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SOCIAL COMPENSATION OR SOCIAL FACILITATION?

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PERFORMANCE EFFECTS OF WORKING WITH THE PHYSICALLY HANDICAPPED: SOCIAL COMPENSATION OR SOCIAL FACILITATION?

By

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ABSTRACT

PERFORMANCE EFFECTS OF WORKING WITH
THE PHYSICALLY HANDICAPPED:
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This work examined possible effects on task performance of working with a physically handicapped person. Past research on stigmatized master status and social compensation suggested that persons would work harder when teamed with a physically handicapped person than with a non-handicapped person, even though this disability was not relevant to the task. Subjects' actual and perceived task performance on either a physical task or a cognitive task was measured. Subjects worked by themselves or with a physically handicapped or nondisabled individual; and, this person was either their teammate or just a co-actor. (In co-actor condition, there was another person in the room, but both the subject and co-actor acted as individuals when performing the task). Results were consistent with the pattern predicted by the stigmatized master status perspective. These findings were discussed in terms of their relevance for understanding the role that physical disability cues play in person perception and consequent task behavior.

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INTRODUCTION

This research explored the potential consequences for task performance of working with someone who is physically handicapped—even when that person's disability is not relevant to task demands. Past research and theorizing on a variety of social psychological phenomena—among them, person perception, collective task performance, and social facilitation—appeared to bear on this issue. However, in reviewing this work, it became clear that two different patterns of effects could be expected, depending on which set of phenomena played the larger role in mediating people's cognitions and behaviors in such contexts.

On the one hand, work on stereotype-based expectation effects on behavior suggested that people might tend to "social compensate" when working with a physically handicapped person. Evidence in the area of person perception suggests that physical disabilities are social stigmata. Nondisabled persons are inclined to view the handicapped negatively, literally as less able in general. As such, when working collectively with a handicapped person, they would be inclined to believe that they would need to work harder to compensate for their partner's expected lack of ability—they would need to social compensate.

On the other hand, past research on social facilitation and related phenomena has demonstrated the role that social-based arousal plays in moderating task performance.

This work has shown that even the mere presence of others has differential effects on performance, depending on task demands; social-based stimuli tend to improve the performance of simple, easily accomplished tasks, whereas they tend to decrease performance on more complicated and/or unfamiliar tasks. It seems reasonable to assume that the presence of someone with physical attributes that connote "difference" (e.g., a disability) would be more arousing than the presence of someone without such attributes. This reasoning suggests that the mere presence of a physically handicapped person in a work context, in contrast to the mere presence of a nondisabled person, might serve to heighten social facilitation—i.e., increase performance on a simple task, but lower performance on a more complex task.

Clearly, then, perceiving a physical disability in another might have differing effects on task performance depending on the underlying psychological processes that were activated by both this perception and task demands. To the extent that a perceived handicap generated expectation-based social compensation, performance effects would be observed only when people were working collectively with the disabled person; no effect would be noted when that person was working separately, as a co-actor. In contrast, to the extent that the mere presence of a handicapped person would serve to heighten arousal in general, performance effects would be observed, irrespective of whether the disabled individual was a coworker or a co-actor.

The present study was designed to explore the relative utility of these two perspectives. However, before turning to the specific procedures that were used in this exploration, the bases for each perspective is reviewed in more detail in the following pages.

Stigma-Based Expectations and Social Compensation

An important variable that is especially relevant to the development of negative reactions in the initial stages of an interpersonal event is expectation – the preconceptions that we bring into the situation that bias our predictions of how an encounter will unfold (Crano & Messé, 1982; Snyder & Gangestad, 1981; Snyder & Swann, 1978a; 1978b). This study examined one very important basis for negative expectations: stigma. Stigmata are cues in people that connote defect or inferiority.

Social stigma. Stigmata in our culture include almost any cue that connotes physical or psychological deviance from the cultural norm, including physical handicaps, psychotic symptoms, mental retardation, and obesity (Crano & Messé, 1982), or anyone who is "deviant, flawed, limited, spoiled, or generally undesirable" (Jones, Farina, Hastorf, Markus, Miller, & Scott, 1984). As Crano and Messé (1982) note, the "operative factor here is that the perceiver associates the identifying cues with other attributes, and assumes – often without any logical basis – that the stigmatized individual possesses these additional traits as well" (p. 480). For example, Chevigny (1946) noted that sighted people often talked louder in the presence of a blind person, even though there was no reason to assume that the blind person also had hearing problems. Crano and Messé stated that this behavior may occur because the sighted speakers generalize one perceptual handicap to other sensory systems.

In a study that produced evidence of the negative impact of stigmata on interpersonal behavior, Kleck, Ono, and Hastorf (1966) had subjects enact the role of an interviewer. All interviewers had to question another subject (actually a confederate). Half the interviewees appeared to be confined to a wheelchair, whereas the remainder did

not appear to be physically handicapped. Results indicated that subjects were more brusque, asked fewer questions, and generally were more formal in the condition in which they encountered the apparently handicapped respondent. Snyder, Kleck, Strenta, and Mentzer (1979) found similar distancing behaviors in subjects who encountered physically handicapped individuals. Word, Zanna, and Cooper (1974) also found equivalent effects when examining racial differences in interviews. In this study, white interviewers acted differently to African-American job seekers than to white job seekers. Interviewers of black applicants, compared to interviewers of white applicants, were more likely to interrupt, to make more speech errors, to be less involved in the interview, and to terminate the interview earlier.

Moving away behavior is but one possible response to encountering someone with a social stigma. Such distancing would be most likely to occur in contexts where there were few perceived costs for disengagement. In contrast, a different response orientation seems more likely in contexts in which people see their fate linked to that of the stigmatized individual. For instance, it could be that when working on a task with a handicapped person, people would believe that it would be in their best interest to try to compensate for the expected deficiencies of their stigmatized coworker. As such, they would social compensate and try harder.

Social compensation. Williams and Karau (1991) proposed a theory of social compensation that attempts to identify the major conditions under which people will worker harder on collective tasks. They acknowledge the findings of the many studies on social loafing, which have found that people expend less effort collectively than either individually or coactively (working separately, but in the presence of other co-workers).

However, they propose that under certain circumstances people may actually work harder in a collective setting than as individuals in order to compensate for others in the group, an effect they refer to as social compensation.

One factor that Williams and Karau (1991) postulated produces social compensation is the expectation that other group members will perform insufficiently. Williams and Karau (1991) proposed that under these circumstances, individuals will feel compelled to contribute more to the collective goal to compensate for the expected inadequate contributions of co-workers. They further suggested that the perceptions of a co-worker's inadequate contributions may be derived from direct knowledge of worker's insufficient efforts or abilities.

Cappella's (1981) review of social interaction processes suggests that there are two basic types of interactional strategies or response modes: reciprocity and compensation. Reciprocation refers to encounters in which both partners are equally active in facilitating the social exchange. Compensation refers to situations in which one partner does more of the work (smiling, talking, initiating, etc.) in a social interaction. The compensating actor controls the flow of the interaction. Findings of previous research indicate that if people expect to be engaged with a partner who is similar to them on some attribute(s), they adopt a reciprocal strategy; if, on the other hand, they expect to interact with a dissimilar partner, they use a compensatory strategy (Ickes, 1984; Ickes, Patterson, Rajecki, & Tanford, 1982).

Stigma as master status. It has long been established that deviant physical characteristics have a dramatic impact on social interactions. Negatively valued characteristics such as obesity (Maddox, Back, & Liederman, 1968) and facial deformity

(MacGregor, 1974) have been found to be important in determining some nontrivial social outcomes. For example, these deviant characteristics have been shown to affect the impressions we form of the individuals having them (Kleinke, 1975) and the causes we assign to these individuals' behavior (McArthur & Solomon, 1978).

Kleck and Strenta (1980) stated that a stigmatizing physical characteristic is important in determining some aspects of our responses to another individual. People possessing stigmatizing physical characteristics have been described as people of "master status" (Frable, Blackstone, & Scherbaum, 1990). Master status people are continually treated as different. They belong to a social group that is both statistically unusual and centrally defining (Frable, 1993). Master status people can be either culturally valued (e. g. physically attractive or intellectually gifted) or culturally stigmatized (e. g. obese, physically scarred, or physically disabled). Perhaps the most important component of the master status construct is that often the defining attribute is so important that everything about the person is understood in terms of this feature (Becker, 1963; Goffman, 1963).

Though there is no evidence linking the master status of the physically handicapped specifically to assessments of low ability, it seems likely that this would be the case. The easily noticed symptoms of many physical disabilities may sensitize people to be concerned about the limitations that these conditions impose; and, it is possible that people tend to overestimate the implications of physical handicap for the afflicted individual's abilities. A major goal of the present research, then, was to explore if people tend to perceive the need to socially compensate for a physically handicapped co-worker, even when the task confronting them did not involve the disability, per se. A related goal was to examine the pervasiveness of this tendency by determining if such

compensation occurs for a task that focuses on cognitive skills as well as for one that primarily involves physical activity.

Physical Handicap as a Stimulus for Social Facilitation

Extensive empirical evidence has demonstrated that even just the mere presence of others tends to enhance the performance of simple and/or well-practiced tasks, but hurt the performance of complicated and/or unfamiliar tasks (e.g., Allport, 1920; Burwitz & Newell, 1972; Carment, 1970; Dashiell, 1930; Markus, 1978; Martens & Landers, 1972; Pessin, 1933; Sanna & Shotland, 1990; Travis, 1928; Triplett, 1898). While the processes that moderate these tendencies have yet to be well-established (cf. Cottrell, 1972; Baron, 1986; Zajonc, 1965, 1980), a number of theoretical perspectives advanced to explain social facilitation suggest that signs of physical handicap could contribute to this effect.

Handicap symptoms as arousal. Zajonc (1965, 1980) has postulated that the presence of others is arousing, and arousal, per se, has long been known to have a complicated effect of performance (Yerkes & Dodson, 1908). Arousal tends to heighten the inclination to express well-learned, dominant responses. As such, reasoned Zajonc (1965, 1980), the presence of others should improve performance of easy tasks, where the dominant response is likely to be correct; but, it should decrease performance of more complex tasks, where the increased salience of the dominant response would interfere with the production of any more diverse, less accessible activities that are required for success.

It seemed reasonable to speculate that indications of physical handicap in another person would increase people's arousal above the level evoked by the mere presence of

a nonhandicapped individual. The research cited above (Kleck, et al., 1966; Snyder, et al.) strongly suggests that people are aroused by the presence of a disabled person, whose appearance, in fact, interfered with their ability to perform a complicated task (e.g., conduct an interview).

Handicap symptoms as distraction. Baron and his colleagues (e.g., Baron, 1986; Groff, Baron, & Moore, 1983; Sanders & Baron, 1975; Sanders, Baron, & Moore, 1978) have proposed that distraction is a major moderator of social facilitation. This work has demonstrated that (a) the presence of others in work settings is, in fact, distracting, and (b) distracting nonsocial stimuli (e.g., music) can increase or decrease performance in the same manner that the mere presence of others can. It seems likely that symptoms of physical handicap would serve to increase the distracting qualities of another's presence, and, in doing so, would tend to enhance any social facilitation effects. For instance, it could be the case that the subjects in Kleck et al.'s (1966) study were so distracted by the other person's apparent physical disability that they were less able to conduct their interview in an appropriate manner.

Differential Predictions about Physical Handicap Effects

The present study was not intended to address the controversy about the possible differential bases of social facilitation effects. Instead, it attempted to explore the extent to which the physical disability of a person encountered in a task situation promoted expectation-based social compensation or social facilitation effects. To this end, subjects worked on a task alone, in the presence of a co-actor, or as part of a dyad that engaged in collective effort as coworkers; in the social conditions, the other person (co-actor or coworker) was either physically handicapped or not. In addition, subjects worked on

either a simple physical (paper-folding) task, requiring rather basic fine-motor skills, or a somewhat more complex cognitive (idea generation) task.

Hypotheses

As noted, social compensation and social facilitation would be expected to mediate the effect on task performance of encountering a physically handicapped person. Thus, two reasonable hypotheses were generated and tested in the present study:

The social compensation hypothesis. To the extent that perceiving another as disabled generated social compensation, subjects were expected to perform better in the handicapped coworker, collective task context than in either the handicapped co-actor, individual task context or the alone condition. In contrast, this pattern would not be expected for the nonhandicapped conditions. Moreover, to the extent that handicap was a pervasive master status, such social compensation would be expected to occur for both a physical task and an even more nonrelevant cognitive task.

The social facilitation hypothesis. To the extent that perceiving another as disabled generated social facilitation, subjects were expected to perform differently in either social context (i.e., as a co-actor or a coworker) than when they worked alone or with a nonhandicapped partner. If the task was easily performed, they would be expected to demonstrate better performance in the social conditions; if the task was not so easily performed, they would be expected to do better in the alone condition.

METHODS AND PROCEDURE

Subjects

Subjects were 119 undergraduate students at Michigan State University, 23 males and 96 females, who participated in this study to earn credits in introductory psychology.[1]

Design

All subjects were randomly assigned to work on one of two tasks: performing a simple paper-folding procedure (Physical Task Condition); or, thinking of as many uses as they could for a common household item (Cognitive Task Condition).

Those subjects assigned to the Social Context conditions worked in the presence of another participant who, they were led to believe, was performing the same task as they. Some thought that they were working collectively as a team with this person (Coworker Condition), whereas others thought they were working independently (Co-Actor Condition). In addition, for about half the subjects in these social contexts conditions, the other person appeared to be paraplegic (Handicapper Condition), while this was not the case for the remainder (Nonhandicapper Condition).

Thus, the research design for the social context conditions that were the primary focus of this study was a 2 (Task: Physical or Cognitive) × 2 (Context: Coworker or Co-Actor) × 2 (Other's Physical Condition: Handicapped or Nonhandicapped) between-subjects factorial.

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[1]Care was taken to distribute the two sexes proportionately among the various conditions of the study; additionally, in the social context conditions, the sex of the other person was varied so that male and female subjects were exposed to about the same proportion of male and female co-participants.

Moreover, some subjects were assigned to individual context conditions in which they worked by themselves on one of the two tasks. As such, these two conditions (Alone - Physical Task; Alone - Cognitive Task) constituted external control groups to the principal design of the study.

Assistants

Two assistants were involved in every session of the Social Context Conditions. One assistant was the researcher, while the other enacted the role of the second subject. The researcher presented instructions, monitored the subject's performance, administered the posttask questionnaire, and debriefed the subject. The other assistant acted as a real subject would have. However, for half these sessions, she or he entered the room in a wheelchair and thus appeared to be physically handicapped (paraplegic). In the remaining sessions, she or he walked into the room and evidenced no symptoms of a physical disability.

Only one assistant was involved in the Alone Conditions sessions. For these situations, the assistant was always the researcher, whose duties were summarized above.

Tasks

Physical task. The physical task required subjects to fold four times as many 4-inch square pieces of paper as they could in a 10-minute work period. After correctly folding a piece of paper, subjects had to insert it into either a box (in the Co-Actor and Alone Conditions) or a tube that led to a common box (in the Coworker Conditions).

Cognitive task. The cognitive task required participants to think of as many uses as possible for a common household object in a 10-minute work period. Subjects were instructed to write each idea that they had for a use on a separate (4-inch square) piece

of paper and insert the slip into either a box (in the Co-Actor and Alone Conditions) or into a tube that led to a common box (in the Coworker Conditions).

Materials

Work set up. The testing room was set up so that there was a divider between two adjacent work places. As such, two subjects could work at the same time, but not be able to observe each other's performance. For the Alone Conditions, the subject could clearly see that the other work space was unoccupied. For the social context conditions, subjects could readily see the other participant working, but could not tell how well she or he was doing.

Each work place was furnished with an ample supply of 4-inch square pieces of paper; the two work places were provided with different-colored paper as an unobtrusive means of determining the individual output of the real subjects in the Coworker Conditions. Writing implements were also supplied for the Cognitive Task Conditions; again, the two work places were furnished with pens with different-colored ink as an unobtrusive means of determining the performance of the actual subjects in the Cognitive Task - Coworker Conditions. For the Co-Actor and Alone Conditions, the space also contained the box into which subjects were to deposit their work; for the Coworker conditions, a larger box with a separate tube running to each work place was clearly visible on the floor.

Posttask questionnaire. After they had finished performing the task for the specified 10-minute period, all subjects were furnished with a brief questionnaire that asked them about their experience. In the Alone Conditions, participants responded (via 6-point scales) to two questions:

"How well did you think that you performed on today's task?"

"What do you think of your ability to perform the type of task you were asked to perform today?"

In the social context conditions, the above questions were Items 1 and 3, respectively, of a 4-item instrument. The other questions were:

"How well do you think the other person performed on today's task?" (Item 2).

"What do you think of the other person's ability to perform the type of task you were asked to perform today?" (Item 4).

Procedure

In the social context conditions, subjects always arrived first, followed a few moments later by the confederate. Subjects, of course, were witness to how the other "participant" entered the room – either by walking in or through the use of a wheel chair.

Subjects in all conditions were handed a set of written instructions that first explained the nature of their participation in the study. They then signed an informed consent form, thereby indicating their willingness to take part in the research. Next, the subjects were instructed in the specific task that they were to perform and the procedures that they would need to follow.[2]

Subjects in the Co-Actor and Alone Conditions were informed that their individual performance would be the sole basis of their evaluation. In contrast, participants assigned to the Coworker Conditions were told that the combined performance of the two team members would determine how well they did.

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[2]See Appendix A for verbatim copies of the instructions to subjects.

Three tactics were employed to attempt to motivate subjects to perform well. First, subjects were led to believe that performance on the task was related to "intelligence capabilities"—verbal intelligence for the cognitive task and physical intelligence for the physical task. Second, subjects were told that they would have to complete a second, similar task if their work did not exceed a well-established standard of average performance, and they would have to continue working on additional tasks until that standard was met. Finally, they were told that the most productive person [team] would receive a $25 [$25 per member] bonus.[3]

After reading the instructions, subjects were told to put on earphones through which they would be hearing white noise while they worked. (This step was taken so that in the social context conditions, subjects would not be able to hear any sounds that the other participant might make.) At this point, the researcher left the room, while a brief taped announcement instructed the subjects to begin working at the task.

After 10 minutes had elapsed, the researcher re-entered the room and told the subject(s) to stop working. The researcher then handed out the posttask questionnaire, which the subject(s) proceeded to complete. Finally, the subjects were debriefed.

Dependent Measures

Both actual and perceived task performance were assessed in this study. Actual performance was measured as the number of products—folded pieces of paper in the physical task, different uses for the knife in the cognitive task—that a subject generated. Perceived performance was measured via her or his responses to the posttask

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[3]In actuality, 10, $25 bonuses were awarded, one to the best performer in each condition.

questionnaire items.

RESULTS[4]

Preliminary analysis revealed that subjects found it much easier to perform the physical, paper-folding task (Mean = 55.93) than the idea-generation, cognitive task (Mean = 24.52), $F(1,109) = 252.38$, $p < .0001$. To eliminate any potential that this substantial difference had for masking other effects, actual performance scores were standardized within a task across all 10 experimental conditions, and it was these z scores that were employed in the analyses reported below.[5]

The major exploration of possible social compensation and social facilitation effects was carried out via 2 (Social Context: Co-Actor or Coworker) × 2 (Task: Physical or Cognitive) × 2 (Other's Physical Condition: Handicapped or Nonhandicapped) analyses of variance; where appropriate, the pooled within-cell variance for all 10 experimental conditions was used as the error term in these analyses. Tables 1 - 5 summarize the results for the actual performance measure, as well as for subjects' responses to the four posttask questionnaire items that assessed perceived performance. In addition, where appropriate, contrasts with the results from the two external control conditions (Physical Tasks - Alone and Cognitive Task - Alone) also were conducted. Findings are presented below in terms of their relevance for predictions involving social

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[4]Preliminary data examination indicated that there was no reliable effect of sex. For this reason, as well as to insure reasonable sample sizes per experimental condition, neither sex of subject nor sex of other was considered in the analyses reported below.

[5]Appendix B presents the ANOVA performed on the raw scores. Note that the pattern of these results (other than the significant main effect of Task) was similar to that found for the z scores.

compensation and social facilitation.

Table 1.

Anova Table for Standard Scores for Actual Task Performance

Variable	df	MS	F
Coworker/Co-Actor(A)	1	4.84	5.63*
Physical/Cognitive(B)	1	1.86	2.16
Handicapped/Normal(C)	1	.03	.35
A X B	1	.00	.00
A X C	1	5.42	6.30**
B X C	1	.01	.15
A X B X C	1	5.37	6.24**
Error	109	.86	

* $p < .05$
** $p < .01$

Social Compensation

In the context of the present study, better performance in the Handicapped Other - Coworker Condition, as compared to all other conditions, would indicate social compensation. As such, we would expect significant Social Context × Other's Physical Condition interactions for the measures of actual and perceived performance. Tables 1 - 5 indicate that these effects were significant for four of the five measures (actual performance, subjects' perceptions of own performance, subjects' perceptions of other's performance and ability) F's(1, 109) = 6.30 - 30.06, $p < .01$ - .0001, and marginally significant ($p < .075$) for the fifth (subjects' perceptions of own ability).

Table 2.

Anova Table for Scores on Question 1

Variable	df	MS	F
Coworker/Co-Actor(A)	1	2.66	2.20
Physical/Cognitive(B)	1	1.41	1.17
Handicapped/Normal(C)	1	1.41	1.24
A X B	1	.24	.20
A X C	1	11.16	9.26*
B X C	1	.01	.01
A X B X C	1	.02	.02
Error	87	1.21	

* $p < .01$

Table 3.

Anova Table for Scores on Question 2

Variable	df	MS	F
Coworker/Co-Actor(A)	1	31.95	43.11**
Physical/Cognitive(B)	1	2.35	3.17
Handicapped/Normal(C)	1	17.24	23.25**
A X B	1	4.31	5.82*
A X C	1	21.75	29.34**
B X C	1	1.16	1.57
A X B X C	1	1.27	1.72
Error	86	.74	

* $p < .05$
** $p < .01$

Consistent with the social compensation perspective, the data indicate that subjects in the Handicapped Other-Coworker Condition outperformed subjects in all other conditions, their perception of their own abilities was greatest in this condition, and their

perception of other's performance and ability were least in the Handicapped Other-Coworker Condition.

Table 4.

Anova Table for Scores on Question 3

Variable	df	MS	F
Coworker/Co-Actor(A)	1	.03	.02
Physical/Cognitive(B)	1	7.41	4.91*
Handicapped/Normal(C)	1	.48	.33
A X B	1	.01	.00
A X C	1	4.43	3.09
B X C	1	.02	.02
A X B X C	1	.12	.08
Error	87	1.44	

* $p < .05$

Table 5.

Anova Table for Scores on Question 4

Variable	df	MS	F
Coworker/Co-Actor(A)	1	37.32	28.43**
Physical/Cognitive(B)	1	2.68	2.04
Handicapped/Normal(C)	1	33.69	25.66**
A X B	1	7.76	5.91**
A X C	1	15.52	11.82**
B X C	1	5.40	4.11*
A X B X C	1	2.37	1.81
Error	86	1.31	

* $p < .05$
** $p < .01$

Table 6, which presents the relevant condition means—along with the results of simple-effects analyses—indicates that for all measures, social compensation occurred

when subjects worked with a handicapped other. Subjects' actual and perceived performance, as well as their perceived ability, was significantly higher in the Coworker - Handicapped Other Condition than in either the Coworker - Nonhandicapped or Co-Actor Handicapped Conditions; and, subjects' perceptions of the other's performance and ability were lower in the Coworker - Handicapped Other Condition, as well.

Table 6.

Actual and Perceived Task Performance as a Function of Social Context and Other's Physical Condition

	Social Context	
Other's Condition	**Coworker**	**Co-Actor**
	Actual Performance	
andicapped	$.489_a$	$-.397_b$
Nonhandicapped	$-.043_b$	$-.008_b$
	Perceived Own Performance	
Handicapped	4.44_a	3.42_b
Nonhandicapped	3.48_b	3.87_b
	Perceived Other's Performance	
Handicapped	1.78_a	3.85_b
Nonhandicapped	3.60_b	3.78_b

"Table 6 (cont'd)"

	Perceived Own Ability	
Handicapped	4.35_a	3.88_b
Nonhandicapped	3.78_b	4.22_b

	Perceived Other's Ability	
Handicapped	1.87_a	3.88_b
Nonhandicapped	3.86_b	4.42_b

Note. **Within each measure, values in the same row or column that do not share a common subscript differed significantly ($p < .05$) from each other.**

Planned contrasts between the Coworker - Handicapped Other Condition and the external control (Alone) conditions also yielded evidence of social compensation. Table 7 presents the relevant means and significance tests for these comparisons. As shown, subjects actually tended to perform better, and to perceive themselves as having done so, in the Coworker - Handicapper Condition than in the Alone Conditions.

Table 7.

Actual and Perceived Task Performance in the Handicapped Coworker and Alone Conditions

Condition	Mean	*t*
	Actual Performance	
Handicapped Coworker	.489	1.83*
Alone	-.008	
	Perceived Own Performance	
Handicapped Coworker	4.44	3.04*
Alone	3.42	
	Perceived Own Ability	
Handicapped Coworker	4.35	1.33
Alone	3.83	

*$p < .05$

It is important to note that the three-way, Task × Social Context × Other's Physical Condition, interaction was significant for actual performance (see Table 1), but not for any of the perceived performance measures. This effect indicates that the Social Context × Other's Physical Condition interaction for actual performance, discussed above, was qualified by the type of task (physical or cognitive) that the subjects performed. Simple effects tests revealed that the Social Context × Other's Physical Condition simple interaction was significant for the physical task, $F(1,109) = 6.98$, $p<.01$, but not for the cognitive task, $F(1,109) = 1.64$, (n/s). Table 8 presents the condition means for the physical task. In the physical task, subjects in the

Collective/Handicapped Condition outperformed subjects in the Collective/ Nonhandicapped Condition by more than one full standard score. This was not true in the Co-actor Conditions. As indicated, performance showed clear evidence of social compensation when subjects worked with a handicapped other.

Table 8.

Mean Actual Performance on the Physical Task as a Function of Social Context and Other's Physical Condition

Other's Condition	Social Context: Coworker	Social Context: Co-actor
Handicapped	$.967_a$	$-.497_b$
Nonhandicapped	$-.180_b$	$.315_b$

Note. Values in the same row or column that do not share a common subscript differed significantly ($p < .05$) from each other.

Social Facilitation

Analyses provided some evidence of an overall social facilitation effect; that is, the comparison between the Alone and combined social context conditions indicated that subjects tended to perform the simple physical task better when another worker was present, but tended to perform the somewhat more complicated cognitive task better when alone, $F(1,109) = 11.06$, $p < .001$. Table 9 presents the means for this comparison.

However, this contrast was not significant for either perceived performance or perceived ability.

Table 9.

Actual Performance as a Function of Task and Context

	Context	
Task	**Social**	**Alone**
Physical	$.136_b$	$-.586_a$
Cognitive	$-.123_b$	$.482_c$

Note. **Values in the same row or column that do not share a common subscript differed significantly ($p < .05$) from each other.**

Of more importance, as Tables 1 - 5 indicate, there was no evidence that the other's physical condition moderated social facilitation. Given the overall results, it was possible that subjects who worked on the physical task would have performed better in the presence of a handicapped other, whereas those who worked on the cognitive task would have performed better alone. Such a pattern would have resulted in a significant Task × Other's Physical Condition interaction. As Tables 1 - 5 reveal, this was not the case for any of the measures.

Other Findings

As Tables 1 - 5 indicate, there were a small number of significant findings that were not relevant to the predictions. Table 1 shows that there was a significant main

effect of Social Context for actual performance; overall, subjects tended to do better in the Coworker (Mean = .223) than in the Co-Actor Context (Mean = -.215), a pattern that suggest social compensation. However, as noted above, this social compensation effect was moderated by the Other's Physical Condition, particularly for the physical task.

Table 3 indicates that there was a significant main effect of Social Context for perceived performance of the partner on the task; overall, subjects tended to perceive the partner as performing better in the Co-Actor Context (Mean = 3.18) than in the Coworker Context (Mean = 4.33), a pattern that suggests that subjects perceived their partner as performing better when that performance had no bearing on the subjects' own outcomes. As noted, this effect was also moderated by the Other's Physical Condition, in a pattern that was consistent with the social compensation hypothesis.

Table 3 also shows a main effect of Other's Physical Condition; overall subjects perceived the handicapped partner as performing less well (m=4.22) than the non-handicapped partner (m=3.32). As noted, this effect was moderated by Social Context, in a pattern that was consistent with the social compensation prediction. These findings strongly suggest that when a handicapped person is seen as part of a team, his physical attributes are considered when overall performance is evaluated.

Finally, Table 3 shows a significant interaction between Social Context and Task. Table 10 presents the condition means for this effect. As indicated, simple effects tests revealed subjects felt that the partner performed best in the Coworker Context/Physical Task Condition.

Table 10.

Responses to Question 2 as a Function of Task and Context

	Context	
Task	**Coworker**	**Co-actor**
Physical	5.72_a	4.87_b
Cognitive	4.02_b	4.76_b

Note. Values in the same row or column that do not share the same subscript differed significantly ($p < .05$)from each other.

Table 5 shows that there was a significant main effect of Social Context for perceived ability of the partner on the task; overall, subjects tended to perceive the partner as being more able in the Co-Actor Context (Mean = 2.91) than in the Coworker Context (Mean = 4.18), a pattern that suggests that subjects perceived their partner as being more able when that ability had no bearing on the subjects' own outcomes. As noted, this effect was also moderated by the Other's Physical Condition, in a pattern that was consistent with the social compensation prediction.

Table 5 also shows a main effect of Other's Physical Condition; overall subjects perceived the handicapped partner as being less able (m=4.18) than the non-handicapped partner (m=2.92). Once again, this effect was moderated by Social Context, in a pattern that was consistent with the social compensation hypothesis. These findings strongly suggest that when a handicapped person is seen as part of a team, his physical attributes are considered when overall ability is evaluated.

Finally, Table 5 shows a significant interaction between Social Context and Task.

Table 11 presents the condition means for this comparison. As indicated by the data, subjects evaluated their partner's ability to perform less favorably in the Coworker Context than in the Co-Actor Context, irrespective of task. However, within the Coworker Context, evaluations were less favorable for the physical task than for the cognitive task.

Table 11.

Responses to Question 4 as a Function of Task and Context

	Context	
Task	**Coworker**	**Co-actor**
Physical	3.45_a	5.12_b
Cognitive	4.18_c	5.06_b

Note. Values in the same row or column that do not share the same subscript differed significantly ($p < .05$) from each other.

DISCUSSION

In general, results provided support for the idea that people will tend to social compensate when working with a handicapped other, consistent with previous findings (Williams and Karau, 1991). These authors suggested that participants in their research felt compelled to compensate for their weaker co-worker in order to attain a respectable collective product that would reflect positively on them. The present study found similar effects when subjects merely were confronted with a partner who was physically handicapped – but one whose disability had no relevance for task performance. Such

social compensation, then, is consistent with the idea that physical handicap is a stigmatized master status (Frable, 1993).

More specifically, analyses revealed social compensation effects for both actual and perceived performance and ability measures; these effects were significant for four of the five measures (actual performance, subjects' perceptions of own performance, subjects' perceptions of other's performance and ability), and marginally significant for the fifth (subjects' perceptions of own ability). These data indicate that subjects in the Handicapped Other-Coworker Condition outperformed subjects in all other conditions, their perception of their own abilities was greatest in this condition, and their perception of other's performance and ability were least in the Handicapped Other-Coworker Condition.

Contrasts between the Coworker - Handicapped Other Condition and the external control (Alone) conditions also yielded evidence of social compensation. Subjects actually tended to perform better, and to perceive themselves as having done so, in the Coworker - Handicapper Condition than in the Alone Conditions.

It is important to note that the evidence supporting the idea that the coworker's physical condition moderates social compensation was stronger for the physical task. Subjects tended to *perceive* performance differences as a function of the coworker's physical condition regardless of the task, but their *actual* performance tended to reflect concerns with their (handicapped) partner's ability only for the physical task. This pattern of findings suggests that the salience of the stigmatized master status that a disability conveys may, itself, be moderated by a variety of factors, including task demands. It could be that people expect a handicapped person to be less capable in

general, but their confidence in this belief is moderated by the extent that there are elements common to both the disability and the task in question. It could be that the elements common to both the disability and the task are highly correlated and, thus, people's expectations about their need to compensate may be strongest when the task required behaviors directly related to the handicap (e.g., when the task required a wheel-chair bound person to move about), less strong when the task required activities only loosely related to the disability (e.g., when the physical nature of the task did not involve the specific handicap, as was the case in this study), and even less strong when the task was clearly unrelated to the handicap (e.g., the cognitive task in the present study). Few, if any, investigations have been conducted in this area, so it is a logical next issue to be examined in pursuing this line of research.

In contrast to support for the idea that another's disability moderates social compensation tendencies, the present study did not yield evidence of link between the other's physical condition and social facilitation. There was evidence of social facilitation overall – subjects tended to perform the simpler task better in the social conditions and the more complex task better in the alone conditions – but this pattern was not moderated by the other's physical condition. It could be that in the present circumstances, the presence of a physically handicapped individual was not a sufficient enough arouser (or distractor) to generate additional social facilitation over and above the mere presence of another.

Limitations to the current research. There were several limitations in this experiment that if corrected and/or eliminated could enhance what are already favorable results. First was the training of the confederates in the proper use of a wheelchair.

Though they went through extensive training so as to get to the point where they felt comfortable and "looked" natural using the chair, there are many things that "real" handicappers do almost continuously (habitually) that the confederates should have been trained to do. There are many, but only a few are mentioned here: constant adjustment of the body in the wheelchair (this is both for comfort and for medical reasons [protection against pressure sores]), placement of the arms and hands while the wheelchair is not in motion, and constant adjustment of the feet on the footpedals (if the feet slip backward too far, they can get caught in the front wheels and cause the chair to lock-up; if they slip too far forward they will drag on the ground and could cause injury). Another problem experienced in this study was the collection of the subjects' responses in the coworker conditions. The use of tubes leading to a common box was very awkward and could conceivably have raised suspicions in the actual subjects. The biggest problem was with the pieces of paper getting caught in the tube and backing up to point where they were sticking out the top. The experimenters were trained to look for this problem and quickly fix it without disturbing the subjects. A larger tube or smaller pieces of paper may correct this problem, or developing an entire new method of collection may be necessary.

Future research. One area of research that should be immediately pursued is that of replicating the results of the current study using the same type of physical task but employing a different type of cognitive that may tap into what was found in the analysis of posttask questionnaires. This analysis showed that subjects' perception of their own abilities was greatest in Handicapped Other-Coworker condition, and their perception of other's performance and ability were least in this condition as well. The question to be addressed is what type of adjustments to the cognitive task are necessary to transform

these perceptions into actual performance on the task. This issue is an extremely important one to address. If preconceived expectations about the disabled, which led to social compensation in the physical task, were also to generalize to an even more non-relevant cognitive task, the results of this line of research would be even more alarming and the implications for handicapped people working in groups are very disheartening. Perhaps something as simple as adding a minor (and irrelevant) physical aspect to the cognitive task would be successful in capturing the phenomena illustrated by responses to the posttask questionnaire.

An extension of the paradigm used in this study could be used as an indirect means of detecting other forms of prejudice. As was demonstrated in the current study, this paradigm was very successful at identifying what preconceived expectations about the handicapped could lead to in actual and perceived performance effects. Consider what may be found by substituting other stigmatized individuals for the handicapper and having them perform similar tasks and responding to similar posttask questionnaires. Would subjects demonstrate similar compensatory efforts to overcome preconceived expectations (which are that they are less competent) when paired with minorities (such as blacks, Hispanic, etc.), or the obese? Though it is politically incorrect to directly downgrade these individuals, the prejudice that does exist could be revealed using this unobtrusive means.

Conclusion. Returning to the issue of physical disabilities being a stigmatized master status, it is notable that in the present situation, people's negative expectations had some positive implications for task outcome – they tended to work harder when they were concerned about the other's expected capabilities. However, it is important to understand

that such negative expectations often do not carry such "silver linings" with them (cf. Crano & Mellon, 1978; Miller & Turnbill, 1986; Snyder & Swan, 1978). And, positive outcomes, even when they do occur, are likely to be poor compensation for ultimate damage that preconceived expectations can do, both personally and interpersonally, to the targets of these beliefs.

APPENDICES

Appendix A

Subjects' Instructions for Coactive Intelligence Condition

Human Task Performance Study

Welcome to the human task performance study. You will be participating in a series of tasks designed to measure intellectual abilities.

We will now read the instructions together:

"We are interested in studying performance on what is called a "brainstorming" task. In the "brainstorming" task, you will be given the name of an object and your task will be to come up with as many uses for this object as you can. Don't be concerned about the quality of the uses you come up with. The uses can be ordinary or unusual. It is, important that you write down as many uses as you can in the time allotted (you will be allowed ten minutes). This task requires your verbal intelligence capabilities. We are interested in the number of uses that can be generated.

I will ask you to write one use on each slip of paper, and then insert the slip of paper into the box adjacent to you before you write down the next use. It is not important that you come up with the same uses as anyone else. What is important is how many uses you can come up with in the time allotted (you will have 10 minutes). Thus, you each bear the full responsibility for generating as many uses as you can.

This is the first phase of this experiment. After this task is completed, your score will be computed. This experiment has been run many times and a standard score for average performance has been established. Your score will be compared to this standard. If your score is at or above the standard for average performance, you will immediately move on to Phase II. If your score is below average, you will be required to repeat this procedure (with slightly modified tasks) until this standard score is reached. You will than be able to move on to Phase II.

The most important aspect of this task is to examine rapid thinking, a quality that is highly correlated with verbal intelligence in adults. That is generally speaking, the higher one's intelligence, the more uses for an object one can come up with. The individual with the highest score will receive a $25.00 award for best performance."

On the table in front of you will find a set of headphones. When instructed, please put them on and do not remove them until told to do so. A tape will be playing that will give you further instructions throughout the experiment.

We will now begin the experiment. Please put the headphones on and listen for further instructions.

DO NOT TURN THIS PAGE UNTIL INSTRUCTED.

Please answer the following questions to the best of your ability:

My class standing is: Freshman ____

Sophomore ____

Junior ____

Senior ____

My age is: _____

My sex is: Male ____

Female ____

How well do you think you performed on today's task?

1 2 3 4 5 6 7

very not well

well at all

How well do you think the other person performed on today's task?

1 2 3 4 5 6 7

very not well

well at all

What do you think of your ability to perform the type of task you were asked to perform today?

1	2	3	4	5	6	7
very good						not good at all

What do you think of the other person's ability to perform the type of task you were asked to perform today?

1	2	3	4	5	6	7
very good						not good at all

How difficult do you feel this task was today:

1	2	3	4	5	6	7
very						not at all

How important was it that you did well on this task today?

1	2	3	4	5	6	7
very						not at all

Subjects' Instructions for Co-Active Physical Condition

Human Task Performance Study

Welcome to the human task performance study. You will be participating a series of tasks designed to measure physical intelligence.

We will now read the instructions together:

"We are interested in studying performance on what is called a "physical intelligence" task. The task you will partake in today is designed to measure a type of hand-eye coordination which some investigators have called physical intelligence. I will ask you to fold pieces of paper in a way that each piece of paper contains four folds. Drop each piece of paper into the box adjacent to you prior to folding the next piece of paper. This task requires your physical intelligence capabilities. I want to see how many pieces of paper you can fold in the time allotted (you will have ten minutes). You each bear the full responsibility for folding as many pieces of paper as you can.

This is the first phase of this experiment. After this task is completed, your score will be computed. This experiment has been run many times and a standard score for average performance has been established. Your score will be compared to this standard. If your score is at or above the standard for average performance, you will immediately move on to Phase II. If your score is below average, you will be required to repeat this procedure (with slightly modified tasks) until this standard score is reached. You will than be able to move on to Phase II. The most important aspect of this task is to examine rapid motor thinking, a quality that is highly correlated with physical intelligence in adults. That is, generally speaking, the higher one's physical intelligence, the more pieces of paper one can fold."

On the table in front of you will find a set of headphones. When instructed, please put them on and do not remove them until told to do so. A tape will be playing that will give you further instructions throughout the experiment.

We will now begin the experiment. Please put the headphones on and listen for further instructions.

DO NOT TURN THIS PAGE UNTIL INSTRUCTED.

Please answer the following questions to the best of your ability:

My class standing is: Freshman ____

Sophomore ____

Junior ____

Senior ____

My age is: _____

My sex is: Male ____

Female ____

How well do you think you performed on today's task?

1 2 3 4 5 6 7

very not well

well at all

How well do you the other person performed on today's task?

1 2 3 4 5 6 7

very not well

well at all

What do you think of your ability to perform the type of task you were asked to perform

today?

1	2	3	4	5	6	7
very good						not good at all

What do you think of the other person's ability to perform the type of task you were asked to perform today?

1	2	3	4	5	6	7
very good						not good at all

How difficult do you feel this task was today:

1	2	3	4	5	6	7
very						not at all

How important was it that you did well on this task today?

1	2	3	4	5	6	7
very						not at all

Subjects' Instructions for Collective Intelligence Condition

Human Task Performance Study

Welcome to the human task performance study. You will be participating a series of tasks designed to measure intellectual abilities.

We will now read the instructions together:

"We are interested in studying performance on what is called a "brainstorming" task. In the "brainstorming" task, you will be given the name of an object and your task will be to come up with as many uses for this object as you can. The task will be evaluated as a collective group performance. In other words, both your and your partner's responses will be added together to measure group performance. Don't be concerned about the quality of the uses you come up with. The uses can be ordinary or unusual. It is important that you write down as many uses as you can in the time allotted (you will be allowed ten minutes). This task requires your verbal intelligence capabilities. We are interested in the number of uses that can be generated.

I will ask you to write one use on each slip of paper, and then drop each piece of paper into the tube, which leads to a common box, before you write down the next use. As you can see, the uses you each generate are collected in this box. It is impossible to identify you since you will not ever write your name on the slips of paper. We will only be able to measure rapid thinking as a team. It is not important whether or not you come up with the same uses as your partner. What is important is how many uses your team come up with in the time allotted (you will have 10 minutes). Thus, you share the responsibility with your partner for generating as many uses as you can.

This is the first phase of this experiment. After this task is completed, your teams' score will be computed. This experiment has been run many times and a standard score for average performance has been established. Your teams' score will be compared to this standard. If your teams' score is at or above the standard for average performance, your team will immediately move on to Phase II. If your teams' score is below average, you will be required to repeat this procedure (with slightly modified tasks) until this standard score is reached. Your team will than be able to move on to Phase II.

The most important aspect of this task is to examine rapid thinking, a quality that is highly correlated with verbal intelligence in adults. That is, generally speaking, the higher one's intelligence, the more uses for objects one can come up with. The team with the highest score will receive a $50.00 award for best performance."

On the table in front of you will find a set of headphones. When instructed, please put them on and do not remove them until told to do so. A tape will be playing that will give you further instructions throughout the experiment.

We will now begin the experiment. Please put the headphones on and listen for further instructions.

DO NOT TURN THIS PAGE UNTIL INSTRUCTED.

Please answer the following questions to the best of your ability:

My class standing is: Freshman ____

Sophomore ____

Junior ____

Senior ____

My age is: _____

My sex is: Male ____

Female ____

How well do you think you performed on today's task?

1 2 3 4 5 6 7

very not well

well at all

How well do you think your partner performed on today's task?

1 2 3 4 5 6 7

very not well

well at all

What do you think of your ability to perform the type of task you were asked to perform today?

1 2 3 4 5 6 7

very not good

good at all

What do you think of your partner's ability to perform the type of task you were asked to perform today?

1 2 3 4 5 6 7

very not good

good at all

How difficult do you feel this task was today:

1 2 3 4 5 6 7

very not

at all

How important was it that you did well on this task today?

1	2	3	4	5	6	7
very						not at all

Subjects' Instructions for Collective Physical Condition

Human Task Performance Study

Welcome to the human task performance study. You will be participating a series of tasks designed to measure physical intelligence.

We will now read the instructions together:

"We are interested in studying performance on what is called a "physical fitness and ability" task. The task you will partake in today is designed to measure a type of hand-eye coordination which some investigators have called physical intelligence. The task will be evaluated as a collective group performance. In other words, both your and your partner's responses will be added together to measure group performance. I will ask you to fold pieces of paper in a way that each piece of paper contains four folds. Drop each piece of paper into the tube, which leads to a common box, adjacent to you prior to folding the next piece of paper. As you can see, the number of pieces of paper

folded are collected in this box. It is impossible to identify you since your names will not ever appear on the pieces of paper. We will only be able to measure rapid motor thinking as a team. I want to see how many pieces of paper your team can fold in the time allotted (you will have ten minutes). This task requires your physical intelligence capabilities. You share the responsibility with your partner for folding as many pieces of paper as you can.

This is the first phase of this experiment. After this task is completed, your teams' score will be computed. This experiment has been run many times and a standard score for average performance has been established. Your teams' score will be compared to this standard. If your teams' score is at or above the standard for average performance, your team will immediately move on to Phase II. If your teams' score is below average, you will be required to repeat this procedure (with slightly modified tasks) until this standard score is reached. Your team will than be able to move on to Phase II.

The most important aspect of this task is to examine rapid motor thinking, a quality that is highly correlated with physical intelligence in adults. That is, generally speaking, the higher one's physical intelligence, the more pieces of paper one can fold. The team with the highest score will receive a $50.00 award for best performance."

On the table in front of you will find a set of headphones. When instructed, please put them on and do not remove them until told to do so. A tape will be playing

that will give you further instructions throughout the experiment.

We will now begin the experiment. Please put the headphones on and listen for further instructions.

DO NOT TURN THIS PAGE UNTIL INSTRUCTED.

Please answer the following questions to the best of your ability:

My class standing is: Freshman ____

Sophomore ____

Junior ____

Senior ____

My age is: _____

My sex is: Male ____

Female ____

How well do you think you performed on today's task?

1	2	3	4	5	6	7
very well						not well at all

How well do you think your partner performed on today's task?

1	2	3	4	5	6	7
very well						not well at all

What do you think of your ability to perform the type of task you were asked to perform today?

1 2 3 4 5 6 7

very not good

good at all

What do you think of your partner's ability to perform the type of task you were asked to perform today?

1 2 3 4 5 6 7

very not good

good at all

How difficult do you feel this task was today:

1 2 3 4 5 6 7

very not

at all

How important was it that you did well on this task today?

1	2	3	4	5	6	7
very						not at all

Subjects Instructions for Alone Intelligence Condition

Human Task Performance Study

Welcome to the human task performance study. You will be participating in a series of tasks designed to measure intellectual abilities.

We will now read the instructions together:

"We are interested in studying performance on what is called a "brainstorming" task. In the "brainstorming" task, you will be given the name of an object and your task will be to come up with as many uses for this object as you can. Don't be concerned about the quality of the uses you come up with. The uses can be ordinary or unusual. It is, important that you write down as many uses as you can in the time allotted (you will be allowed ten minutes). This task requires your verbal intelligence capabilities. We

are interested in the number of uses that can be generated.

I will ask you to write one use on each slip of paper, and then insert the slip of paper into the box adjacent to you before you write down the next use. It is not important that you come up with the same uses as anyone else. What is important is how many uses you can come up with in the time allotted (you will have 10 minutes).

This is the first phase of this experiment. After this task is completed, your score will be computed. This experiment has been run many times and a standard score for average performance has been established. Your score will be compared to this standard. If your score is at or above the standard for average performance, you will immediately move on to Phase II. If your score is below average, you will be required to repeat this procedure (with slightly modified tasks) until this standard score is reached. You will than be able to move on to Phase II. The most important aspect of this task is to examine rapid thinking, a quality that is highly correlated with verbal intelligence in adults. That is generally speaking, the higher one's intelligence, the more uses for an object one can come up with. The individual with the highest score will receive a $25.00 award for best performance."

On the table in front of you will find a set of headphones. When instructed, please put them on and do not remove them until told to do so.

We will now begin the experiment. Please put the headphones on and listen for further instructions.

DO NOT TURN THIS PAGE UNTIL INSTRUCTED.

Please answer the following questions to the best of your ability:

My class standing is: Freshman ____

Sophomore ____

Junior ____

Senior ____

My age is: _____

My sex is: Male ____

Female ____

How well do you think you performed on today's task?

1 2 3 4 5 6 7

very not well

well at all

What do you think of your ability to perform the type of task you were asked to perform today?

1 2 3 4 5 6 7

very not good

good at all

How difficult do you feel this task was today:

1	2	3	4	5	6	7
very						not at all

How important was it that you did well on this task today?

1	2	3	4	5	6	7
very						not at all

Subjects' Instructions for Alone Physical Condition

Human Task Performance Study

Welcome to the human task performance study. You will be participating a series of tasks designed to measure physical intelligence.

We will now read the instructions together:

"We are interested in studying performance on what is called a "physical intelligence" task. The task you will partake in today is designed to measure a type of hand-eye coordination which some investigators have called physical intelligence. I will ask you to fold pieces of paper in a way that each piece of paper contains four folds. Drop each piece of paper into the box adjacent to you prior to folding the next piece of paper. This task requires your physical intelligence capabilities. I want to see how many pieces of paper you can fold in the time allotted (you will have ten minutes).

This is the first phase of this experiment. After this task is completed, your score will be computed. This experiment has been run many times and a standard score for average performance has been established. Your score will be compared to this standard. If your score is at or above the standard for average performance, you will immediately move on to Phase II. If your score is below average, you will be required to repeat this procedure (with slightly modified tasks) until this standard score is reached. You will than be able to move on to Phase II. The most important aspect of this task is to examine rapid motor thinking, a quality that is highly correlated with physical intelligence in adults. That is, generally speaking, the higher one's physical intelligence, the more pieces of paper one can fold."

On the table in front of you will find a set of headphones. When instructed, please put them on and do not remove them until told to do so. A tape will be playing that will give you further instructions throughout the experiment.

We will now begin the experiment. Please put the headphones on and listen for further instructions.

DO NOT TURN THIS PAGE UNTIL INSTRUCTED.

Please answer the following questions to the best of your ability:

My class standing is: Freshman ____

Sophomore ____

Junior ____

Senior ____

My age is: _____

My sex is: Male ____

Female ____

How well do you think you performed on today's task?

1 2 3 4 5 6 7

very not well

well at all

What do you think of your ability to perform the type of task you were asked to perform today?

1 2 3 4 5 6 7

very not good

good at all

How difficult do you feel this task was today:

1	2	3	4	5	6	7
very						not at all

How important was it that you did well on this task today?

1	2	3	4	5	6	7
very						not at all

Appendix B

Table 12.
Anova for Raw Scores on Performance Tasks

Variable	df	MS	F
Coworker/Co-Actor(A)	1	52.89	5.94*
Physical/Cognitive(B)	1	2185.71	245.45**
Handicapped/Normal(C)	1	4.34	.48
A X B	1	3.67	.41
A X C	1	90.39	10.15**
B X C	1	2.63	.29
A X B X C	1	89.88	10.09**
Error	109	8.91	

* $p < .05$
** $p < .01$

Table 13.
Raw Performance Score Means

	COLLECTIVE	CO-ACTOR	ALONE
Physical Task			
Non-handicapped			
Mean	53.27	60.58	47.27
SD	14.75	14.73	12.50
Handicapped			
Mean	70.20	49.18	-----
SD	4.66	13.23	
Cognitive Task			
Non-handicapped			
Mean	25.25	21.27	28.85
SD	8.07	9.43	11.52
Handicapped			
Mean	25.62	21.60	-----
SD	7.47	7.13	

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