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IS GROUP PRODUCTIVITY LOSS THE RULE OR THE EXCEPTION? EFFECTS OF CULTURE AND GROUP-BASED MOTIVATION

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This study examined four causes of group performance loss: goal specificity, communication, incentives for goal attainment, and high versus low cultural collectivism. Subjects were managers from Israeli kibbutzim (63 individuals) and cities (59 individuals) who worked on a simulated task requiring them to evaluate résumés. We used a two-by-three-by-four design in which sample, goal, and test condition were varied to test hypotheses. Group performance loss occurred only for urban respondents with a do-your-best goal and team task.

Western corporations have shown a growing interest in teamwork, but research evidence has not fully supported great hopes that teamwork will increase organizational effectiveness. In fact, in the results of numerous studies, people working together have not performed as well as they performed when working alone, even when process loss was controlled for (Gabrenya, Latane, & Wang, 1983; Latane, Williams, & Harkins, 1979). This phenomenon of individuals exerting less effort when their efforts are combined than when efforts are individual is known as social loafing (Levine, Resnick, & Higgins, 1993; Shepperd, 1993). A meta-analysis of 78 studies on social loafing led to the conclusion that the effect is robust and generalizes across tasks and work populations (Karau & Williams, 1993). However, a large number of variables moderate the tendency to engage in social loafing. For example, social loafing was eliminated when participants worked with close friends or teammates, when there were clear performance standards, and when individual output could be evaluated. In addition, social loafing was not apparent when tasks were meaningful, when people did not feel that their input was redundant, when they did not think others were taking advantage of them, and when the culture in which they were embedded supported contribution to a group. Since most groups in organizations consist of individuals who work together and get to know each other, one wonders whether social loafing is indeed the rule or the exception. This study was designed to answer this question by simulating working conditions in

which the members of a working team know each other, communicate with each other, and have clear performance standards and rewards for performance. We examined these effects in group-focused and self-focused cultures.

SOCIAL LOAFING VERSUS SOCIAL FACILITATION

Social loafing is often explained by the attributions people make about the motivation and performance of other group members. First, people may believe that other group members exert enough effort to achieve a group's goals, thereby making their own efforts unnecessary or dispensable. This phenomenon is often called the free-rider effect (Kerr, 1983). Second, a potential inequity in contributions may occur when one person contributes more than others. To avoid the possibility of becoming a sucker, that is, one who contributes to the collective good when nobody else does, individuals attenuate their efforts and cause an overall loss in group performance (Kerr & Bruun, 1983; Kidwell & Bennett, 1993).

However, a separate line of research has suggested that working in the presence of others may, in fact, increase the level of performance compared to working alone. This effect is known as social facilitation, which is the result of people's motivation to maintain a positive self-image in the presence of others, particularly when they perceive the others as potential evaluators. Three factors, the mere presence of others, evaluation apprehension, and motivation to maintain a positive self-image, account for the social facilitation effect. First, the mere presence of others affects behavior by increasing an individual's general level of arousal (Guerin, 1986). Arousal enhances the emission of dominant and familiar responses. Therefore, the presence of others increases performance on tasks that require familiar responses, but impairs performance on tasks that require novel responses, because overarousal occurs (Zajonc, 1965). Alternatively, the mere presence of others may create a cognitive overload, which can cause either performance increment or decrement, depending on the information-processing demands of the task (Baron, 1986).

Second, the presence of others increases evaluation apprehension. It affects the focus of attention and creates demands on a person to behave in a certain way and to gain positive evaluation. Harkins (1987) showed that the presence of others and evaluation apprehension have an additive effect on performance. These two effects occurred when the performers could be identified and their performance could be compared to certain standards or norms.

Third, the presence of others causes people to focus attention on the self, and to become aware of potential discrepancies between the actual and the ideal self (Wicklund, 1975; Wicklund & Duval, 1971). Self-awareness creates demands on a person to behave in a certain way and to accomplish a certain

level of performance. Self-awareness can either enhance or impair performance, depending on how it affects motivation and attention. The mental resources allocated to self-evaluation are taken out of a pool of limited resources that are allocated to perform the task. Therefore, self-regulatory processes may impair performance of novel or complex tasks that require high levels of attention (Kanfer & Ackerman, 1989).

The lines of research on social loafing and on social facilitation have been developed separately from each other, and in most social psychology textbooks accounts of that research have appeared in separate sections: social loafing appears as a subcategory of group performance, whereas social facilitation appears as a subcategory of coaction—the effect of the presence of others working independently on the same task (Harkins, 1987).

Two major differences distinguish past research on social loafing and social facilitation: the presence of others, and evaluation by others. Both existed in the social facilitation research but were often missing in the social loafing paradigm. In most social loafing studies, individual performance was not identifiable and could not be evaluated.

Evaluation apprehension is enhanced when there are clear measures of performance, when there are standards, or norms against which performance can be compared, and when feedback is provided (Guzzo & Shea, 1992; Pritchard, Jones, Roth, Stuebing, & Ekberg, 1988). The presence of performance measures and performance standards facilitates group evaluation and increased group performance (Harkins & Szymanski, 1989). Loafing is minimized by increasing the identifiability and uniqueness of members' task contributions (Harkins & Szymanski, 1989) and by increasing personal accountability and personal responsibility (George, 1992; Wagner, 1995; Weldon & Gargano, 1988; Weldon & Weingart, 1993).

We argue that traditional research on social loafing has often been conducted in artificial groups that did not conform with the definition of groups as involving people's mutual awareness and potential mutual interaction (McGrath, 1984): First, the presence of others, a major characteristic of groups that enhances evaluation apprehension, was missing in almost all of the studies on social loafing (exceptions are Erev, Bornstein, and Galili [1993] George [1992], Wagner [1995], and Weldon, Jehn, and Pradham [1991]). In some of the studies there were pseudo groups—subjects did not perform in the physical or social presence of others, but rather, were led to believe that they were part of a group (Earley, 1989, 1993; Latane et al., 1979). For example, Earley told his subjects that “they were one of ten managerial trainees who would be working on the in-basket task” (1989: 573). Each “trainee” was seated individually at a table, and “subjects were led to believe that they are performing the task with others, although they are actually performing alone” (Earley, 1989: 565). In other cases, partitions were put between group members so that they could not see, hear, or communicate with each other (Harkins, 1987; Harkins & Szymanski, 1989; Sanna, 1992).

Second, communication among group members, a major characteristic of interactive groups, could not occur in the pseudo groups, or when group members were separated by partitions. Communication enhances both awareness of the presence of others and evaluation apprehension. In social dilemma situations in which individuals may receive higher payoffs for noncooperation than for cooperation, communication has been found to be an effective method of eliminating social loafing (Shepperd, 1993; Weldon et al., 1991) and enhancing cooperation (Chen & Komorita, 1994; Edney & Harper, 1978; Wagner, 1995). Communication and interaction among group members have been shown to increase commitment and group performance (Matsui, Kakuyama, & Onglatco, 1987), and groups with both a group goal and group feedback for reciprocal task interdependence had better performance than groups with low levels of interaction (Mitchell & Silver, 1990; Saavedra, Earley, & Van Dyne, 1993; Straus & McGrath, 1994). Communication between subordinates and superiors improved superiors' performance when subordinates were knowledgeable (Scully, Kirkpatrick, & Locke, 1995), and participation in goal setting and group discussion led to the highest level of commitment to personal goals and to individual performance (Erez, 1993; Erez & Arad, 1986; Latham, Erez, & Locke, 1988).

Third, in most of these studies subjects did not have specific group performance goals, and they did not receive feedback on performance (Harkins, 1987; Harkins & Szymanski, 1989; Latane et al., 1979; Weldon & Gargano, 1988; Williams, Harkins, & Latane, 1981). Only a few studies have incorporated goals when testing group productivity loss (Earley, 1989, 1993; Sanna, 1992; Shepperd & Wright, 1989; Weldon et al., 1991). The absence of goals and feedback impaired evaluation apprehension.

Incentives reinforce emphasis on goal attainment and feedback. People become more committed to their goals when goal attainment leads to rewards (Locke & Latham, 1990). Three types of rewards serve to overcome social loafing: economic rewards for group accomplishment, including money and awards; social rewards of liking, group membership, and status; and self-rewards that are experienced when a task is intrinsically interesting and when performance is personally valued (Shepperd, 1993). Previous research has demonstrated that rewarding a group for goal attainment or for successfully competing against other groups mitigates the effect of social loafing (Erez et al., 1993; Shepperd & Wright, 1989; Zaccaro, 1984).

In sum, social loafing can be eliminated when the members of a group are all present, work together, communicate with each other, and have specific standards and performance goals, and when goal accomplishment is reinforced. All these conditions that eliminate social loafing coincide with the definition of a group as involving mutual awareness and potential mutual interaction among group members (McGrath, 1984). However, social loafing may occur under certain conditions that do not allow people to develop mutual awareness and cohesiveness: when groups are formed temporarily or are in an early stage of formation.

LOAFING, SELF, AND CULTURE

Culture has relevance for understanding the effect of social loafing. Earley (1989) demonstrated that group members with highly collectivistic values did not loaf and contributed to their groups' performance, whereas members with individualistic values loafed, in particular when they were not held personally accountable for performance. Earley also showed that social loafing rarely occurred in collectivist cultures like China but occurred more often in individualistic cultures like the United States. Individuals in collectivist cultures, including China and Israel, contributed to group performance when they were led to believe that they were working in in-groups but did not do so when working in out-groups or alone. Individuals in individualistic cultures like the United States performed better when they were working alone than when working either in in-groups or out-groups (Earley, 1993). These findings reinforce Hackman and Oldham's conclusion that "unless the case of self-managing work groups is compelling, it may be more prudent in traditional organizations to opt for the less radical alternative of enriching the jobs of individual employees" (1980: 225).

The reason social loafing does not occur among collectivists is that they place group goals and collective action ahead of their own interests. In contrast, individualists are motivated by personal gain, and contribution to the group is inconsistent with self-interest, unless they are held personally accountable for, and personally responsible for, their groups' performance (Earley, 1989, 1993). Individuals with highly individualistic values are less likely to behave cooperatively than collectivists. Collectivists' cooperative behavior is not contingent upon group size or individual identifiability, whereas cooperative behavior by individualists is more often observed in small rather than large groups, and when they can be personally identified (Wagner, 1995).

Collectivist values reflect how members of one culture relate to each other and how important it is for them to belong to their social groups. These values include self-definition as part of a group, subordination of individual goals to group goals, concern for the integrity of the group, and an emotional attachment to an in-group. The major themes of individualism are self-definition as an entity distinct and separate from a group, emphasis on personal goals, and little concern for and emotional attachment to an in-group (Triandis, Bontempo, Villareal, Asai, & Lucca, 1988; Triandis, Leung, Villareal, & Clark, 1985). Collectivists, unlike individualists, define the self as an entity extending beyond the individual to include a particular group of others (Wagner, 1995).

People in different cultures use the concept of collectivism/individualism to evaluate the desirability of attachment to others and its impact on their notions of self-worth and well-being (Erez, 1994; Erez & Earley, 1993). In collectivistic cultures, there is low differentiation between self and others. People stress similarities with other group members, and

their selves are defined in relational terms. People in collectivistic societies see themselves as part of an encompassing social relationship, and they recognize that their own behavior is affected by what they perceive to be the thoughts, feelings, and actions of others. The representation of collectivistic values in a person's self-definition shapes the "interdependent self" (Markus & Kitayama, 1991; Triandis, 1989).

In contrast, in individualistic cultures there is a clear differentiation between self and others, and the normative imperative is to become independent from others and to discover and express one's unique attributes. The essence of individualistic values involves a conception of the self as an autonomous, independent person. The representation of these individualistic values in a person's self-definition shapes the "independent self" (Markus & Kitayama, 1991; Triandis, 1989). It should be noted that every person has both independent and interdependent selves, and one or the other dominates, depending on the individual's cultural values.

One of the methods that is commonly used to assess the independent and the interdependent self is the Twenty Statement Test (Cousins, 1989; McPartland, Cumming, & Garretson, 1961; Trafimow, Triandis, & Goto, 1991), which requires people to make 20 statements about themselves beginning each with the words "I am . . ." This projective test allows people to express themselves openly. Therefore, it captures personal variability more than a structured five-point Likert-type scale. Responses are content-analyzed and classified into categories that reflect the independent or the interdependent self. For example, a reference to a social role (e.g., "I am a son" and "I am a member of the Academy of Management") reflects the interdependent self. A statement of a personal attribute, existing independent of others (e.g., "I am 18 years old," "I am ambitious") is an expression of the independent self. McPartland and colleagues first used the scale to assess the relationship between the self-concept and withdrawal behavior of patients newly admitted to psychiatric hospitals. They found that patients whose self-concepts were dominated by statements reflecting their physical characteristics were more withdrawn than those defining themselves in relational terms. More recently, the measure was implemented to assess cross-cultural differences in levels of independent and interdependent selves. Consistent with their individualistic views, Americans were found to have salient independent selves, whereas Japanese and Chinese people had salient interdependent selves, consistent with their collectivistic values (Cousins, 1989; Trafimow et al., 1991).

An individual's independent and interdependent selves evaluate teamwork and the opportunity to contribute to team performance differently. Working with others and contributing to a group fulfills the interdependent self and strengthens a person's sense of belonging to the group. Individual contribution to a group is less meaningful to the fulfillment of the independent self because its self-definition is not in relational terms. Contribution to a group becomes meaningful for the individual self only when a person is

held personally accountable for group performance and when his or her contribution to the group can be identified and evaluated.

The interdependent self is more attuned toward evaluation by others than the independent self, in particular when others are part of the immediate reference group. For this reason, perhaps, Chinese managers with strong interdependent selves did not loaf when they were led to believe that they were part of an in-group as they did when they thought they were part of an out-group. In contrast, American managers with strong independent selves are guided by self-evaluation, and contribution to a group is less central to their values than it is to managers in collectivistic cultures. Therefore, they attenuated their performance while working in groups (Earley, 1993).

In line with the model of cultural self-representation (Erez & Earley, 1993), employees in collectivistic cultures will positively evaluate the opportunity to contribute to group performance because it enhances their interdependent selves. Cultural values shape the independent and the interdependent self. They serve as criteria for evaluating the contribution of certain motivational and managerial techniques to a person's sense of self-worth and well-being. Positive evaluations result in commitment and adherence to a motivational technique, whereas negative evaluations inhibit commitment and performance. Collectivistic values are represented in the interdependent self, whereas individualistic values are represented in the independent self. Therefore, group performance loss is more likely to occur in individualistic cultures, where contribution to the group does not directly enhance the independent self, but it will not occur in collectivistic cultures, where contribution to the group satisfies the interdependent self.

The purpose of the present study was to examine the following effects on group performance loss: the effect of cultures with high and low collectivism as they are represented by the interdependent versus the independent self; the effects of specific group goals, general group goals, and individual goals; the impact of communication among group members; and the impact of incentives. These four factors influence both awareness of the presence of others and evaluation apprehension, which further affect individual contribution to a group. We tested two hypotheses concerning culture.

Hypothesis 1: Individuals in whom the interdependent self predominates will be more highly represented in a collectivistic subculture, whereas those in whom the independent self predominates will be more highly represented in an individualistic subculture.

Hypothesis 2: Group performance loss, measured by the difference between the mean performance scores of individuals working alone and their scores working in groups, is less likely to occur in a collectivistic subculture, where the interdependent self is dominant, than in an individu-

alistic subculture, where the independent self is more salient.

We also tested three hypotheses concerning group-based motivation.

Hypothesis 3: Social loafing occurs when group goals are set in general terms of "do your best" but not when group goals are specific and difficult.

Hypothesis 4: Social loafing is less likely to occur when team members can communicate with each other than when they cannot.

Hypothesis 5: Incentives for group goal attainment reinforce individual contributions to a group.

METHODS

Subjects

Two groups of midlevel managers participated in the study; 63 were from kibbutzim in Israel, and 59 were from urban areas. Participants in each sample had known each other for at least six months as trainees in a long-term managerial training program. We matched the urban individuals to comparable kibbutz individuals by gender, age, and education. Average ages were 41.7 years and 39.2 years for the kibbutz and urban samples, respectively. There were 59 men and 4 women in the kibbutz sample and 55 men and 4 women in the urban sample. The average level of education in the two samples ranged from higher education with a nonacademic degree to higher education with a bachelor's degree.

Culture

The kibbutz and the urban sectors represent two distinct subcultures in Israel. These two subcultures differ in their emphasis on collectivist and individualist values and in the practice of these values as shown in their principles of organization and conduct (Erez, 1986): A kibbutz is a communal settlement based on socialistic ideology and collectivist values. There is no private ownership and no differential reward system. All kibbutz members share the same facilities, including dining room, laundry, cars, medical care, and education. A few examples of the principles of the communal life of the kibbutz follow. (1) Production goals are communal rather than individual, decision making is communal rather than hierarchically centralized, and consumption is communal. Taken together, these features mean communally decided priorities governing the use of communal resources. (2) Equality in need fulfillment and in effort sharing is based on the Marxian principle, to each according to his or her needs from each according to his or her capabilities; this equality is coupled with dissociation between contributions and effort and between contributions and the distribution of rewards so that position and status do not determine material rewards. (3) Direct

democracy is exercised by an organizational structure, which puts the highest authority concerning all kibbutz matters in the hands of the general meeting (usually convening once a week), in which every member has a vote. (4) Offices are rotated after predetermined periods of time ranging from one to five years, and there is a communal system of education and child rearing, whereby the community shares responsibility for the education of its members' children. (5) Each member has total life security in the domains of economics, health, and care of dependents, and the social structure depends solely on voluntary participation and cooperation for adherence to its norms and has no formal reinforcement mechanisms (Leviatan, 1984).

These unique characteristics of the kibbutz society create a subculture in Israel that is particularly distinct when contrasted with the urban sector. The two subcultures are significantly different on objective dimensions of structure, communal life, policies governing resource allocation, power distribution, and participation in decision making. In contrast to people in the kibbutz setting, individuals in the urban setting live their lives independently, mostly in family units. Each person or family has its own resources and is responsible for decisions concerning the creation and consumption of resources. Every citizen has the rights and duties defined by national and municipal laws. We expected these differences in sociocultural environment to promote psychological differences between the two sectors, with the interdependent self being more central to people in the kibbutz and the independent self more central to people in the cities. The differences in self-concept between the two sectors emerge over and above common characteristics derived from Israel as a collectivistic and egalitarian culture (Hofstede, 1991).

Design

The study consisted of a two-by-three-by-four (culture-by-goal-setting-condition-by-phase) partially crossed factorial design in which phase was a repeated factor. The kibbutz and the urban sectors represent the first factor. The second factor, goal-setting condition, had three categories: difficult individual goal, difficult group goal, and do-your-best goal. The level of goal difficulty was determined in a pretest conducted on another sample ($n = 32$). The individual goal was to evaluate at least 5 completed résumés of candidates for a production manager position in each phase. The group goal was to evaluate at least 15 résumés in each phase. The third factor consisted of four within-subject performance phases that represented different task conditions: phase 1 was an individual task and phase 2 was a team pooled task, wherein each member contributed to group output without needing to directly interact with other work group members (Saavedra et al., 1993). The comparison between phase 1 and phase 2 served to test the social loafing effect; phase 3, in which there was communication among group members, added to the previous task condition. Phase 4, which included economic incentives, again added to the previous condition. Each phase lasted seven minutes. In keeping with the social loafing literature, we chose a task for

which performance was additive (conjunctive, in Steiner's [1972] terminology). That is, each individual's performance was added to the performance of other group members.

Task

As noted, subjects were asked to work on a simulated task requiring them to evaluate the suitability of candidates for a production manager position. Subjects read candidates' résumés and evaluated them on eight relevant criteria. Four sources of information were available for each candidate: (1) biographical data, (2) vocational experience, (3) general and specific ability, and (4) personality traits. Each member of a three-person group received partial information that consisted of biographical data plus two of the additional sources of information. The fourth source of information could be obtained from documented files that were presented to each team. In the last two performance phases, which permitted communication, this information was also available from other team members through personal communication, because each member of a three-person team lacked a different source of information. Subjects were asked to evaluate each résumé according to the eight criteria and to place a check on an evaluation form indicating whether or not the applicant met each of the criteria.

The level of task complexity was not high according to the criteria suggested by Wood (1986). The task did not require the processing of a great amount of information since there were only eight criteria for evaluating the applicants; it did not require a high level of coordination; and there was no change involved in the process.

Measures

Performance was measured as the number of criteria checked and completed by the subjects at each performance phase.

Goal commitment consisted of the mean response to three items based on Latham and colleagues (1988): (1) "To what extent do you agree with the goal that was set?" (2) "How important is it for you to at least attain the goal that was set?" (3) "To what extent will you strive to attain the goal that was set?" Each item was rated on a seven-point Likert-type scale ranging from 1, "strongly disagree," to 7, "strongly agree."

Independent and interdependent selves were measured by the Twenty Statement Test (TST) developed by McPartland and colleagues (1961). Instructions to subjects were as follows: "In the twenty blanks below please make twenty different statements in response to the simple question (addresses to yourself), 'Who am I?' Answer as if you are giving the answers to yourself, not to somebody else. Write your answers in the order they occur to you. Don't worry about the logic or importance. Go along fairly fast" (Cousins, 1989: 126). The measure has previously been used to depict cultural differences in self-definitions.

The independent self consists of personal qualities, attitudes, beliefs, and behaviors that do not relate to others (e.g., I am intelligent). The inter-

dependent self refers to demographic categories or groups with which the subject is likely to be experiencing "common fate" (e.g., "I am a father of two kids"). Two judges content-analyzed the responses using the recommended coding scheme (Cousins, 1989; McPartland et al., 1961). Responses were coded as representing the independent self if they were self-referential and were classified into one of these four categories. (1) Physical: references to observable, physical attributes of self that do not imply social interaction (e.g., "tall"), (2) attributive: references to the self as a situation-free agent characterized by personal styles of acting, feeling, and thinking (e.g., "moody," "ambitious"), (3) personal aspirations: statements like "I aspire to get a doctoral degree", and (4) hobbies and preferred activities: statements like "I enjoy playing the piano," "I enjoy working in the garden."

Responses were classified as representing the interdependent self if they conveyed self-definition in relational terms, through references to others, and were classified into one of six categories: (1) family (e.g., "I am a mother"), (2) residency ("I am a kibbutz member"), (3) work or school affiliation ("I work in the guest house"), (4) military service ("I served in the airforce"), (5) political affiliation ("I am a member of the Labor Party"), and (6) human being ("I am a human being.").

Communication was also measured. Subjects filled out a form indicating, for each criterion that they evaluated, whether they got an additional information (1) by communicating with others or (2) by reading the files, or (3) got no additional information. The frequency of responses in the first category was the measurement of the amount of communication.

Ability, measured on the basis of individual task performance in a five-minute practice trial (see Procedures), served as a control variable.

Procedures

The procedures used for the kibbutz and urban samples were identical. An experimenter introduced herself to the trainees as a researcher interested in developing a training method for improving managers' performance in evaluating new job applicants. In both samples, subjects were randomly assigned to one of three goal-setting conditions: individual goal, group goal, and do-your-best goal. Subjects in the three goal conditions were instructed to seat themselves around tables in groups of three, and each group member received a set of instructions and a packet of evaluation forms and résumés that had to be evaluated. Subjects were asked to read the first set of instructions, which included a description of the position of production manager, the list of criteria for evaluation, and one résumé for practice. Subjects were given a five-minute individual practice trial to familiarize themselves with the evaluation task. The manipulation of the goal conditions was then introduced.

Phase 1: Individual performance. Subjects in both the individual and group goal conditions were assigned the specific, difficult individual goal, complete the scoring and evaluation of at least 5 résumés. Subjects in the

third group were asked to do their best. Individual performance served as the basis for comparison with subsequent group performance.

Phase 2: Team performance. Every three subjects were instructed to form a team and were assigned goals according to the goal-setting condition. In the individual goal condition, each member of the team was given the goal of evaluating at least 5 résumés and asked to keep his or her completed résumés separate from others'. In the group goal condition, subjects were assigned a group goal of completing at least 15 résumés, and they were asked to put their completed résumés in one pile. In the third, do-your-best group, there were no specific goals, and subjects were asked to put their completed résumés in one pile. Subjects in all three goal conditions were allowed to use additional information from written files that contained complete information about all the job applicants. One set of files was available for each team. At this stage, subjects were not allowed to communicate with each other.

Phase 3: Team performance with intragroup communication. The instructions were the same as in the second phase, except that each team was encouraged to exchange information about the candidates. Each subject was instructed that other team members might have additional information about the applications that he or she was missing.

Phase 4: Incentive for performance. Subjects continued to work as in phase 3 but were rewarded according to their goal-setting conditions. Each person in the individual goal condition received a personal reward for achieving the individual goal of evaluating at least 5 résumés; each person in the group goal condition in a group that met the goal of evaluating at least 15 résumés also received a reward. In the do-your-best condition the reward was offered when a team completed 15 résumés, so in phase 4 this was no longer a general goal condition. The rewards were pens for subjects from the kibbutz sector and coupons for sandwiches for subjects in the urban sector. The two rewards were comparable in their value.

Subjects in the two specific goal conditions received a short questionnaire about goal commitment after goals were assigned in phases 1, 2, and 4.

RESULTS

The TST questionnaires were coded by two independent judges who were blind to subjects' sample membership (kibbutz versus urban). The judges classified each sentence as referring to either the independent or the interdependent self. The coefficient of reliability was .91. We calculated the response rate for each category as the ratio between the number of independent or interdependent responses and the total number of responses the subject made (the maximum number of responses possible for each subject or each category was 20). Table 1 shows the scores for independent and interdependent selves in the kibbutz and urban samples.

The results supported Hypothesis 1: Urban subjects obtained higher scores on the independent and lower scores on the interdependent self than kibbutz subjects ($t = 3.48, p < .001$).

TABLE 1
Means and Standard Deviations for Independent and Interdependent Selves

Statistic	Independent		Interdependent	
	Urban	Kibbutz	Urban	Kibbutz
Mean	0.78	0.62	0.22	0.38
s.d.	0.21	0.22	0.21	0.22
<i>t</i>	3.48***		3.48***	

*** $p < .001$

The following correlations (r 's) between goal commitment and performance were found: phase 1, .20 ($p < .01$); phase 2, .26 ($p < .01$); phase 4, .37 ($p < .001$). All the correlations were positive and significant. The highest level of correlation was found in phase 4, when rewards for performance were offered. The results support previous research on goal setting indicating that goal commitment significantly affects performance (Erez & Zidon, 1984).

The mean frequencies with which subjects communicated with other group members and read the information files were as follows: Communication with other group members: for the urban sample in phase 3 the mean was 3.44 (s.d. = 2.84); in phase 4, the mean was 5.03 (s.d. = 4.35). For the kibbutz sample in phase 3 the mean was 4.54 (s.d. = 5.60); in phase 4, the mean was 7.35 (s.d. = 7.93). Reading the files: for the urban sample, in phase 3 the mean was 0.49 (s.d. = 1.34); in phase 4, the mean was 0.83 (s.d. = 3.13). For the kibbutz sample, in phase 3 the mean was 0.27 (s.d. = 1.01); in phase 4, the mean was 0.22 (s.d. = 0.59).

We analyzed the effects of culture, goal-setting condition, and experimental phase on performance scores by repeated-measures analyses of covariance (ANCOVA), using phase as the repeated factor and ability as the covariate. The homogeneity of the beta coefficients for the covariate was tested, and no significant differences were found between the groups.

Table 2 presents the mean performance scores, and Table 3 summarizes results of the analysis of covariance.

The results of the three-way ANCOVA demonstrated three main effects—culture, goal, and phase—as well as interaction effects ($p < .05$).

Subjects in the kibbutz sample outperformed subjects in the urban sample with ability controlled. Subjects in the do-your-best goal condition performed significantly more poorly than those with specific individual or group goals, but there were no significant differences between the two specific goal groups. Post hoc analyses of the difference between the four experimental phases showed that performance was significantly higher in the incentive phase (phase 4) than in all other three phases.

There were two significant two-way interactions (phase and sector, and phase and goal) and a three-way interaction between sector, goal, and phase.

TABLE 2
Performance by Experimental Conditions

Experimental Phase	Urban			Kibbutz		
	Individual Goal	Group Goal	Do-Your-Best Goal	Individual Goal	Group Goal	Do-Your-Best Goal
Phase 1						
<i>n</i>	25	19	15	21	22	20
Observed mean	25.25	23.56	13.90	26.90	30.17	20.55
s.d.	5.16	10.35	6.34	7.30	9.58	6.90
Adjusted mean	25.19	25.77	15.08	25.99	28.95	20.83
Phase 2						
Observed mean	25.41	20.87	11.00	28.50	28.58	19.05
s.d.	5.44	7.74	4.64	8.77	9.21	8.42
Adjusted mean	25.37	22.49	11.84	27.83	26.96	19.25
Phase 3						
Observed mean	25.25	27.50	18.49	27.80	30.41	16.35
s.d.	4.39	4.90	4.58	8.91	10.21	6.65
Adjusted mean	25.21	28.87	19.15	27.23	30.02	16.52
Phase 4						
Observed mean	32.95	33.37	27.85	35.30	40.52	29.10
s.d.	7.89	14.66	12.08	7.89	13.71	11.31
Adjusted mean	32.92	34.66	28.53	34.76	39.22	29.26

TABLE 3
Results of Three-Way Covariance Analyses of Performance

Source of Variance	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between				
Sector	2,062.93	1	7.63	0.001
Goal	2,896.93	2	10.72	0.001
Sector × goal	377.72	2	1.40	0.25
Ability ^a	6,433.21	1	23.80	0.001
Error	270.33	104		
Within				
Performance phases	1,187.83	3	24.43	0.001
Phase × sector	122.19	3	2.51	0.05
Phase × goal	104.89	6	2.16	0.05
Phase × sector × goal	119.48	6	2.46	0.02
Error	48.62	312		

^a Ability was a covariate.

To better understand the pattern of the three-way interaction, we did separate analyses for the kibbutz and urban samples by using a two-way ANCOVA for each (see Table 4). Figure 1 presents graphs of the interaction effects in each sector.

Table 4 illustrates that there were significant main effects of goal and phase in the two sectors. However, the two-way interaction between phase and goal condition was significant in the urban sample only. We further interpret these findings in line with the research hypothesis concerning

TABLE 4
Results of Two-Way Covariance Analyses of Performance for the Kibbutz and Urban Samples

Source of Variance	Kibbutz				Urban			
	Mean Square	df	F	p	Mean Square	df	F	p
Between								
Goal	1,907.71	2	5.84	0.0068	1,633.55	2	10.02	0.001
Ability	1,974.52	1	6.04	0.0001	1,130.67	1	6.94	0.01
Error	326.67	59		0.25	162.94	50		
Within								
Performance phases	412.58	3	6.48	0.001	276.57	3	7.08	0.001
Phase × goal	41.21	6	0.65	0.69	83.98	6	2.15	0.05
Error	63.70	177	0.44	0.72	39.03	150	0.35	0.78

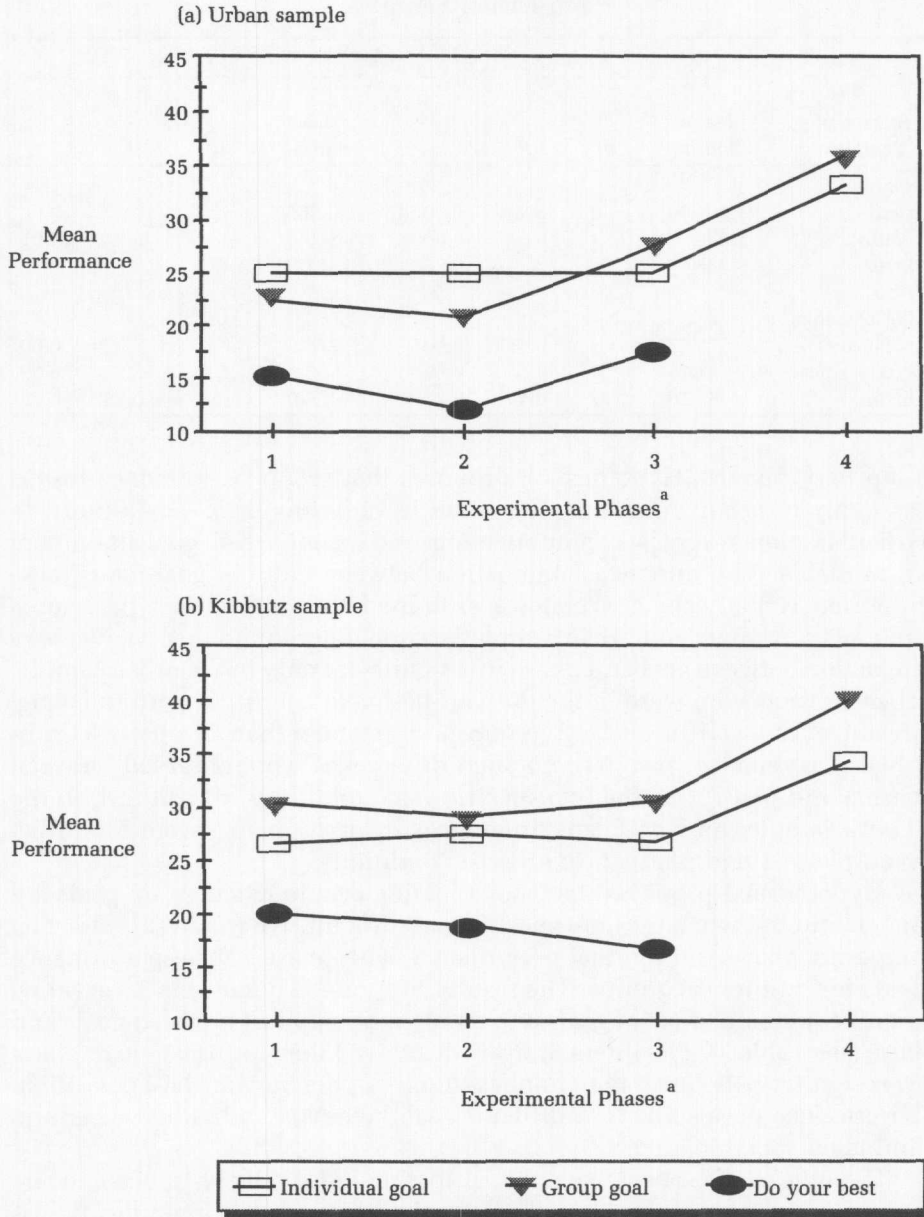
group performance. Hypothesis 2 proposes that group performance loss is less likely to occur in collectivistic than in individualistic subcultures, in particular when no goals, communication, and incentives on goal attainment are available. The three-way interaction between culture, goal, and phase supported Hypothesis 2. When we examined the interaction effect separately in the kibbutz and urban samples, as noted, we found that the two-way interaction between goal and phase was significant only in the urban sample. Urban subjects who were in the do-your-best goal condition performed significantly less well in phase 2 (group performance) than in phase 1 (individual performance; $p < .03$); no such differences were observed between phase 1 and phase 2 in the two specific goal conditions. In contrast, in the kibbutz sample, no significant differences in performance were found between phase 1 and phase 2, in all goal conditions.

Hypothesis 3 proposes that social loafing occurs when group goals are general, but not when they are specific and difficult. We tested this effect by comparing phase 1 individual performance with phase 2 team performance across the culture subgroups. The results supported Hypothesis 3, revealing a significant main effect of goals and an interaction effect between goals and phase (see Table 3). The interaction effect showed that performance in phase 2 was significantly lower than in phase 1 only in the do-your-best condition. The presence of specific and difficult goals, whether individual or group, eliminated social loafing.

Hypothesis 4 proposes that social loafing is less likely to occur when team members communicate with each other than when communication is not possible. We tested this hypothesis by comparing phase 3, group communication, with phase 1, individual performance, and with phase 2, group performance with no communication.

Table 3 shows that there was a significant effect of phase on performance, a significant two-way interaction of phase and goal, and a significant

FIGURE 1
Performance Means



^aPhase 1 is individual performance; phase 2, group performance; phase 3, group performance with communication; phase 4, performance incentives.

three-way interaction of phase, goal, and sector. We interpreted the three-way interaction by testing the ANCOVA's effects in the kibbutz and the urban samples separately. The results demonstrated that the two-way interaction effect of phase and goal was significant in the urban sample only. Post hoc analyses demonstrated that in the urban sample there were significant differences ($p < .05$) in performance between phase 3 and phase 2 in the do-your-best and in the group goal conditions, but not in the individual goal condition. In addition, there were significant effects between phase 3 and phase 1. These findings supported Hypothesis 3 in the urban sample only, where the communication in phase 3 helped overcome the social loafing seen in phase 2 for teams in both the do-your-best and group goal conditions.

Hypothesis 5 proposes that incentives for goal attainment reinforce individual contribution to a group. We tested this effect by comparing phase 4, in which there were incentives for performance, and phases 1 and 2, individual and group performance, respectively. The results supported Hypothesis 5 by demonstrating that the performance level achieved in phase 4 was significantly higher than that in phase 1 in both samples in the individual and group goal conditions ($p < .001$). It was also significantly higher than phase 2 performance in the two specific goal-setting conditions in both the kibbutz ($p < .01$) and the urban ($p < .10$) samples. It should be noted that in phase 4 there was no longer a do-your-best condition since subjects were rewarded for obtaining the goal set in the group goal condition. When incentives were introduced in phase 4, all subjects performed significantly better than in phase 2.

DISCUSSION

The question that stimulated the present study was whether social loafing, leading to group performance loss, is the rule or the exception. The answer to this question is important as more and more organizations shift from individual work to teamwork. The research on social loafing has led to the conclusion that it is a robust phenomenon that occurs when individuals work in groups. The research design in most previous studies has been similar, characterized by lack of real interactive groups. Subjects most often performed in pseudo groups, sometimes alone and sometimes with partitions between group members. Further, subjects were not allowed to communicate, and in most cases did not have specific goals or rewards for performance.

The present study examined group performance loss in 16 conditions representing four factors: with/without specific goals, with/without communication, with/without rewards, and with/without cultural values that support self-definition in relational terms and individual contribution to a group. In all of the experimental conditions the group members performed in the presence of others, and they had known each other for at least six months. Perhaps familiarity is important for team building. Social loafing was found in only 1 of the 16 conditions. Therefore, results demonstrate that social loafing is the exception rather than the rule.

This answer has both theoretical and practical implications. First, we identified conditions that mitigate social loafing: the presence of familiar others, the use of specific goals, intragroup communication, and incentives. The presence of others and interpersonal interaction adhere to the definition of groups (McGrath, 1984). Groups are intact social systems, and conceptual models of group effectiveness always involve process characteristics of interaction and communication (Goodman, 1990). Yet many studies of social loafing have missed these dimensions.

The individualistic subculture of the urban sector of Israel endorsed the independent self, which is less affected than the interdependent self by the presence of others and by the criterion of contributing to group performance. Therefore, in the absence of specific goals, communication, and incentives, the urban groups experienced performance loss. In contrast, members of the collectivistic subculture, whose individual contribution to their groups enhanced their interdependent selves, contributed to group performance even in the absence of specific goals.

The Effect of Specific Group Goals

The positive effect of specific group goals on group performance provided additional support for the existing goal-setting research literature (Locke & Latham, 1990; Weldon et al., 1991; Weldon & Weingart, 1993). The design of our study allowed for testing the effect of specific goals, which provided clear standards for evaluation, against the effects of do-your-best goals, which did not provide such clear standards. The results demonstrated that subjects who lacked standards for evaluation performed significantly more poorly than subjects in the two specific goal conditions. In addition, we observed group productivity loss only for those in the do-your-best condition; no performance loss was observed in the specific group goal condition even when individual contributions could not be identified. Performance evaluation according to standards seems to be more important to group performance than the prospect of identifying individual contribution to group performance.

The positive effect of specific goals on group performance can also be explained by the expectancy model. Specific goals establish the link between performance and outcomes. They provide opportunities for developing high expectations, which motivate behavior (Shepperd, 1993). In addition, the valence of obtaining difficult goals makes a task more meaningful (George, 1992; Locke & Latham, 1990). Therefore, the setting of specific and difficult goals enhances the motivational force for goal attainment.

Intragroup Communication

As noted, most research on social loafing has examined the performance of groups in which interaction is low: group members often do not know each other, they have no direct contact, and they are not allowed to communicate with one another. These groups do not quite fit the definition of groups as social aggregates that involve mutual awareness and potential mutual interaction

(McGrath, 1984), because both were minimized. The present study, in which communication enhanced mutual awareness and interaction among group members, provided further support to the positive effect of communication on enhancing cooperation and performance (Chen & Komorita, 1994; Wagner, 1995). The subjects in our study knew each other prior to the experiment; they were sitting together as a group, had direct contact with each other, and were allowed to communicate on work-related issues in the third phase of the experiment. Intragroup communication assured awareness of the presence of others and facilitated evaluation apprehension. The present findings demonstrated that in the urban sample, performance in the do-your-best goal condition significantly increased in phase 3.

Communication with others increased evaluation apprehension. Communication did not affect performance in the individual goal condition because performance standards existed anyway, and potential evaluation by others, which was relevant for subjects in the group goal condition, became less relevant for subjects with individual goals. The finding suggests that the mere presence of others (in phase 2) was not enough to overcome social loafing, which decreased with the introduction of communication, which enhanced evaluation apprehension (Geen, 1991).

The kibbutz members did not improve their group performance in the communication phase. Rather, under the do-your-best goal their performance in phase 3 was marginally lower than that in phases 1 and 2. One possible explanation is that kibbutz members are used to interpersonal communication, and therefore they were less sensitive to its effect than the urban Israelis were (Erez & Earley, 1993: 168). A second possible explanation is based on observations we made during the experiment: Kibbutz members took advantage of the communication phase to pursue "off-task" communication, including small talk. Therefore, when they did not have specific goals to direct their effort in the do-your-best condition, they were marginally less productive than they had been in phase 1, which served for comparison. Off-task communication was not observed in the urban sample.

Incentives

The effect of incentives on performance has long been recognized. According to goal-setting theory, incentives increase the level of goal commitment. In the present study, incentives led to the highest level of correlation between commitment and performance ($r = .37$). According to expectancy theory, incentives enhance the level of motivation because they increase the valence of performance outcomes and strengthen the link between performance and outcomes. Hence, incentives could remedy group performance loss by increasing the valence associated with achieving group goals (Shepherd, 1993). In addition, incentives associated with goal attainment activate the process of evaluation, which facilitates group performance. The results of the present study support all three theories of motivation—goal-setting, expectancy, and social facilitation—as incentives significantly increased the level of performance. The highest level of performance was obtained in

phase 4, the specific group goal condition, in the kibbutz sample. One possible explanation is that group incentives magnify the value associated with the attainment of group goals and thereby enhance the level of motivation. A second explanation is that the kibbutz members were more experienced in teamwork, and they valued it more highly than the urban people. Therefore, they had an advantage over the urban teams when they were all motivated to win the rewards.

Culture: The Interdependent versus the Independent Self

The present findings demonstrated, in line with our hypothesis, that the interdependent self was more prevalent in the subjects from kibbutzim, which are highly collectivistic and egalitarian societies by definition. The independent self was more prevalent among people from the urban sector, which differs from kibbutzim in being more individualistic (Erez, 1986; Leviatan, 1984). The Twenty Statement Test allows individuals to freely express their self-concept, and it captured the cultural variation between the kibbutz and urban sectors.

The model of cultural self-representation (Erez & Earley, 1993) served as our basis for interpreting the moderating effect of culture on the effectiveness of group goals, intragroup communication, and incentives. Contributing to the attainment of group goals is more highly valued by the interdependent self, which is also more sensitive to evaluations made by significant others and hence more susceptible to the effect of social facilitation than is the independent self. Therefore, the interdependent self positively evaluates contribution to group performance, which leads to a high level of performance, even in the absence of specific group goals. On the other hand, contribution to the collective does not enhance the independent self, and therefore, productivity loss occurred in the urban sample when no specific goals were set. The present study supports previous research on the moderating effect of culture on social loafing (Earley, 1989, 1993). However, this study focuses on the representation of cultural values in the interdependent and independent selves.

Culture moderated the effect of intragroup communication on group performance in the do-your-best condition. Intragroup communication increased awareness of the presence of others as potential evaluators. As a result, group performance significantly increased. However, intragroup communication did not improve performance in the kibbutz sample. As we have already suggested, kibbutz members are used to the presence of others, and therefore they were less sensitive to the change from no-communication to intragroup communication (Erez & Earley, 1993). In addition, they took the opportunity to communicate about issues other than the task and did not allocate all their resources to performing the task when no specific goals were set.

Finally, culture seemed to moderate the effect of group incentives on performance. The highest level of performance was attained by kibbutz members in the group goal condition, when goal attainment was accompa-

nied by incentives. It may suggest that group incentives increase the valence of contribution to group goals, which is highly valued by the interdependent self. The effect of group incentives was somewhat weaker in the urban sample because the independent self does not appreciate contribution to group goals as much as the interdependent self does.

Implications for International Management

There is a growing emphasis on teamwork in organizations. Therefore, it is important to identify the conditions that minimize group productivity loss. This study identified the following conditions. First, when team members are familiar with each other, and when they work in the presence of each other, they are less likely to loaf than they are when they work in pseudo groups or in newly formed groups. Second, setting specific, moderate-to-difficult goals overcomes group productivity loss. Goals provide standards for evaluation, direct a group toward goal attainment, establish the link between performance and outcomes, and, when difficult goals are set, increase the valence of goal attainment.

Third, communication among group members reduces social loafing. This effect can be achieved when group members get to know one another, when they have direct contact, and when they can communicate with each other. Our findings suggest that in the absence of specific goals, members of collectivistic cultures use channels of communication for processing off-task information, and consequently, they reduce the attention allocated to task performance. Thus, it is important to set specific and difficult goals and to provide feedback on performance in order to focus attention on task performance.

Fourth, performance-based incentives should be considered as potential motivators. Incentives establish standards for evaluation, and they increase the valence associated with goal accomplishment. Group incentives motivate members of collectivistic cultures because they strengthen the valence associated with contribution to the collective.

The present findings imply that group performance loss is the exception rather than the rule. Teamwork in individualistic cultures can be highly effective if implemented correctly. Team productivity is enhanced when team members are familiar with each other, when they interact with each other to promote mutual awareness and understanding, knowledge sharing, and coordination, and when their behavior is guided by specific group goals that are followed by feedback and incentives for goal accomplishment. One example is the implementation of quality improvement teams. Such teams were first implemented in Japan, a collectivist culture, with which the focus on team performance is consistent. However, quality improvement teams have also been implemented in individualistic cultures such as the United States and Great Britain. Companies like Motorola and Xerox, both of which won the Baldrige National Award for quality, have restructured their organizations and developed human resource management practices to support teamwork. Individual jobs were often transformed into functions of ad hoc or

permanent cross-functional teams, which increase people's interdependence and need to function together rather than independently. Cooperation and collective responsibility are further enhanced by shifting the focus from the job to the organization. All of the companies that have won the Baldrige Award integrate rewards based on the individual and team levels. At Xerox, individuals are nominated for the President's Award or the Xerox Achievement Award. Teams compete for the Excellence Award and the Excellence in Customer Satisfaction Award. Motorola sponsors a Team Quality Olympics in which teams make formal presentations of their contributions and receive gold, silver, or bronze medals accordingly. Westinghouse has implemented peer review for determining quality achievement winners. Incentives on the corporate level, including profit sharing, gain sharing, and employee stock ownership plans, support the shift of focus from the individual to the organizational level. Combining team focus with individual focus and rewarding individual contributions to team efforts are effective ways for implementing teamwork in individualistic cultures and for overcoming group productivity loss (Blackburn & Rosen, 1993; Earley & Erez, 1996).

REFERENCES

- Baron, R. S. 1986. Distraction/conflict theory: Progress and problems. In L. Berkowitz (Ed.), *Advances in experimental social psychology*, vol. 19: 1-40. Orlando, FL: Academic Press.
- Blackburn, R., & Rosen, B. 1993. Total quality and human resource management: Lessons learned from Baldrige Award-winning companies. *Academy of Management Executive*, 7: 49-66.
- Chen X-P, & Komorita, S. S. 1994. The effect of communication and commitment in a public good social dilemma. *Organizational Behavior and Human Decision Processes*, 60: 367-386.
- Cousins, S. D. 1989. Culture and self-perception in Japan and the United States. *Journal of Personality and Social Psychology*, 56: 124-131.
- Earley, P. C. 1989. Social loafing and collectivism: A comparison of United States and the People's Republic of China. *Administrative Science Quarterly*, 34: 565-581.
- Earley, P. C. 1993. East meets West meets Mideast. Further explorations of collectivistic and individualistic work groups. *Academy of Management Journal*, 36: 319-348.
- Earley, P. C., & Erez, M. 1996. *Managing across cultures and countries: Inside understanding*. New York: Oxford University Press.
- Edney, J. J., & Harper, C. S. 1978. The common dilemma: A review of contributions from psychology. *Environmental Management*, 2: 491-507.
- Erev, I., Bornstein, G., & Galili, R. 1993. Constructive intergroup competition as a solution to the free rider problem: A field study. *Journal of Experimental Social Psychology*, 29: 463-478.
- Erez, M. 1986. The congruence of goal setting strategies with socio-cultural values, and its effects on performance. *Journal of Management*, 21: 588-592.
- Erez, M. 1993. Participation in goal-setting—A motivational approach. In E. Rosenstein & W. M. Lafferty (Eds.), *International handbook of participation in organizations*: 73-91. New York: Oxford University Press.
- Erez, M. 1994. Toward a model of cross-cultural I/O psychology. In M. D. Dunette & L. Hough

- (Eds.), *Handbook of industrial and organizational psychology* (2nd ed.), vol. 4: 569–607. Palo Alto, CA: Consulting Psychologists Press.
- Erez, M., & Arad, R. 1986. Participative goal-setting: Social motivational and cognitive factors. *Journal of Applied Psychology*, 71: 591–597.
- Erez, M., & Earley, P. C. 1993. *Culture, self-identity, and work*. New York: Oxford University Press.
- Erez, M., & Zidon, I. 1984. Effect of goal acceptance on the relationship of goal difficulty to performance. *Journal of Applied Psychology*, 69: 69–78.
- Gabrenya, W. K., Jr., Latane, B., & Wang, Y. 1983. Social loafing in cross-cultural perspective. *Journal of Cross-Cultural Psychology*, 14: 368–384.
- Geen, R. G. 1991. Social motivation. In M. R. Rosenzweig & L. W. Porter (Eds.), *Annual review of psychology*, vol. 42: 377–399. Palo Alto, CA: Annual Reviews.
- George, J. M. 1992. Extrinsic and intrinsic origins of perceived social loafing in organizations. *Academy of Management Journal*, 35, 191–202.
- Goodman, P. S. 1990. *Designing effective work groups*. San Francisco: Jossey-Bass.
- Guerin, B. 1986. Mere presence effects in humans: A review. *Journal of Experimental Social Psychology*, 22: 38–77.
- Guzzo, R. A., & Shea, G. P. 1992. Group performance and intergroup relations in organizations. In M. D. Dunnette & L. Hough (Eds.), *Handbook of industrial and organizational psychology* (2nd ed.), vol. 3: 269–313. Palo Alto, CA: Consulting Psychologists Press.
- Hackman, J. R., & Oldman, G. R. 1980. *Work redesign*. Reading, MA: Addison-Wesley.
- Harkins, S. G. 1987. Social loafing and social facilitation. *Journal of Experimental and Social Psychology*, 23: 1–18.
- Harkins, S. G., & Szymanski, K. 1989. Social loafing and group evaluation. *Journal of Personality and Social Psychology*, 56: 934–941.
- Hofstede, G. 1991. *Culture and organizations: Software of the mind*. London: McGraw-Hill.
- Kanfer, R., & Ackerman, P. L. 1989. Motivation and cognitive abilities: An integrative/aptitude-treatment interaction approach to skill acquisition. *Journal of Applied Psychology*, 74: 657–690.
- Karau, S. J., & Williams, K. D. 1993. Social loafing: A meta-analytic review and theoretical integration. *Journal of Personality and Social Psychology*, 65: 681–706.
- Kerr, N. L. 1983. Motivation losses in small groups: A social dilemma analysis. *Journal of Personality and Social Psychology*, 45: 819–828.
- Kerr, N. L., & Bruun, S. 1983. Dispensability of member effort and group motivation: Free-rider effects. *Journal of Personality and Social Psychology*, 44: 78–94.
- Kidwell, R. E., Jr., & Bennett, N. 1993. Employee propensity to withhold effort: A conceptual model to intersect three avenues of research. *Academy of Management Review*, 18: 429–456.
- Latane, B., Williams, K. D., & Harkins, S. G. 1979. Many hands make light the work: The causes and consequences of social loafing. *Journal of Personality and Social Psychology*, 37: 822–832.
- Latham, G. P., Erez, M., & Locke, E. A. 1988. Resolving scientific disputes by the joint design of crucial experiments by the antagonists: Application to the Erez-Latham dispute regarding participation in goal setting. *Journal of Applied Psychology*, monograph, 73: 753–772.
- Levine, J. M., Resnick, L. B., & Higgins, E. T. 1993. Social foundation of cognition. In M. R.

- Rosenzweig & L. W. Porter (Eds.), *Annual review of psychology*, 44: 585–612. Palo Alto, CA: Annual Reviews.
- Leviatan, U. 1984. Research note: The kibbutz as a situation for cross-cultural research. *Organization Studies*, 5: 67–75.
- Locke, E. A., & Latham, P. G. 1990. *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice-Hall.
- Markus, H. R., & Kitayama, S. 1991. Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98: 224–253.
- Matsui, T., Kakuyama, T., & Onglatco, L. U. 1987. The effects of goals and feedback on performance in groups. *Journal of Applied Psychology*, 72: 407–415.
- McGrath, J. E. 1984. *Groups: Interaction and performance*. Englewood Cliffs, N.J.: Prentice-Hall.
- McPartland, T. S., Cummings, J. H., & Garretson, W. 1961. Self-conception and ward behavior in two psychiatric hospitals. *Sociometry*, 24: 111–124.
- Mitchell, T. R., & Silver, W. S. 1990. Individual and group goals when workers are interdependent: Effects on task strategies and performance. *Journal of Applied Psychology*, 75: 185–193.
- Pritchard, R. D., Jones, S. D., Roth, P. R., Stuebing, K. K., & Ekberg, S. E. 1988. Effects of group feedback and goal setting and incentives on organizational productivity. *Journal of Applied Psychology*, monograph, 13: 337–358.
- Saavedra, R., Earley, P. C., & Van Dyne, L. 1993. Complex interdependence in task-performing groups. *Journal of Applied Psychology*, 78: 61–72.
- Sanna, L. J. 1992. Self-efficacy theory: Implications for social facilitation and social loafing. *Journal of Personality and Social Psychology*, 62: 774–786.
- Scully, J. A., Kirkpatrick, S. A., & Locke, E. A. 1995. Locus of knowledge as a determinant of the effects of participation on performance, affect, and perceptions. *Organizational Behavior and Human Decision Processes*, 61: 276–288.
- Shepperd, J. A. 1993. Productivity loss in performance groups: A motivation analysis. *Psychological Bulletin*, 113: 67–81.
- Shepperd, J. A., & Wright, R. A. 1989. Individual contribution to a collective effort. *Personality and Social Psychology Bulletin*, 15: 141–149.
- Steiner, I. D. 1972. *Group process and productivity*. San Diego: Academic Press.
- Straus, S. G., & McGrath, J. E. 1994. Does the medium matter: The interaction of task type and technology on group performance and member reactions. *Journal of Applied Psychology*, 79: 86–97.
- Trafimow, D., Triandis, H. C., & Goto, S. G. 1991. Some tests of the distinction between the private self and the collective self. *Journal of Personality and Social Psychology*, 60: 649–655.
- Triandis, H. C. 1989. The self and social behavior in differing cultural contexts. *Psychological Review*, 96: 506–520.
- Triandis, H. C., Bontempo, R., Villareal, M. J., Asai, M., & Lucca, N. 1988. Individualism and collectivism: Cross-cultural perspectives on self-ingroup relationships. *Journal of Personality and Social Psychology*, 54: 328–338.
- Triandis, H. C., Leung, K., Villareal, M. J., & Clark, F. L. 1985. Allocentric and idiocentric tendencies: Convergent and discriminant validation. *Journal of Research in Personality*, 19: 395–415.

- Wagner, J. A., III. 1995. Studies of individualism-collectivism: Effects on cooperation in groups. *Academy of Management Journal*, 38: 152-172.
- Weldon, E., & Gargano, G. M. 1988. Cognitive loafing: The effects of accountability and shared responsibility on cognitive effort. *Personality and Social Psychology Bulletin*, 14: 159-171.
- Weldon, E., Jehn, K. A., & Pradham, P. 1991. Processes that mediate the relationship between a group goal and improved group performance. *Journal of Personality and Social Psychology*, 61: 555-569.
- Weldon, E., & Weingart, L. R. 1993. Group goals and group performance. *British Journal of Social Psychology*, 32: 307-334.
- Wicklund, R. A. 1975. Objective self-awareness. In J. C. Naylor (Ed.) & D. Ilgen (Assoc. Ed.). *Advances in experimental social psychology*, vol. 8: 233-275. Orlando, FL: Academic Press.
- Wicklund, R. A., & Duval, S. 1971. Opinion change and performance facilitation as a result of objective self-awareness. *Journal of Experimental Social Psychology*, 7: 319-342.
- Williams, K., Harkins, S., & Latane, B. 1981. Identifiability as a deterrent to social loafing: Two cheering experiments. *Journal of Personality and Social Psychology*, 40: 303-311.
- Wood, R. E. 1986. Task complexity: Definition of the construct. *Organizational Behavior and Human Decision Processes*, 17: 60-82.
- Zaccaro, S. J. 1984. Social loafing: The role of task attractiveness. *Personality and Social Psychology Bulletin*, 10: 99-106.
- Zajonc, R. B. 1965. Social facilitation. *Science*, 149: 159-167.

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