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SOCIAL FACILITATION OF HUMAN PERFORMANCE: MERE PRESENCE EFFECTS*

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SUMMARY

An experiment was conducted ($N = 60$ college women) to test the proposition that the "mere presence" of another human being, as opposed to the presence of a potentially evaluative audience, is a sufficient condition for the social facilitation of performance on a simple task. Mere presence was defined as the physical proximity of a blindfolded peer, and performance was evaluated on a bidirectional choice maze. When compared to a control group that traversed the maze in isolation, *S*s in the mere presence of a peer both completed experimental trials faster ($p < .01$) and made fewer errors while doing so ($p < .02$), thus providing support for the mere presence hypothesis. On the other hand, while *S*s who traversed the maze in the presence of an observing (nonblindfolded) peer also worked faster than controls ($p < .05$), they were not superior to controls in terms of error rate. It was noteworthy that still other *S*s who worked in the company of a blindfolded or nonblindfolded mannikin produced results exactly parallel in form to those from *S*s who worked in the company of a blindfolded or nonblindfolded human being. These findings were discussed in terms of a definition of mere presence that takes into account the distractability or predictability of the other in social situations.

A. INTRODUCTION

Central to Zajonc's (15, 16) theory of social facilitation is the idea that the *mere presence* of a conspecific has a marked influence on the behavior of an organism. In using the term "mere presence," Zajonc meant to rule out such specific factors as competition and rivalry, directive cues from one organism to another, and various forms of social reinforcement. Zajonc

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based his view, in part, on studies which showed that the presence of an audience was a sufficient condition to permit the deduction of heightened drive (generalized arousal) from the behavior of human *S*s (e.g., 18). Other studies showed that the physiological correlates of arousal, such as palmar sweat, also increased under such audience conditions (e.g., 10).

In reaction to Zajonc's propositions, Cottrell (1, 2) questioned the notion of *mere* presence. He argued that the existing experimental evidence did not preclude certain specific effects of an audience, since an audience by its very nature is composed of spectators. Cottrell, Wack, Sekerak, and Rittle (3) sought to indentify the effects of the mere presence of another on generalized drive in an experiment comprised of three conditions: Alone, Audience, and Mere Presence. The first two conditions replicated the research of Zajonc and Sales (18) wherein *S*s worked at a psuedorecognition task either alone or under the surveillance of peers. The final condition in the Cottrell *et al.* experiment was unique; the "audience" in this condition consisted of blindfolded individuals who could not act as spectators. Thus, they were "merely" present.

The findings of the Cottrell *et al.* study (3) seemed quite clear. The data suggested that *S*s in the presence of a seeing audience demonstrated heightened generalized drive, just as in the experiment by Zajonc and Sales (18). However, for *S*s working alone or in the mere presence of a blindfolded audience, this increase in drive was not apparent. From these data Cottrell *et al.* concluded that ". . . drive effects on individual performance will not occur unless the others present are either spectators or coactors" (3, p. 250). According to their formulation, coactors can produce such effects because they evoke feelings of competition. Spectators, on the other hand, can also produce such effects because they have the capacity to evaluate the actor, and, based on his past experience, the actor would have reason to be apprehensive about such evaluation (2).

While there is no quarrel with the notion that evaluation apprehension might influence generalized drive and thus mediate social facilitation effects under certain circumstances, there is reason to doubt whether this variable is the sole mediating factor in such effects. Evidence has begun to accumulate which shows that the presence of others can have a facilitative effect on motor performance even when their potential for evaluation is markedly reduced (5, 9) or virtually eliminated (11). The results of these studies, all using American undergraduates as *S*s, suggest that Zajonc's original formulation concerning the possible effects of mere presence is tenable.

Indeed, the measurement of the behavioral impact of the simple presence

of a conspecific has implications beyond the resolution of the discrepant (and relatively narrow) hypotheses outlined above. If mere presence can be shown to have reliable effects, then renewed conceptualizations of the essential features of this variable can provide a starting point for the integration of the social facilitation literature with other areas, such as theories concerned with personal space and xenophobia, for example. Accordingly, the current research was undertaken with an intent to examine further the effects of the sheer presence of a human (or quasi-human) on the behavior of an actor. Basically, the study included (in addition to other conditions) a replication of the three experimental conditions reported by Cottrell *et al.* (3): Alone (Control, hereinafter), where *S*s worked in isolation; Audience, where *S*s worked while being observed by a peer; and Mere Presence (Blindfolded Audience, hereinafter), where *S*s worked in the company of a blindfolded peer. There were, however, some unique features of the current methodology that deserve mention. First, the peers (confederates) in the Audience and Blindfolded Audience conditions were not introduced to the *S*s as interested observers, as was the case in the Audience condition in the Cottrell *et al.* (3) research. Rather, their presence was viewed as a matter of happenstance or coincidence. The purpose of this procedure was to make the Audience and Blindfolded Audience conditions equivalent with the exception of the distinguishing feature of the blindfold. Second, the task employed was one in which performance could be evaluated by the *S*, as well as by anyone able to observe the *S*. It consisted of a simple maze having a series of 10 twofold choice points. Performance on such bidirectional choice mazes is known to be *facilitated* in coaction situations (7) and in situations where the role of the audience as observer is highlighted (13). The evaluative aspect of this motor task is in distinction to the psuedorecognition task employed by Cottrell *et al.* (3). Since the recognition task involves sham stimuli, *S*'s responses literally cannot be evaluated for correctness on that measure.

In addition, three other conditions were included in the present experiment. Two of these were mannikin conditions. They were similar to the Audience and Blindfolded Audience conditions, except that instead of confronting live peers, *S*s performed in the company of a Mannikin and a Blindfolded Mannikin. These quasi-social stimulus objects had the general form of a live conspecific, but differed along a number of dimensions, such as predictability, activity, and sentience. The purpose of these manipulations was to provide *S*s with a set of stimuli that might produce a generalized conditioned response. Either the occurrence or the absence of

such generalized responses was expected to be of value in refining the hypothesis under examination.

A final (sixth) experimental condition tested *S*s in the presence of their mirror image (Mirror condition) to evaluate Wicklund and Duval's (14) proposition that social facilitation effects are mediated by the *S*'s own level of self-evaluation, and not necessarily by a state of audience-induced drive. As "mirror presence" has been shown to facilitate performance in two previous studies (8, 14), we wished to compare such effects with the influence of a live audience within the framework of a single experiment.

B. Method

1. *Subjects*

The *S*s were 60 female introductory psychology students, participating to fulfill a course requirement at the University of Wisconsin. Each was assigned at random to one of six experimental conditions with the restriction that there be an equal number of *S*s in each condition.

2. *Apparatus and Materials*

The experimental setting consisted of two cubicles, one control room and one test room, that were separated by a wall containing an 11 × 12-inch one-way observation window. The window was located at a level about 3 feet from the floor.

In the 6 × 8-foot test room a small table was placed against the wall, just beneath the window. A hood (screen) was installed over the one-way window and the surface of the table. At the point nearest the wall the hood was 26 inches above the surface; at the end of the table farthest from the wall the hood sloped down to a height of five inches above the surface. The hood was constructed with openings at two places. First, there was a small, trapezoidal port in a side wall of the hood through which one could inspect the surface of the table, but not the one-way window. Second, there was a table-wide opening at the 5-inch base of the hood that allowed an *S*, when seated at the table, to place her hands and forearms under the hood. Thus seated, looking down on the inclined roof of the hood, the *S*'s view of the inspection port, the surface of the table, and the window was entirely blocked. However, an observer in the control room on the other side of the window had an unobstructed view of the *S*'s hands on the surface of the table.

A Lafayette (20015) Automatic Tally Maze was anchored to the surface

of the table beneath the hood about seven inches from the edge nearest the *S*. The maze is a narrow, shallow groove cut in the surface of a 10 × 13-inch board; it is traversed by a stylus held in the hand like a pen. In all, the maze has 10 bidirectional choice points and 10 corresponding *cul-de-sacs*. An entry into a *cul-de-sac* closes an electric circuit which records entries as errors on a remote digital counter. The start- and end-points of the maze are tactually distinguishable from the groove in that they are circular and have diameters several times the width of the groove.[1]

In addition to the maze, a push button was installed at the edge of the table. When the *S* pressed the button a signal light in the control room was illuminated. A second light, attached to the hood and in full view of the *S*, also lit when the button was pressed.

The only other furnishing in the test room (besides the hooded table arrangement) was a chair placed against a wall some 4 feet directly to the left of the *S*'s chair. An individual sitting in this chair could see the complete left profile of the seated *S*. Moreover, he could see, through the inspection port in the hood, the *S*'s hands as she attempted to trace the maze with the stylus.

3. *Procedure*

*S*s were asked to report to a waiting room where they were met by *E*-1 and were escorted some distance to the test room. Enroute the *S* was told that the experiment had to do with motor learning. Additionally, *E*-1 explained that activities in the laboratory were particularly hectic that day, and somewhat confused. She went on to say that apparently some of the rooms had been scheduled for two experiments at the same time. When *E*-1 and the *S* reached the door of the test room, the former peeked in the door as if unsure that the room was unoccupied. The purpose of this bogus information was to create in the *S* an expectancy that the experiment might be interrupted at some point.

Once in the test room, *E*-1 allowed the *S* a brief look at the maze through the inspection port before asking her to be seated at the table. The *S* was then told that her task was to learn the maze; that is, to attempt to traverse it without error. Any reference to the rate of traversing the maze was intentionally omitted. The *S*'s hands were placed under the hood and

[1] During pretesting it was discovered that the maze was unreliable as a tallying device, so it was necessary that the *E*s record errors as well as time to completion on all trials. Interobserver reliability checks prior to the experiment showed there was always .95 (or greater) agreement between *E*s.

she was instructed how to locate the start point in the maze with the stylus. *S*s were quickly able to locate this point by making reference to their free hand which was resting at a fixed point on the border of the maze.

When the *S* demonstrated that she could reliably locate the start point, the bush button was explained. Its purpose was to signal the *E*. A long signal indicated that the *S* wished *E*-1 (if absent) to return. A short signal indicated the *S* had just ended a trial, or was about to begin a new trial on the maze. This code was duplicated on a placard near the top of the hood.

As soon as the *S* indicated her understanding of the procedure, she was asked to attempt her first trial on the maze. Before this attempt began, *E*-1 stated that she would leave the test room in order to check on some automatic recording devices "a few feet down the hall," and that it would take about 10 seconds to get there. The signaling procedure and the statement about recording devices in distant places were included in the procedure so that the *S*s would be less likely to discover they were being observed through the window in the area of the wall that was covered by the hood.

Upon leaving the test room, *E*-1 entered the adjacent control room where *E*-2 was in position to observe and record the *S*'s first attempt at the maze while alone. When this initial (practice) trial was completed, *E*-1 re-entered the test room and asked the *S* to report any questions or problems. *E*-1 then informed the *S* that she was going to return to the distant control room and that the *S* was to begin a series of about 20 trials. It was noted that the automatic recording devices would keep track of the number of trials. As a final point, *E*-1 told the *S* to give a short push on the button then and there so that they could agree on an appropriate duration. In fact, this particular signal served as a cue to *E*-2 to enter the test room and implement the scheduled experimental treatment.

4. *Experimental Conditions*

Just as *E*-1 was preparing to leave, *E*-2 entered the test room without knocking and registered surprise that it was occupied. She apologized for interrupting and stated that she did not require the room at that particular time, but simply wanted to leave something (someone) in the room that (who) would be used in her perception experiment in about a half-hour, and *E*-1 assented to this. The object or person in question was then placed on the chair four feet to the left of the *S*. *E*-2 reiterated her statement that she would definitely not return for at least 30 minutes, then departed. Each of the six experimental conditions was defined by the occupant of the chair:

FIGURE 1
PHOTOGRAPHS OF THE MALE MANNIKIN ARRAYED FOR THE BLINDFOLDED MANNIKIN (LEFT SIDE) AND THE MANNIKIN (RIGHT SIDE) EXPERIMENTAL CONDITIONS

a. Audience. The chair was occupied by a male, undergraduate confederate (*C*), ostensibly the next *S* in *E*-2's perception study. It was explained to the actual *S* and *E*-1 that it was necessary that he sit there in order for his eyes to adapt to the level of illumination in that room. *E*-1 insisted that he was not to communicate in any way with the female *S* and, consistent with the instruction, the confederate made no comments.

b. Blindfolded Audience [Mere Presence in the Cottrell *et al.* (3) parlance]. The chair was again occupied by a male accomplice, but on this occasion he was wearing a Sleep-Shade (TM) blindfold over his eyes when he was led into the room. Again, the rationale was given that he was an *S* in the perception experiment and that his eyes were being adapted for that study. The proscription against communication between *S*s was also invoked here.

c. Mannikin. The upper portion of an adult, male, commercial mannikin was placed on the chair with its ventral side oriented toward the *S*. The face of this mannikin is illustrated in the right portion of Figure 1.[2]

[2] The authors are indebted to Mr. Jim Bush and the J. C. Penney Company for the loan of the mannikin. They would also like to thank Tom Clees and Dave McNelly, who served as *C*s. About half the *S*s in the various conditions were run with each *C*.

d. Blindfolded Mannikin. In this condition the mannikin was wearing the blindfold noted earlier in Blindfolded Audience condition. This version of the mannikin is illustrated in the left portion of Figure 1.

e. Mirror. A framed 29 × 39-inch glass mirror was placed on the chair with the reflecting surface oriented toward the *S*.

f. Control (Alone). Here, the second experimenter (*E*-2) placed a small, closed cardboard box (15 × 13 × 6 inches) on the chair. The only distinguishing feature of the box was that it bore a "fragile" sticker.

The stimulus objects left on the chair in the Mannikin, Blindfolded Mannikin, Mirror, and Control conditions were in all cases referred to by *E*-2 as materials she would be using in her perception experiment. No further explanation was ever given or sought. Immediately after the particular experimental condition was implemented, *E*-1 asked the *S* if she had any questions about the task and then left the test room. The *S* then began the task of repeatedly traversing the maze. After the *S* had completed the 20 test trials, *E*-1 returned to the test room where the *S* was tested for suspicion, debriefed, and dismissed.

A number of *S*s who arrived for the experiment had to be replaced for various reasons: One was eliminated because of procedural error; one refused to continue after the first few trials; one reported that she had been reading about social facilitation effects while in the waiting room; four exceeded a predetermined five-minute allowance to complete the first trial; three cheated on every trial by changing their position so that they looked at the maze before a trial; and four were suspicious about the possibility of an observation window under the hood. There was no relationship between the reason for replacement of an *S* and the experimental condition to which the *S* was assigned.

C. Results

The remaining 60 *S*s were tested for 20 trials. Inspection of the data indicated that there were differences between experimental conditions early in testing, but that treatment effects generally merged past the tenth trial as a result of apparent ceiling effects in performance. This diminution of differential treatment effects was also observed by Hunt and Hillery (7, Figure 1). Another precedent for the analysis of the treatment effects on early (as opposed to late) trials on two-fold choice mazes comes from Shaver and Liebling (13), who tested *S*s for a total of four trials. Therefore, in the current study, *S*s' average performance for the first four and the first 10 trials were analyzed separately from the total number of trials. The

results of the four- and 10-trial analyses were identical: all significant effects obtained in the four-trial analyses were also significant in the 10-trial analyses ($ps < .05$ in all cases). Accordingly, only the results of the four-trial analyses will be reported here.

In terms of statistical designs and analyses, the experimental conditions could be contrasted in at least two meaningful ways. An obvious design would be a 1×6 analysis with the six levels represented by the six experimental conditions. Another plausible design contrasts the two human conditions (Audience and Blindfolded Audience) with the two "matched" nonhuman comparison conditions (Mannikin and Blindfolded Mannikin) in a 2×2 factorial with stimulus type (human or mannikin) as one factor, and stimulus characteristic (blindfolded or not blindfolded) as a second. The data will be discussed in terms of both of these designs.

1. *Speed of Response: One-way (1 × 6) Analysis*

An analysis of the data for the practice (pre-experimental) trial revealed no significant differences in the speed of response (in seconds) among the various treatment groups ($F < 1$). This established the equivalence of the groups prior to the introduction of independent variable(s). However, significant differences did emerge in the four test trials performed immediately after the implementation of the six experimental conditions ($F = 2.77$, $df = 5/54$, $p < .05$). As can be seen in Table 1, the control group evidenced the slowest speed of response, the human audience groups the fastest, while the mannikin and mirror groups were intermediate. This pattern of means suggests a general "energizing" effect for all of the social and quasi-social stimuli employed, with the human audience conditions having the greatest effect.

TABLE 1
AVERAGE SECONDS AND ERRORS PER TRIAL UNDER EXPERIMENTAL CONDITIONS FOR THE FIRST FOUR TEST TRIALS

Condition	Dependent measure	
	Seconds	Errors
Audience	74.1	12.8
Blindfolded Audience	64.9	9.6
Mannikin	103.0	17.3
Blindfolded Mannikin	85.1	12.5
Mirror	88.2	16.3
Control	108.3	15.2

When certain planned comparisons between treatments were made by t test, however, only Ss in the human audience conditions showed significantly faster performance when contrasted with the Control group (Audience *vs.* Control: $t = 2.38$, $df = 18$, $p < .05$; Blindfolded Audience *vs.* Control: $t = 2.97$, $df = 18$, $p < .01$). Four other planned comparisons (Audience *vs.* Blindfolded Audience; and Mannikin, Blindfolded Mannikin, and Mirror *vs.* Control) yielded nonsignificant results in all cases.

2. *Speed of Response: Factorial (2 × 2) Analysis*

The facilitative effect for speed of response was also evident across group means in the 2 × 2 social and quasi-social design. Here the overall effect for stimulus type (human *vs.* mannikin) was reliable ($F = 8.80$, $df = 1/36$, $p < .01$), revealing faster time in the human conditions than in the mannikin conditions ($\overline{X} = 59.5$ and 94.1, respectively). While the facilitative effect in Table 1 appeared to be stronger in the blindfolded conditions than in the nonblindfolded conditions ($\overline{X} = 75.0$ and 88.6, respectively), this difference for stimulus characteristic was not significant ($F = 1.94$, $df = 1/36$, $p < .10$). Also, the interaction of the two factors was not significant ($F < 1$).

3. *Accuracy of Response: One-way (1 × 6) Analysis*

As in the case of the speed of response, the mean number of errors for the pre-experimental baseline trial did not differ according to experimental treatments ($F < 1$), while the means for the first four test trials did ($F = 2.49$, $df = 5/54$, $p < .05$). The mean errors for the first four test trials are also presented in Table 1. In terms of the planned comparisons, the Blindfolded Audience condition again evidenced significantly better performance (i.e., fewer errors) than the Control ($t = 2.87$, $df = 18$, $p < .02$). However, while the Audience was superior to the Control condition, these did not differ significantly from each other. As with the speed data, none of the other planned comparisons was significant either.

4. *Accuracy of Response: Factorial (2 × 2) Analysis*

In the 2 × 2 analysis the pattern of means for accuracy is quite similar to the pattern of means for speed. The overall human *vs.* mannikin comparison (seen in Table 1) again found Ss doing better (i.e., making fewer errors) in the company of another human than in the company of a mannikin ($\overline{X} = 11.2$ and 14.9, respectively; $F = 8.42$, $df = 1/36$, $p < .05$). Moreover, the blindfold *vs.* nonblindfold comparison was also significant across both the

social and the quasi-social conditions ($\overline{X}$ = 11.1 and 15.1, respectively; F = 8.42, df = 1/36, $p < .01$). *S*s in the blindfold conditions made fewer errors than the *S*s in conditions where there was no blindfold. The interaction of stimulus type and stimulus characteristic again was not significant ($F < 1$).

D. Discussion

A basic finding of the current research has to do with the improvement of response on a simple task under truly "social" conditions. Female undergraduate *S*s generally traversed the maze faster and made fewer errors in the company of a human being, when compared to similar *S*s who worked in isolation. Neither the presence of a mirror nor the quasi-social presence of a mannikin produced such marked effects.

Most interesting, however, was the finding that an improvement in responding was evident regardless of whether the human companion could or could not evaluate the *S*'s performance. This result is especially striking when one considers that in the Blindfolded Audience (Mere Presence) condition, the companion could not begin to know *what*, if anything, the *S* was engaged in, since the companion was allegedly a fellow *S* who had been led into the room blindfolded after all task instructions to the *S* had already been given. Obviously, Zajonc's (15, 16) notion of "mere presence" receives support, while Cottrell's (1, 2) argument against the sufficiency of mere presence is brought into question.

On the other hand, while both the Audience and Blindfolded Audience groups showed a sort of energization of responses in terms of rate (seconds per trial), only the latter group was reliably different from the Control group in terms of the emission of correct responses [or "dominant" responses in the sense that the probability of a correct response during the test trials was .50 or greater; *cf.* Hunt and Hillery (7)]. A possible explanation for this difference is that some characteristic of the Audience condition actively interfered with the emission of correct responses, even though those *S*s might be said to be in a heightened state of generalized drive or arousal (as inferred from their rate of responding).

If these results are valid in showing that the capacity for evaluation is not the sole sufficient condition for the production of social facilitation effects, what is there in the current experimental conditions that could mediate such effects? One possibility for interpretation is found in Zajonc's recent refinement of the definition of "mere presence." He has argued (17) that there is a fundamental difference between physical and social stimuli in the environment. Physical stimuli are by and large consistent and

constant, hence reliable and predictable. Social stimuli, to the contrary, are somewhat less regular, systematic, or predictable, and sometimes produce important surprises. In essence,

> . . . in the presence of others, some degree of alertness or preparedness for the unexpected is generated, not because there is necessarily the anticipation of positive or negative incentives, or because threat of evaluation is generated, but simply because one never knows, so to speak, what sort of responses—perhaps even novel and unique—might be required of the individual in the next few seconds (17, p. 23).

This need for preparedness and alertness of which Zajonc speaks seems to provide the basis for a coherent account of the effects observed in the current experiment. The account assumes only that a blindfolded companion is more predictable (and thus requires less preparedness or attention) than a seeing companion, simply because the physical impediment of the blindfold reduces the wearer's capacity to structure his environment visually, thus reducing his potential for action (6). Thus, in the Control condition where the requirement for preparedness was low, energization (as revealed by response rate) was correspondingly low. In the Blindfolded Audience condition, where the need was somewhat greater, greater energization was in evidence for both speed of response and the emission of the correct (dominant) response. However, in the Audience condition, where the need for preparedness was greatest, general energization was also evident in speed of responding, but the presumed need for general alertness may have been so high as to preclude concentration on any specific element of the situation. Hence, in this condition, performance of a response that required retention and recall of information was somewhat debilitated. If this account is correct, it suggests that there may be measurable degrees or levels of "mere presence," and that different levels can produce different effects. It also suggests that mere presence effects would vary as a function of the predictability of the audience, in contrast to the sheer distractability of the audience, where these two factors could be independently manipulated.

The distracting effects of a "seeing" *versus* a non-"seeing" mannikin audience were as strong if not stronger than those of a seeing *versus* a nonseeing human audience. Since a mannikin in either case is both predictable and nonevaluative, there is some need to speculate about the possible cause of this result. One explanation is suggested by an examination of the physical characteristics of the "seeing" mannikin (Figure 1, right-hand

side). The large, always-staring eyes of the mannikin may themselves have been distracting, according to the significance which is attached to "the look" in Sartre's (12) phenomenology, Heider's (6) theory of perception and control, and Duval and Wicklund's (4) theory of objective self-awareness. In all three formulations, the directed gaze of another is held to be a primary stimulus for the onset of self-evaluation, self-consciousness, and concern over the other's intentions and potential courses of action toward the self. Through conditioning, the "fixed stare" as a stimulus may have gradually acquired the capacity to elicit these responses on its own, as in the case of the painting whose eyes seem to "follow a person around the room." Indeed, Duval and Wicklund suggest the possibility that "the mere sight of another's eye is sufficient to create objective self-awareness . . ." and ". . . would not be surprised if the sight of a pair of eyeballs hung on a wall caused the individual to evaluate himself," (4, p. 166).

The Mirror condition did not produce results that differed significantly from the Control, a finding discrepant with the results of Wicklund and Duval (14) and Liebling and Shaver (8). Physical distance or orientation may have been the reason for this discrepancy; in the earlier studies the mirror was placed directly in front of the *S* at a distance of no more than one or two feet; while in the present study the position of the mirror was made comparable to the position of the other experimental objects.

To recapitulate our major point, while the arguments we have proposed above must remain somewhat speculative regarding the possible antecedents of the mere presence effect, it should be evident that the *fact* of such an effect is clearly established in the present data for college-age *S*s. These data suggest that the presence of *either* a potentially evaluative or a nonevaluative (merely present) human audience can facilitate performance by increasing drive. The clearest indication of this hypothesized drive effect can be seen in the data for the speed of performance. However, the data also indicate that a potentially evaluative audience may produce an additional, possibly debilitating effect on performance by providing a stronger source of distraction from the task than an audience which is merely present. This effect, which is evidenced most clearly in the error data, suggests that the uncovered eyes of another may have been the major source of this distraction, regardless of whether the "seeing" other was a human or a mannikin. This latter finding lends to the speculation that cues which are closely associated with the knowledge that one is being actively perceived or evaluated by another may have the greatest potential to elicit

distraction effects of this type. Of course, the present results applied only to college women in Western society; whether they can be generalized to other people has yet to be shown.

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