount of controversy it has generated, and the differing ways the findings have been

⁶ Geller's journal report of his role-playing versions of three of Milgram's obedience experiments was published later, in 1978, but it was based on his dissertation, which came out in 1975. It should be noted that although obedience experiments have apparently not been conducted in the United States since the mid-1970s, replications have continued to be carried out in other countries (i.e., Burley & McGuinness, 1977; Meus & Raaijmakers, 1986, 1987; Miranda, Caballero, Gomez, & Zamorano, 1981; Schurz, 1985; Shanab & Yahya, 1977, 1978; Shelton, 1982).

interpreted, Milgram's metaphor of "a kind of permanent intellectual jewel" can just as appropriately be applied to his own obedience paradigm. It is a reflection on the universality of the themes the obedience research speaks to, such as the human propensity for evil and hierarchical role relationships, that interest in it has not been confined to academia. From the beginning, journalists (e.g., Reinert, 1970; Sullivan, 1963) and political and social commentators (e.g., Karnow, 1971; Krauthammer, 1985) have found relevance in it. And it continues to inspire research and analysis (Blass, 1990a, 1990b; Meeus & Raaijmakers, 1986, 1987; A. G. Miller, 1986) and influence conceptualizations about obedience-related phenomena (Haritos-Fatouros, 1988; Kelman & Hamilton, 1989).

The dramatic demonstration that people are much more prone to obey the orders of a legitimate authority than one might have expected remains an enduring insight, but one that is in need of some qualification: Milgram (1963, 1965c) did indeed find drastic underestimations of full obedience (with 3% of the subjects, at the most, expected to obey), but others (e.g., Kaufmann & Kooman, 1967; Mixon, 1971) have obtained findings suggesting that greater accuracy in predicting the outcome of an obedience experiment is possible. Milgram also showed how difficult it is for people to translate their intentions into actions even when moral principles might be at stake, and that momentary situational pressures and norms (e.g., rules of deference to an authority) can exert a surprising degree of influence on people's behavior. According to Milgram, they wield their power through the unexpected amount of inhibitory anxiety generated by their breach.

Almost as provocative as his finding of the extreme willingness of individuals to obey a legitimate authority is Milgram's contention that this comes about through the person's acceptance of the authority's definition of reality. As he (Milgram, 1965c, p. 74) put it: "Men who are in everyday life responsible and decent were seduced by the trappings of authority, by the control of their perceptions, and by the uncritical acceptance of the experimenter's definition of the situation, into performing harsh acts."

Although one can question the exact parallels between the actions of Milgram's subjects and those of the Nazis under Hitler, the obedience studies have clearly contributed to a continued awareness of the Holocaust and to attempts at understanding its causes. This becomes increasingly important at a time when witnesses to the Holocaust are gradually dying out and a revisionism, denying the Nazis' murder of 6,000,000 Jews, is on the rise. Hopefully, such "consciousness raising" can help prevent any future attempts at genocide. The potential value of the obedience experiments in this regard is no trivial matter—especially to those of us who are survivors of the Holocaust.

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