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ABSTRACT

The study examined the importance of social protocols (social interaction expectations) in the employability of handicapped persons. The project involved four goals (sample findings in parentheses): survey research (protocols requiring conversational skills were ranked highly, as were following instructions); a naturalistic observation of 17 handicapped and 16 nonhandicapped workers (a broad social interaction pattern existed among successful employees, although handicapped workers had low rate and duration of social interactions, and a smaller extent of active participation than nonhandicapped Ss); assessment of the relationship between observed social interaction patterns of handicapped youth in work settings and selected employment incidents as documented by employment officers' contact reports; and development of a list of social protocols important in employment. A composite is presented with the 10 top positive and five top negative social protocols. Positive protocols included following immediate and delayed instructions, responding to job related emergencies, and using social amenities. Among negative protocols are using weak excuses, arguing, and having friends around during work. It was concluded that effective preparation for employment should focus on protocols dealing with productivity and with being pleasant. (CL)

FINAL REPORT

Empirical Identification of Social Protocols Relating to the Employability of Handicapped Youth

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Office of Special Education and Rehabilitation Services

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Logan, Utah

Identification of Social Protocols Relating to the Employability of Handicapped Youth

Final Report

Preface

The social protocol project was designed to provide information about the social requirements of work environments so that this knowledge, embedded in future programs, might enhance the opportunity for successful employment among handicapped people. There were several premises upon which the research strategies were based. First, little is known about the social aspects of work. Hence, no one investigative approach is likely to yield sufficient breadth of information. Thus, a variety of methodologies including those for survey and descriptive observation studies were to be employed in this project. Second, a useful outcome must include a description of both the social behaviors that occur in work environments and the contexts that define their situational appropriateness. These contextual relationships are herein referred to as social protocols. Third, descriptive categories for behavior and their concomitant protocols have been sometimes rendered in such global terms as to have almost no functional utility. In contrast, they may be described in relation to such specific events or circumstances that they have no generality and are hence, equally useless. The consideration of where to operate on the continuum of specificity is a primary issue in the theoretical conceptualization and operational design of social behavior research. Moreover, an appropriate degree of specificity for one set of purposes might be inadequate for others. Thus, where little is known about social protocols, as in the employment arena, a researcher must bear the burden of a perilous decision without much guidance. Resources permit only a small number of options to be explored within an almost infinite array of

possibilities. It would be a prudent strategy then, to collect data on social protocols at various points along the specificity continuum in order to better guide future research. That was the intent in this project.

The "Social Protocol" project was initially organized in four objectives. This report will follow the same structure. After some introductory remarks, each objective will be discussed in turn after which a concluding section will summarize findings and present recommendations.

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Social Protocol Final Report

Table of Contents

List of Figures

List of Tables

Introduction

Employment for handicapped people has not been abundant. In fact, unemployment and underemployment has been the general rule. For severely handicapped people employment occurs mostly within the confines of sheltered workshops where average earnings were $661 a year in 1979. Handicapped people in work activity centers fared less well, earning an average of $288 a year. If handicapped clients were systematically moving through a continuum from day activity centers to work activity centers to sheltered workshops and, finally, to semi-sheltered or competitive employment, there would be some reason for optimism. However, the facts suggest that the presumed continuum of vocational programs in most communities is not functioning for individual clients. Most individuals in competitive or upper levels of sheltered employment are so placed within a few months to a year. Those who are not placed within a two to three year period generally remain indefinitely at lower levels in the vocational /prevocational program continuum where there is little opportunity for meaningful work or to earn wages. The reasons for lack of movement along the vocational continuum are many. That discussion is beyond the scope of this introduction. However, the inability of many handicapped youth and adults to interact within the required social protocols of vocational training and employment settings has played a large role. While self-care, community living and vocational task skills have received considerable attention from scientists and program developers, social interaction related to the work place has been mostly ignored.

The Social Protocol Project was designed to begin to fill this gap in the scientific literature. Survey research and observational research methodologies were to be applied to the problem of identifying the social

protocols operating in the work place. A more detailed description of these research strategies is presented below.

Survey Research.

The Social Protocol Project proposed to use a questionnaire with work-placement officers and employers of the handicapped to secure their opinions about important social parameters of work. As this study evolved, it became progressively more methodologically complex in order to obtain a greater variety of information. Initial use of a questionnaire provided useful information, but that information was frustratingly limited. Therefore, the process below was developed to provide a broader set of information.

Three Dimensional Questionnaire: As preliminary questionnaires were given and respondents were queried, it became clear that it was not sufficient to ask just about the importance of a particular questionnaire item (i.e., social procotol). Indeed, preliminary data suggested that a particular category of behavior may be more or less important, may occur more or less frequently, and may be more or less problematic with new employees. This feedback led to the development of a questionnaire format that called upon respondents to rate each social protocol in each of three dimensions; importance, frequency, and employer satisfaction with new employees in regard to that social protocol.

Three Categories of Employers: Preliminary work suggested that employers of different types might respond in different ways to questionnaire items. Therefore, the survey sampled three categories of employers; food service employers (e.g., restaurants and cafeterias); other service employers (e.g., grocery stores, printing shops, etc.); and industrial or agricultural manurfacturers (e.g., cheese factories).

Interviewing Employers: The preliminary work made it apparent that questionnaires can only provide a surface level of information. That is, they allow respondents to rate among a set of prearranged choices. However, they do not permit respondents to provide information that goes beyond the prearranged items on the questionnaire. For that reason, an interview was also conducted with every respondent. The purpose of these interviews was two-fold: First, interviews were used to gather examples from employers about the specific social protocols that were important in their businesses. In this way, a detailed description of the circumstances that surround important social protocols could be obtained for a variety of behaviors and for a variety of places of employment. Second, the interview was used to find out how different employers attempt to correct or otherwise discipline employees in the face of behavior they consider to be inappropriate or undesirable.

Observational Research. The Social Protocol Project proposed to conduct observational research at places of employment in order to examine, in vivo, the social interaction that takes place and the circumstances in which it occurs. Initially, it was proposed that people placed from Cache Instructional Workshop would be observed in their places of employment in conjunction with some of their nonhandicapped co-workers. However, preliminary investigation led to a somewhat different strategy. First, it turned out that there were not all that many Cache Instructional Workshop clients placed in competitive employment recently. The dominant employer of the handicapped in the Cache Valley area turned out to be Deseret Industries, Inc. For that reason, Deseret Industries was chosen as the primary site in which handicapped and nonhandicapped workers would be observed. Second, a preliminary study was conducted in which some handi-

capped and nonhandicapped workers were observed in several different businesses. The primary purpose of this study was to develop a system for observing social behavior. It became evident from this preliminary work that no one system could reliably yield a sufficient breadth of information. For that reason, two observation systems were developed. One examines the structure of ongoing social interactions using an interval recording system in which the rates, patterns, and participants of social interaction are assessed. The second system uses a checklist to efficiently record additional information not available from the first observation system. The remainder of the report presents the findings for each of the four goals proposed in the Social Protocol Project.

Goal One

INTRODUCTION

The purpose of Goal One was to determine placement officers' and employers' ratings of social protocols related to the employability of handcapped youth. Competitive employment work supervisors rather than placement officers were included as participants in this study. There has been relatively little recent job placement activity for handicapped youth in Cache Valley. Therefore, placement officers were not felt to be a useful source of information. In contrast, judgements by competitive employers, about social protocols important for success on the job seemed likely to provide information directly pertinent to vocational preparation of handicapped people.

Previous research in this area has focused primarily on task requirements of jobs rather than on social skills that may be necessary for job success. This research has focused on sheltered workshops rather than on competitive/employment settings (Malgady & Barcher, 1982; Rusch, et al., 1982; Mithaug, et al., 1977; Foss & Peterson, 1981). The present study was aimed at identifying social protocols that employers considered relevant to job success in competitive employment.

METHODS

A. Subject Selection

The survey was conducted in Cache County (population 48,500), Utah. A listing of businesses in Cache County was obtained from the telephone directory, the Cache County Chamber of Commerce, and the Utah State Directory of Businesses. The businesses were selected for inclusion in the study based on two factors: (a) the business had to have at least eight

The names of businesses that met the above criteria were then divided into three categories; manufacturers, services, and food services, and assigned a random number. In each of the three categories, twenty businesses were selected based on the first twenty random numbers; ten first-choice participants and ten alternates. The types of businesses that comprised the sample are described in Table 1.1.

Insert Table 1.1 about here

For each business, the on-line supervisor was the respondent for both the questionnaire and the interview. The on-line supervisor is in daily contact with employees and is in a position to provide typical examples of social behavior among employees. Further, the on-line supervisor evaluates the employees' performance and their opinions of individuals may lead to job promotion, retention, or loss.

PROCEDURES

Following the random selection of businesses, a manager from each business was contacted by phone. On the basis of the telephone interview, each business was screened further. Criteria for screening included: a) the business had to employ a minimum of eight employees; b) the supervised employees did not have to be licensed or have special skills training; c) the jobs did not require skills beyond math and reading; and d) there could not be a requirement of union membership. If the business met all of the above criteria, that business was included in the study. If the business failed to meet any one of the above criteria, the business was excluded from the survey and a business from the alternate list was selected. A telephone interview was then conducted with the new business.

A 37-item questionnaire form was mailed to on-line supervisors at

Table 1.1

Businesses Sampled

Category	Number and Types of Businesses
Manufacturers	3 Processed diary products
	3 Manufacture office supplies
	1 Manufacture car seat covers
	1 Develop electronic supplies
	1 Manufactur animal feed
	1 Produce baked goods
Services	4 Grocery Stores
	2 Motels
	3 Health Care Centers
	1 Dry Cleaner
Restaurants	4 Fast food establishments
	5 General restaurants
	1 University cafeteria

businesses included in the study (see Table 1.2). The questionnaire items included social behaviors and situations identified in the vocational literature and from preliminary survey research with employers. Each questionnaire item was rated from 1 to 5 by supervisors on each of three dimensions (frequency, importance, and satisfaction).

Insert Table 1.2 about here

Once the questionnaire was completed, on-line supervisors were contacted by phone and an interview was scheduled at each place of business. During the interview, the supervisor was asked to select five categories of behavior that were of "most concern", from the 37-item questionnaire. When supervisors had difficulty choosing five categories of behavior that were of "most concern", the interviewer provided prompts based on the supervisors' responses to questionnaire items. Prompts consisted of pointing out questionnaire items that had been ranked both as being very important and being sources of dissatisfaction. After selecting the five items of "most concern", the supervisor was asked to provide a typical example that characterized each. The examples were operationalized in terms of the setting in which the behavior occurred, the time of day or the circumstances in which the behavior was most likely to occur, the sequence of events including antecedent conditions, a description of the actual behavior(s), and the events that followed that behavior.

Next, supervisors were asked to report their typical response when each category of behavior of most concern occurred. A matrix that listed twelve consequences ranging from ignoring the behavior to firing the

TABLE 1.2

Directions: Below is a list of employee behaviors that may or may not contribute to successful job performance. Read each one and select one of the numbered descriptors that best describes (1) how frequently the situation occurs in your work setting; (2) how important the behavior is to successful performance of your specific type of work; and (3) how satisfied you are with this behavior in employees when they first begin employment. Place the number for the correct descriptor in the space that corresponds to the column designated for the descriptor (e.g., spaces under I correspond to frequency of occurrence). Note: Whenever a situation is described that is negative or undesirable, rate the item for importance as: "how important it would be for the situation not to occur."

I Frequency of Occurrence	II Importance to job success	III Satisfaction
0 Not applicable to this job	0 Not applicable to this job	0 Not Applicable to this job
1 Less than once a month	1 Not at all important	1 Not satisfied with any employee
2 About once a month	2 Rarely important	2 Satisfied with a few employees
3 About once a week	3 Moderately important	3 Satisfied with half of the employees
4 About once a day	4 Very important	4 Satisfied with most employee
5 More than once a day	5 Critical to job success	5 Satisfied with all employees

Example	I	II	III
Having friends around during on the job hours	___	___	___

	I	II	III
1. Carrying out instructions from others that need immediate attention.	___	___	___
2. Carrying out instructions which need attention only after an amount of time has passed from the time of the given instructions (e.g., "When you are through stacking boxes, begin to take inventory").	___	___	___
3. Providing information to other employees or to the public which is related to products, schedules, operations, or store policy (e.g., "the company does not refund sale items", or "We open Saturdays at a later time").	___	___	___
4. Independently getting necessary information required for performing a new task (e.g., checking a catalogue to locate depleted materials).	___	___	___

5.	Refusing to follow wrong instructions from co-workers in an acceptable manner (e.g., "I can't leave until I'm sure that the pressure gauge is stable").	___	___
6.	Ignoring inappropriate gossiping or boisterous behavior by co-workers.	___	___
7.	Conversing in "small talk" unrelated to work during job hours.	___	___
8.	Admitting a wrong action, or apologizing to someone on the job.	___	___
9.	Praising co-workers for jobs well done.	___	___
10.	Friendly joking or kidding with co-workers.	___	___
11.	Referring inquiries or instructions to qualified personnel designated to handle such work (e.g., "credit can be obtained on the second floor").	___	___
12.	Offering help to co-workers, or giving goods or materials to a co-worker (e.g., "I'll finish the salad bar while you clear all of the tables").	___	___
13.	Using social amenities such as "please", "thank you", "excuse me", etc.	___	___
14.	Stopping talk and listening to others when they begin to speak (e.g., "shut up and listen").	___	___
15.	Bringing conversation to an end at appropriate times (e.g., answering phone, end of break time).	___	___
16.	Roughhousing during work.	___	___
17.	Ridiculing, criticizing, cursing at, or threatening co-workers.	___	___
18.	Accepting apologies from co-workers for wrong-doings.	___	___
19.	Accepting joking or kidding from co-workers.	___	___
20.	Handling unfriendly joking or sarcastic kidding from co-workers by him/herself.	___	___
21.	Expressing appreciation for something a co-worker has done.	___	___
22.	Handling being ridiculed, cursed, criticized, or threatened by co-workers.	___	___
23	Using inappropriate physical gestures in place of verbal outbursts (e.g., thumbing the nose at someone).	___	___
24.	Ignoring co-workers' encouragement to grumble or complain.	___	___
25.	Arguing with co-workers or supervisor.	___	___
26.	Giving orders when he/she does not have this responsibility.	___	___

Table 1.2 (continued)

	I	II	II
. Persisting to inquire into supervisor's or co-workers' personal affairs (e.g., being nosy).			
. Responding appropriately to job-related emergencies (e.g., injury, burst water pipe).			
. Having difficulty remembering peoples' names.			
. Borrowing money from co-workers.			
. Using appropriate tone and loudness of voice.			
. Standing too close to other people, or not maintaining appropriate social distance.			
. Using weak or phony excuses for being late to work, missing work, or failing to perform some duty.			
. Primping while on the job station (e.g., hair-combing, applying make-up).			
. Having friends around during on-the-job hours.			
. Complaining or grumbling to co-workers about company policies or procedures.			
. Acknowledging what others are saying by making eye contact, nodding head, or saying uh-huh, umm, yea, right, etc. while others speak.			

mments or additional suggestions:

was asked to indicate what his/her response would be after the first

Insert Table 1.3 about here

occurrence of the behavior, the second occurrence, and so on until either the employee was fired or until subsequent occurrences led repeatedly to the same consequence. Consequences other than those listed were noted by the interviewer at the bottom of the page.

Upon completion of the Cache Survey each example provided by supervisors was re-numbered to correspond with questionnaire items. This process was undertaken because often examples related to more than one questionnaire item number. Raters were trained to identify any overlap between questionnaire items and to specify items that were independent of others (see Table 1.4). In cases where items overlapped, raters were trained to

Insert Table 1.4 about here

read all of the items and then number the example according to those items which best described that example. In addition, the following coding procedures were adhered to. All examples that were identified as "acknowledging," (item 37), were treated as if speaking had, in fact, occurred. "Bringing conversations to an end at an appropriate time", (item 15), was counted whenever conversing was mentioned in the context of interfering with work performance or acknowledged in the context of failure to others. Because it was sometimes difficult to determine from the behavioral descriptions whether joking situations were friendly, unfriendly, or a type of ridicule, all examples pertaining to joking were counted as items 19, 20,

Table 1.3

Supervisor Response Matrix

What supervisor response is called for?	After how many occurrences would you make this response? 1st	2nd	3rd	4th	5th	6th	More
Ignore							
Check on							
Talk with							
Reprimand							
Show how							
Re-explain							
Apprentice							
Reduce hours							
Probation							
Fire or suspend							
Switch job location							
Other (explain)							

Qualifications: _____

_____

_____

Item Analysis for Reliability

Questionnaire Item		Corresponding Items	
Number	Description	Number	Description
1.	Following instructions needing immediate attention	33.	Weak excuses
2.	Following delayed instructions	33.	Weak excuses
3.	Providing job-related information to others	11.	Referring persons to someone else
		12.	Offering to help someone else
4.	Finding necessary information before performing a job		None
5.	Refusing to follow others who behave		None
6.	Ignoring inappropriate gossip	7.	Conversing in "small talk"
		17.	Ridiculing, criticizing others
7.	Conversing in "small talk"	6.	Ignoring inappropriate gossip
		14.	Stopping talk and listening to other
		15.	Ending conversations at appropriate points in time
		35.	Having friends around work area
		37.	Acknowledging hearing others
9.	Praising co-workers	21.	Showing appreciation
10.	Joking or kidding co-worker		None
11.	Referring persons to someone else	3.	Providing job-related information to others
		12.	Offering to help someone else
12.	Offering to help someone else	3.	Providing job-related information to others
		11.	Referring persons to someone else
13.	Using social amenities,	21.	Showing appreciation
14.	Stopping talk and listening to	7.	Conversing in "small talk"

			points in time
		35.	Having friends around work
		37.	Acknowledging hearing others
15.	Ending conversations at appropriate points in time	7.	Conversing in "small talk"
		14.	Stopping talk and listening to others
		35.	Having friends around work
		37.	Acknowledging hearing others
16.	Roughhousing during work	6.	Ignoring inappropriate gossip
17.	Ridiculing, criticizing others	6.	Ignoring inappropriate gossip
		31.	Using appropriate tone of voice
18.	Accepting apologies		None
19.	Accepting joking/kidding	20.	Handling unfriendly joking
20.	Handling unfriendly joking	19.	Accepting joking/kidding
21.	Showing appreciation	9.	Praising one another
		13.	Using social amenities
22.	Handling ridicule/criticism	6.	Ignoring inappropriate gossip
23.	Using inappropriate physical gestures		None
24.	Ignoring co-worker's complaints	36.	Complaining about company policies to others
25.	Arguing with co-workrs or supervisor	8.	Apologizing
26.	Giving orders without authority		None
27.	Inquiring into personal affairs		None
28.	Responding to emergency situations		None
29.	Not remembering others names		None
30.	Borrowing money from co-workers		None
31.	Using appropriate tone of voice	17.	Ridiculing, criticizing others

33.	Weak excuses	1. Following instructions needing immediate attention
		2. Following delayed instructions
34.	Primping on the job	None
35.	Having friends around work	7. Conversing in "small talk"
		14. Stopping talk and listening to others
		15. Ending conversations at appropriate points in time
36.	Complaining about company policies to others	24. Ignoring co-worker's complaints
37.	Acknowledging hearing others	7. Conversing in "small talk"
		14. Stopping talk and listening to others
		15. Ending conversations at appropriate points in time

and 21 unless the type of joking behavior was clearly specified.

"Praising co-workers for jobs well-done" and "Using social amenities" (items 9 and 13) were not classified as equivalent behaviors. "Praising co-workers" was classified as work-related behavior and "social amenities" were defined as common pleasantries.

"Ignoring co-workers' grumbling or complaints" (item 24) and "complaining or grumbling to co-workers about company policies or procedures" (item 36) frequently overlapped in the examples provided by supervisors. Because of the difficulty in determining whether an employee initiated or simply failed to ignore complaining, both questionnaire items were given one count unless the supervisor's example stipulated one or the other.

After the rating process, five of the examples from each category of employer (food services, other services, and manufacturers) were independently rated by a second rater to assess reliability. Interobserver agreement was calculated by dividing the total number of agreements by the total number of agreements plus disagreements and multiplying by 100. Reliability for all groups was 84%. The reliability coefficient for manufacturers and for services was 86% and and the reliability coefficients for restaurants was 80%.

RESULTS

Analysis of Questionnaire Ratings

Questionnaire items were organized in categories based on whether the protocol was task related and whether the behavior described was desirable. For example, the protocol "following instructions" is desirable and task-related while "borrowing money" refers to undesirable and nontask-related behavior.

Desirable and task-related items. The distribution of ratings for

Insert Figure 1.1 about here

The first two graphs which refer to instruction following were rated highly across all three dimensions. Although "responding to emergency situations" is not frequently called for, it is important to employers and they are generally satisfied with employees in this regard. The remaining items refer to protocols that call for some sort of information dissemination. These protocols occur frequently and were rated as being very important to the job. In addition, employers indicated general satisfaction with new employees in this area.

Desirable and nontask-related items. Conversational skills, common pleasantries, ignoring undesirable behavior, joking and kidding, and employees reacting appropriately to others' undesirable behavior comprise the second group of items. The distribution of ratings for each dimension on these items is shown in Figure 1.2.

Insert Figure 1.2 about here

Protocols requiring conversational skills, presented in the first four sets of graphs, were ranked high on all three dimensions indicating that they occur frequently, are important to the job and supervisors are satisfied with new employees in this regard. The next three sets of graphs represent protocols requiring common pleasantries. All are rated as important for job success. Employers indicate social amenities are called for more often than showing appreciation to co-workers and praising co-workers. In general, supervisors are satisfied with new employees in this area.

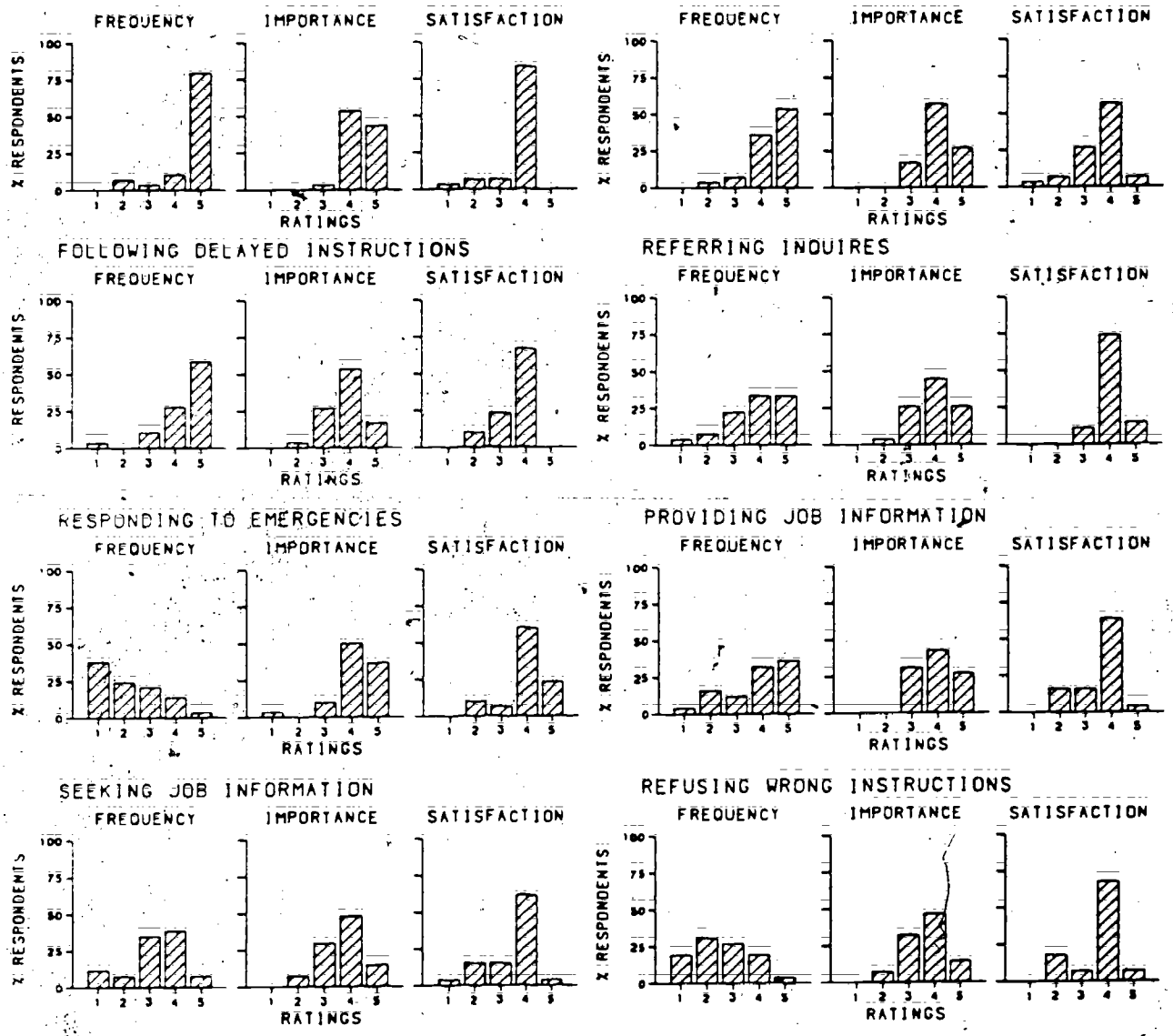
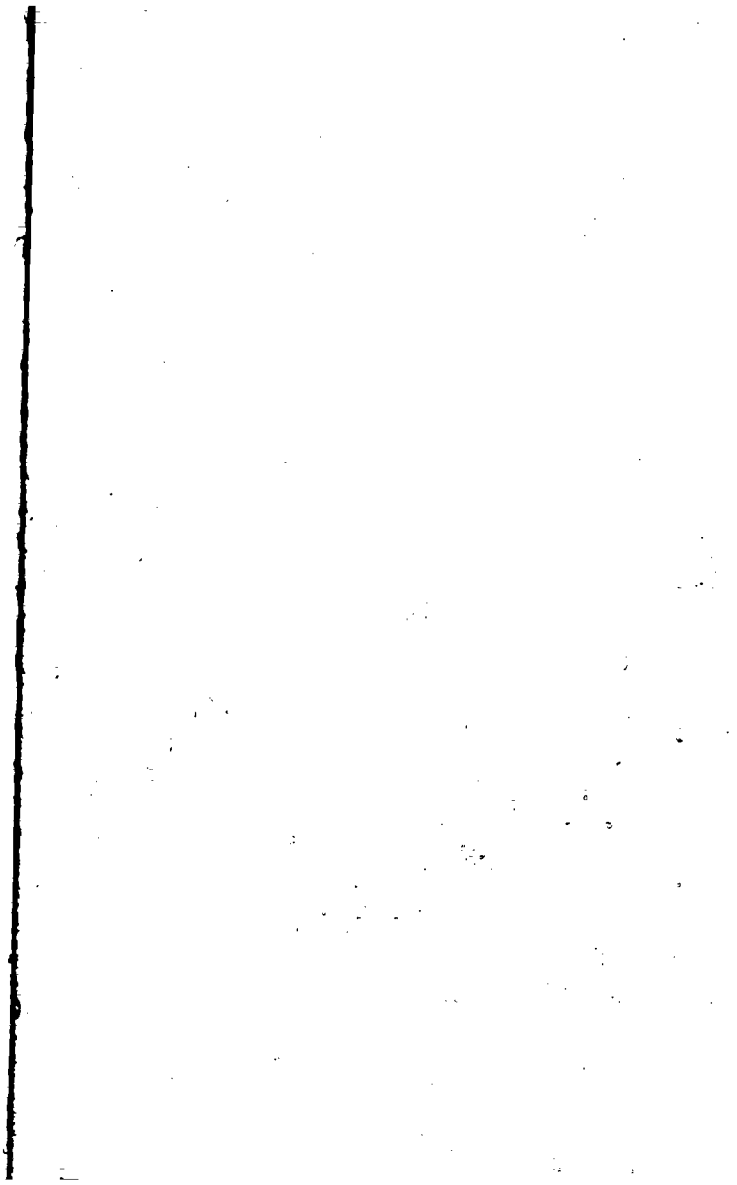


Figure 1.1 Desirable, Task-Related Social Protocols.

Distributions of ratings for thirty employers on eight social protocols.



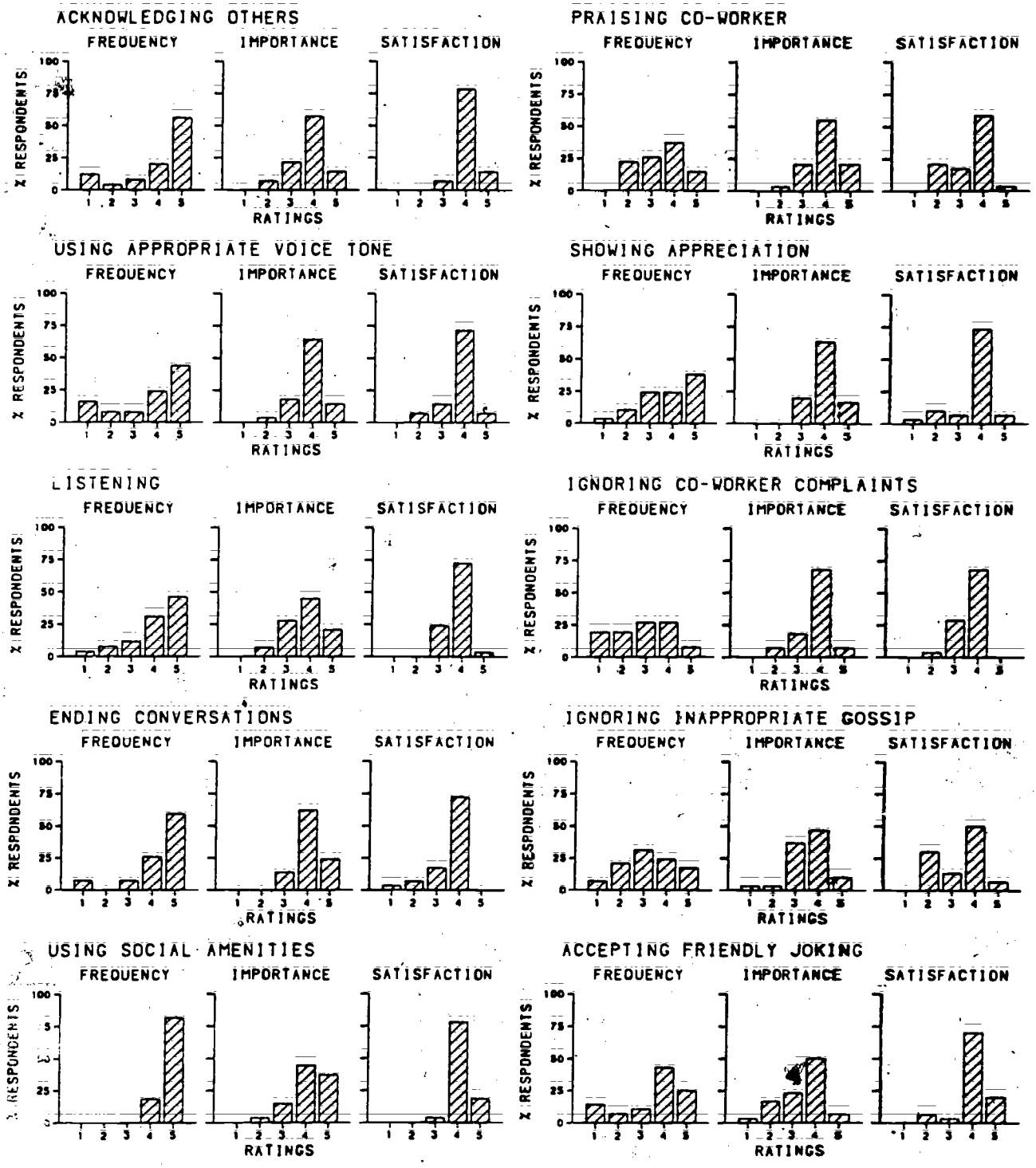


Figure 1.2 Desirable, Not Task-Related Social Protocols.

Distributions of ratings for thirty employers on fourteen social protocols.

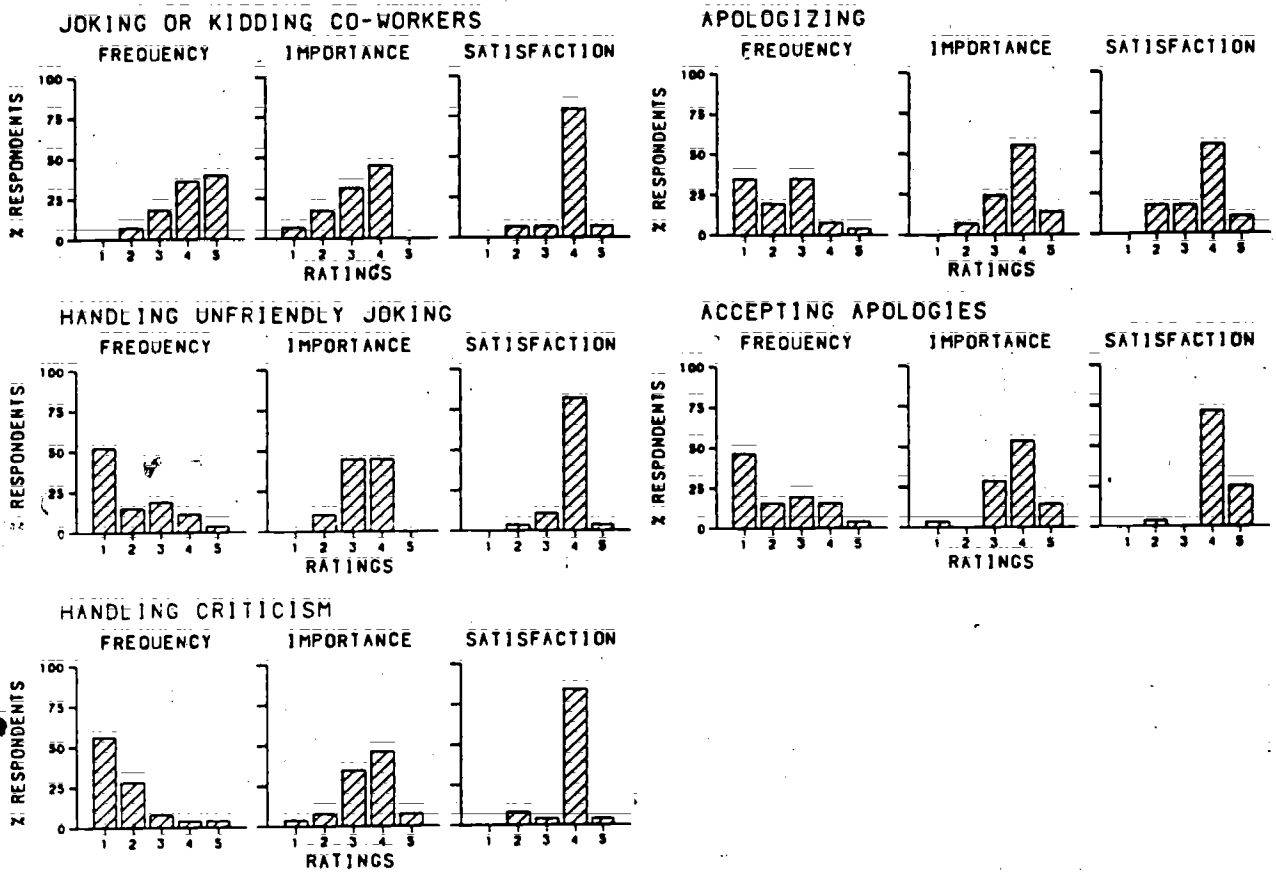


Figure 1.2 (cont.)

The frequency ratings for items referring to protocols of ignoring inappropriate behaviors (next two graphs) are evenly distributed. In importance to job success both items were rated highly. Ignoring complaints was rated somewhat higher than ignoring gossiping and employers were more satisfied with new employees in their ignoring of complaints than in their ignoring of gossiping.

Supervisors were satisfied with the extent to which new employees joked and kidded at work. In general, frequency ratings were equally distributed with joking or kidding co-workers being slightly higher. In addition, both protocols were rated high in importance. Finally, employers indicate that workers frequently react appropriately to others' undesirable behavior. Both of the items in this last set are ranked as being moderately to very important and for the most part, employers are satisfied with new employees.

Undesirable and task-related items. The distribution of ratings for each dimension on these items is shown in Figure 1.3

Insert Figure 1.3 about here

"Weak or phony excuses" was rated as occurring frequently. Employers identified this protocol as being fairly important and as one with which they are generally satisfied. The remaining protocols are classified undesirable because they interfere with completion of work tasks. Except for engaging in small talk, these did not occur frequently. They were rated as moderate to very important for job success and for the most part, employers indicated satisfaction with new employees in this regard.

Undesirable and nontask-related items. The distribution of ratings

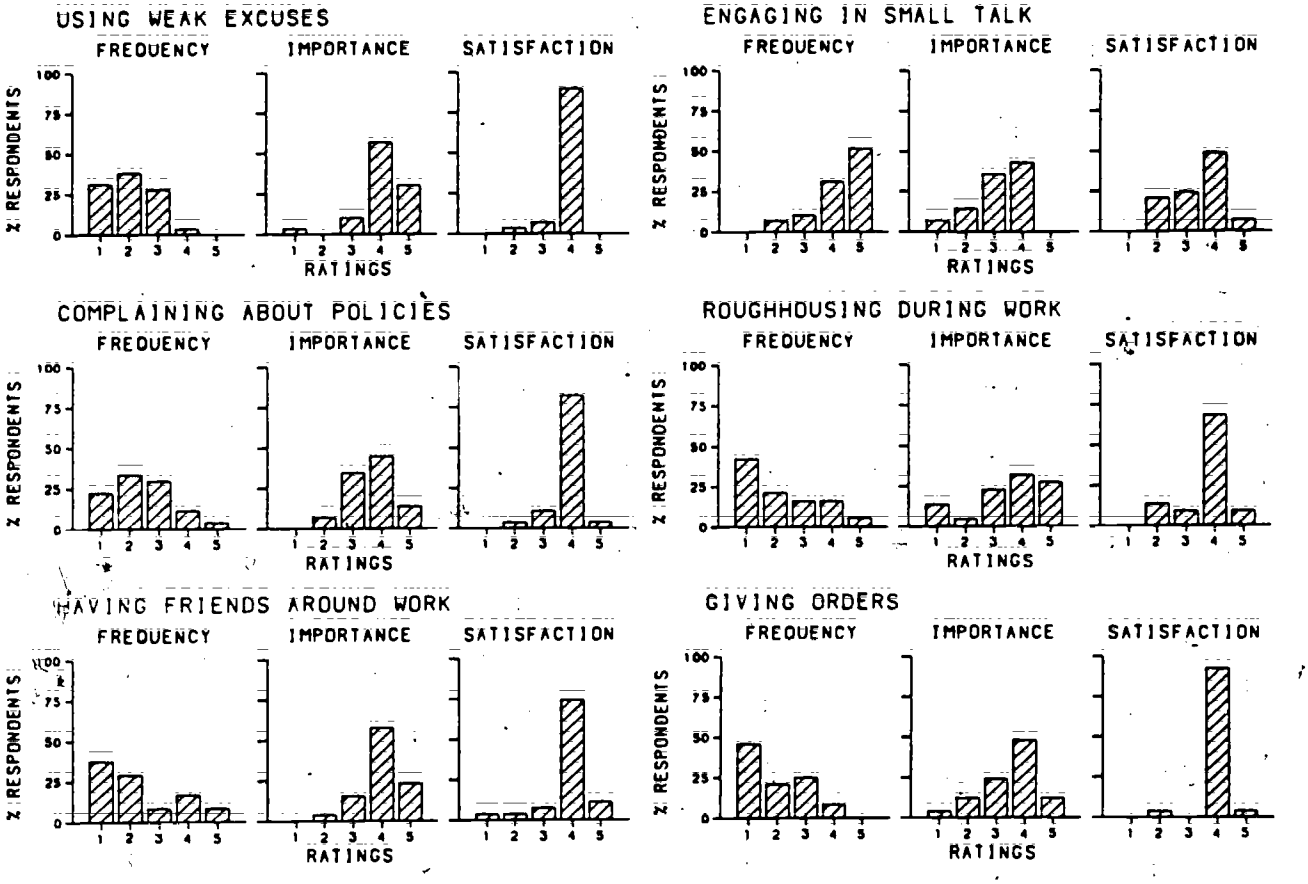


Figure 1.3 Undesirable, Task-Related Behaviors.

Distributions of rating for thirty employers on six social protocols.

for each dimension on these items is shown in Figure 1.4.

Insert Figure 1.4 about here

Except for not "maintaining social distance," items that reflect negative interaction between employees were not rated as frequent occurrences. These protocols were rated by employers as moderately important to job success and the majority of employers indicated that they were satisfied with new employees. "Primping on the job" is rated as not occurring often, as of moderate importance, and most employers are satisfied with their new employees. The final protocol, "forgetting names", was rated as not very important to job success.

Rankings of questionnaire items. Table 1.5 presents the mean ratings on questionnaire items ordered from most to least important.

Insert Table 1.5 about here

The frequency of non-applicable ratings and ratings for the frequency and employer satisfaction dimensions are also displayed on this table. The items that received over 5 non-applicable ratings were those that reflected undesirable nontask-related behaviors across all dimensions. The range of mean ratings in the frequency dimension (1.5 - 4.7) is greater than the range of mean ratings in the importance dimension (2.6 - 4.4) and in the satisfaction dimension, (3.3 to 4.7).

The correlation between ratings on each questionnaire item was calculated to assess the extent to which having a high rating on one dimension was associated with a high rating on other dimensions. Frequency and importance dimensions were moderately correlated ($r = 0.43$) as were frequency and satisfaction dimensions ($r = 0.43$). Importance and satisfaction were less positively correlated ($r = 0.28$).

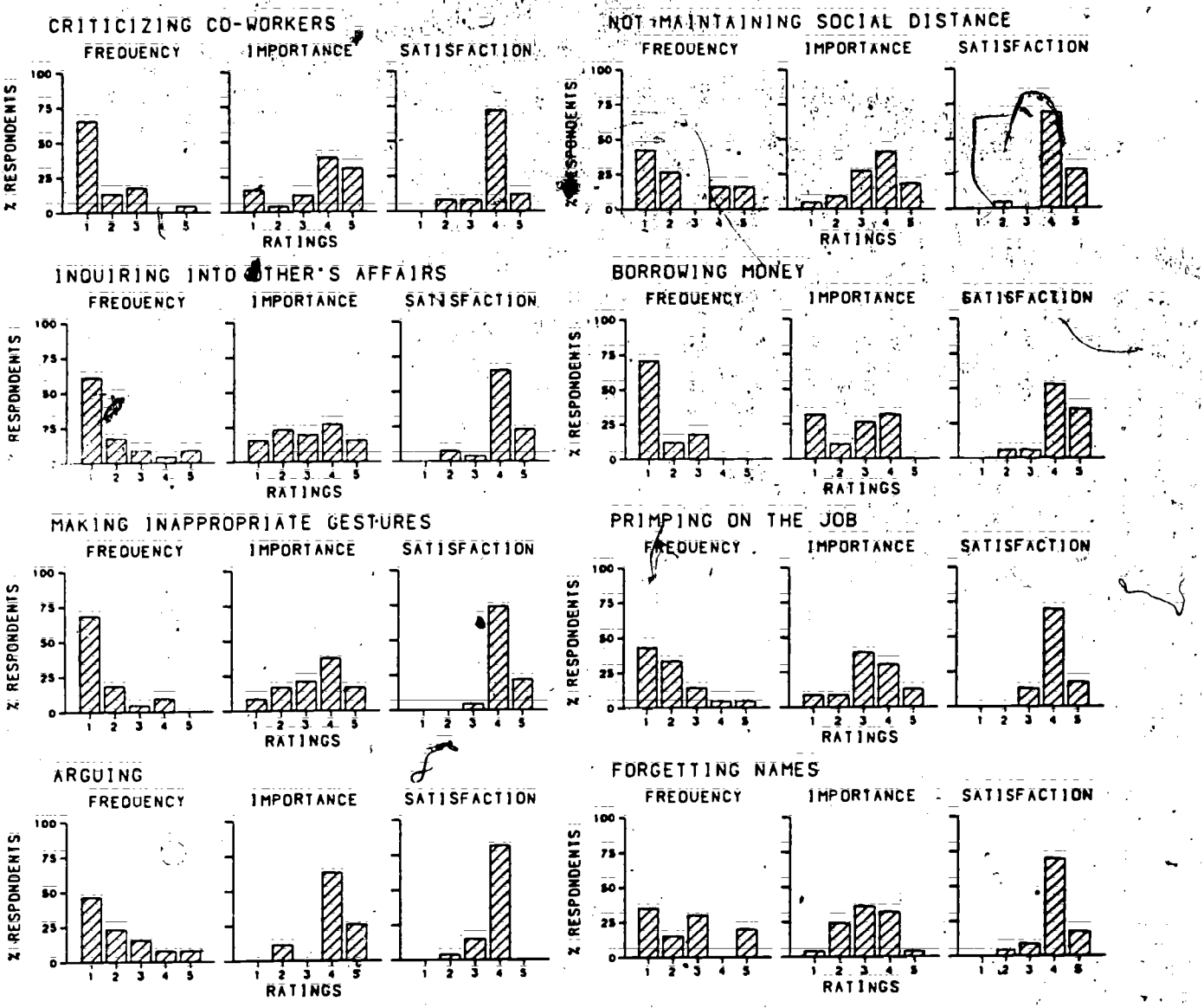


Figure 1.4 Undesirable, Not Task-Related Behaviors.
Distributions of ratings for thirty employers on eight social protocols.

TABLE 1.5

Employer Survey

Questionnaire Summary Analysis

Question Description	Ques. No.	Importance			Frequency			Satisfaction		
		Rank	$\bar{X}$ Rating	N.A.	Rank	$\bar{X}$ Rating	N.A.	Rank	$\bar{X}$ Rating	N.A.
Following instructions needing immediate attention	1	1	4.4	0	2	4.5	1	1	4.7	0
Responding to emergency situations	28	2	4.4	0	29.5	2.0	0	16	3.9	0
Offering to help someone else	12	4	4.1	0	5	4.3	2	29.5	3.6	0
Using social amenities	13	4	4.1	2	1	4.7	0	2.5	4.2	2
Weak excuses	33	4	4.1	0	29.5	2.0	0	16	3.9	1
Providing job-related information to others	3	8	4.0	4	12.5	3.6	5	34	3.4	5
Ending conversations at appropriate points in time	15	8	4.0	1	7	4.2	3	29.5	3.6	1
Appropriate tone of voice	31	8	4.0	2	12.5	3.6	4	16	3.9	2
Having friends around work	35	8	4.0	4	24	2.3	5	16	3.9	3
Arguing with co-workers or supervisors	25	8	4.0	3	29.5	2.0	4	16	3.9	3
Referring persons to someone else	11	11.5	3.9	3	3	4.4	3	9.5	4.0	3
Showing appreciation	21	11.5	3.9	0	11	3.7	0	25.5	3.7	0
Following delayed instructions	2	15	3.8	0	5	4.3	1	29.5	3.6	0
Praising one another	9	15	3.8	1	15	3.4	2	32.5	3.5	1
Acknowledging hearing others	37	15	3.8	2	9.5	4.0	4	5	4.1	2
Apologizing	8	15	3.8	1	22.5	2.4	3	25.5	3.7	1
Ignoring co-worker complaints	24	15	3.8	2	18	2.9	3	29.5	3.6	2
Stopping talk and listening to someone	14	20.5	3.7	0	9.5	4.0	2	21.5	3.8	0

Table 1.5 (continued)
Questionnaire Summary Analysis

Question Description	Ques. No.	Importance			Frequency			Satisfaction		
		Rank	$\bar{X}$ Rating	N.A.	Rank	$\bar{X}$ Rating	N.A.	Rank	$\bar{X}$ Rating	N.A.
Ridiculing, criticizing co-workers	17	20.5	3.7	4	34	1.7	7	21.5	3.8	4
Accepting an apology	18	20.5	3.7	2	25.5	2.1	3	2.5	4.2	2
Refusing to follow others who behave inappropriately	5	20.5	3.7	2	20.5	2.5	4	25.5	3.7	2
Finding necessary information before performing a job	4	20.5	3.7	3	7	3.0	4	32.5	3.5	4
Grumbling or complaining about policies to other employees	36	20.5	3.7	1	22.5	2.4	2	9.5	4.0	1
Ignoring inappropriate gossip	6	25	3.6	0	16	3.2	0	36	3.3	0
Not maintaining social distance	32	25	3.6	8	20.5	2.5	10	9.5	4.0	8
Roughhousing during work	16	25	3.6	8	25.5	2.1	11	21.5	3.8	8
Giving orders without authority to do so	26	27.5	3.5	4	29.5	2.0	4	9.5	4.0	3
Using inappropriate physical gestures toward others	23	27.5	3.4	6	33	1.6	8	5	4.1	7
Handling ridicule, criticism	22	27.5	3.5	4	36.5	1.5	5	16	3.9	5
Accepting friendly joking	19	29.5	3.4	0	14	3.5	1	5	4.1	0
Primping on the job	34	31.5	3.3	7	29.5	2.0	8	25.5	3.7	7
Handling unfriendly joking	20	31.5	3.3	1	29.5	2.0	2	16	3.9	1
Friendly joking or kidding someone else	10	34	3.1	1	8	4.1	1	21.5	3.8	1
Not remembering others' names	29	34	3.1	5	19	2.6	9	9.5	4.0	6
Conversing in "small talk"	7	34	3.1	2	5	4.3	1	36	3.3	1
Inquiring into personal affairs	27	36	3.0	4	33	1.8	6	9.5	4.0	4
Borrowing money from co-workers	30	37	2.6	10	36.5	1.5	12	36	3.3	1
				32						

Protocols of "Most Concern."

At the beginning of each interview, managers were asked to re-examine the 37 social protocols on the questionnaire and identify five that were "of most concern" to their business. The number of times that a protocol was chosen as being "of most concern" was totaled for each of the three groups of employers (food service, other service, manufacturer). Kendall's coefficient of concordance (Siegal, 1956) yielded a correlation coefficient of .57 (statistically significant at $p < .05$) indicating substantial agreement across groups of employers in their choice of protocols of "most concern". In Table 1.6 the protocols are listed in order of decreasing frequencies (i.e., those chosen the most are listed first, etc.) with the percentage of times an item was chosen. The percentage was calculated by

Insert Table 1.6 about here

dividing the number of times an item was chosen by 30 (the number of times it could have been chosen) and multiplying by 100.

Employees' ability to follow instructions consistently and getting necessary information prior to performing a job appear to be "of most concern" to employers. In addition, protocols reflecting an individual's ability to be a pleasant co-worker (praising, showing appreciation, offering to help), and protocols directly related to productivity (e.g., providing job-related information, responding to emergencies, having friends in the area) are important to employers. At the other end of the continuum, employers reported that protocols involving joking with co-workers and remembering people's names were not of concern.

A second analysis was conducted that related work supervisor's

Table 1.6

Protocols of Most Concern to Employers

Question Description	Question Number	Number of Times Each Procotol Chosen	Percentage of Times Chosen
Following instructions needing immediate attention	1	14	47
Following delayed instructions	2	10	33
Finding necessary information prior to performing a job	4	10	33
Conversing in "small talk"	7	9	30
Weak excuses	33	9	30
Praising one another	9	7	23
Offering to help someone else	12	7	23
Showing appreciation	21	7	23
Providing job-related information to other employees	3	6	20
Responding to emergency situations	28	6	20
Ending conversations at appropriate points in time	15	5	17
Having friends around the work area	35	5	17
Complaining about company policies to others	36	5	17
Ignoring inappropriate gossiping	6	4	13
Using social amenities	13	4	13
Ridiculing, criticizing others	17	4	13
Arguing with co-workers or supervisor	25	4	13
Appropriate tone of voice	31	4	13

Table 1.6 (continued)

Refusing to follow others who behave inappropriately	5	3	10
Stopping talk and listening to others	14	3	10
Acknowledging hearing others	37	3	10
Referring persons to someone else	11	2	7
Roughhousing during work	16	2	7
Accepting friendly joking	19	2	7
Ignoring co-worker complaints	24	2	7
Giving orders without authority	26	2	7
Inquiring into personal affairs	27	2	7
Primping on the job	34	2	7
Apologizing	8	1	3
Handling ridicule/criticism	22	1	3
Using inappropriate physical gestures	23	1	3
Borrowing money from co-workers	30	1	3
Social distance	32	1	3
Engaging in friendly joking or kidding	10	0	0
Accepting an apology	18	0	0
Handling unfriendly joking	20	0	0
Not remembering others' names	29	0	0

selection of protocols "of most concern" to their ratings of those protocols on the questionnaire The objective of the analysis was to see which set of ratings, (frequency, importance, and satisfaction) singly or in combination, would predict the selection of items "of most concern." A multiple regression, step-wise analysis, procedure indicated that a combination of the dissatisfaction and importance scales were the best predictors for an item to be chosen as "of most concern" (Multiple R = 0.70, R^2 = 0.49, $p < .05$). The addition of frequency scores did not significantly improve the predictive power (R = 0.72, R^R = 0.51) of the importance and dissatisfaction scores.

Description of Social Examples

In the interviews, supervisors were asked to provide specific examples for social protocols that they chose as being of most concern in their business. The first category of protocols for which supervisors provided examples is information dissemination and information acceptance. A typical example of information dissemination involved a supervisor providing instructions to an employee about the work that needed to be completed that day. For example, one supervisor stated that she regularly checks her laundry supplies and then sets priorities based on which items are most depleted. The employee is then given instructions to act on those priorities. In these situations, the supervisor expects all of the instructions to be followed in the order that they are given. Sometimes an instruction may call for a delayed response. One supervisor reported an example in which an employee was told to increase the delivery load to a certain account on his/her next trip which was approximately one week away.

At times, supervisors place new employees with a more experienced employee as an apprenticeship. In these situations, supervisors expect the

experienced employee to show the new employee how tasks are performed. However, if the new employee has some questions, supervisors expect the employee to come to them, and not to the experienced worker. In one example an experienced employee was to show a new employee how to mix a cleaning solution. The experienced worker gave erroneous instructions to the new worker. Later, the supervisor indicated the new worker should have asked her the correct way to mix the solution. There are some situations in which supervisors do not provide direct training for a new task, either because the task is difficult to train or because supervisors expect the employee to know how to do it already. In these situations, supervisors expect employees to ask them for correct information before performing the task. For example, one fast food supervisor reported that it is difficult to train for all problems that arise in ringing up orders on the cash register. The supervisor indicated that when employees encounter problems, they should ask for instructions prior to completing tasks.

A second commonly cited class of protocols were those involving pleasantness and helpfulness between employees or between an employee and a customer. The examples indicated that supervisors expect employees to be polite to one another. This includes thanking one another when they have received help, or offering to help one another when they get behind in their work or when it is busy. Supervisors felt that politeness and showing appreciation are necessary for a good working atmosphere. Supervisors' examples indicated that more experienced employees should help new employee, when they are struggling with something. Supervisors also reported that they expect employees to engage in pleasantries with customers. For example, employees are expected to acknowledge customers coming into their place of business by looking up and saying "hello," or making eye contact and saying "I'll be with you in a minute." The examples provided by the

supervisors also indicated that they expect employees to gracefully accept a certain amount of joking, kidding, or criticism from the public. This seems most critical among food service employers. In addition, supervisors expect employees to be able to take a certain amount of kidding from each other. One supervisor reported, "When someone makes a mistake, they could get kidded about it for the rest of the day." Supervisors also noted that using an appropriate tone of voice while interacting with the public and with co-workers is important in order to maintain a pleasant working atmosphere.

A third category of social protocols for which supervisors provided examples reflected unpleasant interactions between co-workers or between co-workers and their supervisors. These included such things as employees giving orders to other employees without the authority to do so, employees complaining about having too much work to do, or employees complaining that others are not doing as much work. Supervisors indicated that they would rather have employees talk to them than complain to one another. In addition, supervisors indicated that they would like employees to ignore others' complaints because it may lead to bad feelings among the staff. One type of related protocol refers to the use of weak or phoney excuses by employees when they do not perform their work. A typical weak excuse involves an employee calling in the morning to report that he will not be coming to work for some reason. Supervisors state that this is most likely to occur on weekends and results in other people having to work a double shift. Supervisors' examples indicate that sometimes, workers do not even bother to call in when they are not going to come to work.

Another general negative category of protocols is procrastination or putting off work. There were several examples in which "small talk" be-

tween co-workers resulted in customers having to wait or production falling behind. For example, one supervisor indicated that his hostess came into work about 11:00 a.m. but talked until about 11:30 or so. As a result, the restaurant did not get properly set up and could not open on time. When employees are standing around talking and a customer comes in, the supervisor expects employees to stop talking and wait on the customer. Likewise, supervisors expect employees to keep track of break time and return to their stations when the time is up regardless of whether they have friends in the area. One employer provided an example in which employees went on coffee breaks together. If one stayed longer than the ten minutes allowed, the rest also stayed and continued talking.

Several examples were reported in which employees were required to respond appropriately to emergency situations. Apparently, these situations occur infrequently but require immediate action when they do occur. In one example, a supervisor indicated that when the restaurant gets busy, waitresses may bump and spill hot coffee on one another. The employee who does not have the coffee spilled on him should loosen the clothing of the person who does and apply first aid immediately. In another example in a factory situation, it was reported that a mechanical failure may occur at any time. When it does, employees must act quickly to prevent products coming down the conveyer belt from being destroyed. If employees do not react quickly, the results may be disastrous.

There were single examples provided for other negative types of behaviors such as primping on the job, borrowing money and roughhousing. Primping was of concern to supervisors because customers might have to wait while employees fix their hair or makeup. Supervisors were concerned about borrowing money because if it were not returned, it would create a loss for either the business or the other employee. Supervisors' concern with

roughhousing was that an employee may be hurt and production time may be lost.

Analysis of Disciplinary Consequences for Socially Undesirable Behavior

After on-line supervisors described specific examples of social protocols that were of "most concern" to them, they were asked to report the actions that they took when those events took place repeatedly. The number of examples cited for each social protocol is reported in Table 1.7 along with the mean number of transgressions that would lead to an employee being fired or suspended.

Insert Table 1.7 about here

Among those social protocols for which at least five examples were cited, ridiculing and critizing others was reported to most rapidly lead to firing an employee (3 occasions). Failing to show appreciation for others, failing to use social amenities and using weak or phoney excuses for inadequate job performance were next in number of offenses which lead to firing. Although transgressions of the first four protocols listed in Table 1.6 take slightly longer to result in being fired, they were cited far more frequently than other protocols.

There were some differences among the three employer groups in the mean number of offenses that precede firing an employee: manufacturers reported firing employees after an average of 4.8 transgressions; food services employers after 5.2; and other service employers after 4.4. For all groups, probation was the most commonly reported disciplinary consequence prior to firing (manufacturers = 33% of the time; food services = 42% of the time and; other services = 45% of the time). Other disciplinary

Table 1.7

Frequency of Examples of Social Protocols
Cited and Mean Time of Transgressions to Firing

Question Description	Question Number	Number of Examples of Each Protocol	X # of Times Prior to Firing
Following instructions needing immediate attention	1	17	5.2
Conversing in "small talk"	7	17	5.3
Following delayed instructions	2	13	5.5
Finding necessary information prior to performing a job	4	12	5
Ending conversations at appropriate points in time	15	12	5.7
Offering to help someone else	12	10	5.4
Weak excuses	33	9	4.2
Complaining about company policies to other	36	8	4.8
Showing appreciation	21	6	4
Providing job-related information to others	3	5	5.25
Using social amenities	13	5	4
Ridiculing, criticizing others	17	5	3
Refusing to follow others who behave inappropriately	5	4	4
Praising one another	9	4	0
Responding to emergency situations	28	4	4.5
Appropriate tone of voice	31	4	6
Having friends around work area	35	4	3.5
Ignoring inappropriate gossiping	6	3	3

Table 1.7 (continued)

Roughhousing during work	16	3	4	
Arguing with co-workers or supervisor	25	3	6	
Acknowledging hearing others	37	3	4	
Apologizing	8	2	4	
Friendly joking or kidding co-worker	10	2	0	
Stopping talk and listening to others	14	2	4.5	
Accepting friendly joking	19	2	0	
Handling ridicule/criticism	22	2	3	
Ignoring co-worker complaints	24	2	4	
Primping on the job	34	2	6	
Referring persons to someone else	11	1	0	
Giving orders without authority	26	1	0	
Borrowing money from co-workers	30	1	4	
Accepting an apology	18	0	0	
Handling unfriendly joking	20	0	0	
Making inappropriate physical gestures	23	0	0	
Inquiring into personal affairs	27	0	0	
Not remembering others' names	29	0	0	
Social distance	32	0	0	

consequences are listed in Table 1.8.

Insert Table 1.8 about here

There were protocols for which transgressions were never reported to lead to firing an employee. These protocols reflect pleasantry and amiability between co-workers such as: offering to help co-workers, friendly joking with co-workers, etc. Restaurant supervisors and industrial supervisors cited 7 and 6 different protocols respectively, for which transgressions would not result in firing an employee, even after many repeated offenses. For other service employers, there were only three protocols for which transgressions would never result in discharging employees.

DISCUSSION

The purpose of goal one was to identify social protocols that are related to employability. Thirty employers throughout the Cache Valley area were asked to respond to a questionnaire and were later interviewed in order to further clarify the protocols which were "of most concern" to them. Supervisors' responses to the questionnaire items indicated that, in general, they considered the social protocols included on the questionnaire as being important in their businesses. They also indicated that they were satisfied with new employees in regard to most of the social protocols. Their ratings on the frequency with which social protocols occurred varied widely. Some, such as responding to emergency situations, occur infrequently, while others, such as following instructions, occur several times a day. However, when choosing items that were "of most concern" in their place of business, employers tended to select protocols that they had

TABLE 1.8

Disciplinary Consequences Prior to Firing

Consequence	Frequency of occurrence prior to last response			Percentage		
	Manufacturers	Restaurants	Services	Manufacturers	Restaurants	Services
Switch job location	7	1	1	21	3.7	1.6
Reduce Hours	0	6	1	-	22	1.6
Apprentice	0	0	3	-	-	5
Re-explain	1	2	1	3	7.4	1.6
Show how	0	1	1	-	3.7	1.6
Reprimand	8	5	8	24	19	13
Talk with	2	2	10	6	7.4	17
Check On	0	0	9	-	-	15
Ignore	0	0	0	-	-	-

rated both as very important and as being sources of dissatisfaction with new employees. The ratings of the frequency dimension did not correlate highly with their choice of protocols "of most concern". The protocol that employers chose most frequently as being "of most concern" was following instructions that need immediate attention. Other protocols frequently cited by employers as "of most concern" included following delayed instructions, obtaining necessary information before performing a job, conversing in small talk, and using weak or phoney excuses.

The examples of protocols "of most concern" provided by supervisors indicated that they expect employees to come to them with job-related questions. Supervisors also indicated that they consider politeness between employees to be desirable. They also expect pleasantness to extend to customers who come in their place of business. Supervisors' examples reflected that they do not like their employees to engage in aversive interactions with others. After supervisors described protocols that were "of most concern" they reported disciplinary actions that they take. Some protocols such as as following instructions, conversing in small talk, and finding necessary information prior to performing a job, were cited in frequent examples. It took about five transgressions before an employee was fired for those behaviors. Other protocols involving pleasantries among co-workers were frequently cited but would never result in firing an employee. Further, 30% to 40% of the time, probation is the supervisory action that immediately precedes firing an employee. Other frequently cited consequences that occur just prior to firing include reduction of hours, talking with employees (which may include a verbal reprimand similar to a probationary statement), and switching job locations.

INTRODUCTION

A naturalistic observation study of handicapped and nonhandicapped workers was undertaken as a formative step towards describing social protocols in work settings. The purpose of the study was to gather information about the social interaction patterns among people at work. Primary areas of interest were: a) the rate and direction of initiations; b) the participants in social interactions; c) the extent of subjects' active participation in interactions; and, d) the general content of social interactions.

METHODS

Subjects

Both handicapped (N=17) and nonhandicapped (N=16) individuals were observed in two work sites. The handicapped subjects were mildly to moderately retarded according to their employment records. They lived either in independent living situations such as apartments or rented homes (N=11) or with their families (N=5) (i.e., parents, a brother or a sister). They had been working for their present employers for a mean of 4.6 years with a range of 6 months to 18 years.

The nonhandicapped subjects either lived independently (N=13) or with their families (N=3). They had been working for their present employers for a mean of 5.7 years with a range of 4 months to 17.5 years.

Setting

Observations took place at two large businesses that specialized in refurbishing household goods. Workers performed a variety of tasks such as loading and unloading trucks, bench work that kept them at stationary work stations, or pricing goods. Observations were conducted in the morning and

afternoon during both work periods and break periods. Break observations took place in lounge areas where tables and chairs were available and employees were able to buy refreshments. Generally, all workers took their break at the same time.

Procedure

Extensive information on social interactions during work and break was gained utilizing a partial-interval recording system (Social Interaction Observation System - SIOS) and a checklist recording technique (The Field Observation Checklist). The SIOS, a partial-interval recording system, was the primary observation instrument (see observation sheet Appendix I). The purpose of the SIOS was to record patterns of social interaction. Of specific interest was: a) the rate and direction of initiations; b) the participants in social interactions and; c) the extent of subjects' involvement in interactions. For all observations, observers were equipped with a Panasonic cassette tape-recorder with a 15-second interval tape and a small earplug. Codes employed in recording observations are summarized in Table 2.1.

Insert Table 2.1 about here

During each interval the observer recorded verbal and physical initiations to and from the target subject. Participants in social interactions were identified as co-workers, supervisors, others, or groups of individuals. Continuous interactions and the target subjects' verbal and physical participation in those interactions were noted in each interval for the duration of the interaction. An interaction ended when a six second pause occurred in the conversation, or, in the case of dyadic

TABLE 2.1

Social Interaction Observation System Codes

I. Initiations

V	Vocal initiation or response by the target subject.
T	Motor initiation or response by the target subject.
↑ or ↓	The interactor arrow signifies the direction of an initiation. The arrow points toward the individual being initiated to.
/	A slash indicates an initiation to or by the target subject that was not responded to.

II. Participants

C	Co-worker
S	Supervisor
O	Other. For example, a buyer, a customer, or a client.
G	Group interaction is scored when two persons other than the target subject are part of an interaction.

III. Continuous Interactions

⟶	A horizontal arrow is used to indicate that an interaction continues into subsequent intervals.
V or T ⟶	A "V" or "T" over a horizontal arrow is scored once per interval during an ongoing interaction if the target subject verbalizes during that interval.

IV. Context Information

Ⓢ	Supervisor presence for at least part of the interval.
Ⓢ̸	Supervisor absence for the entire interval.
✓	Opportunity for interaction. There is at least one person within 15 feet of the target subject for at least one second of the interval.
+	No opportunity for interaction for at least 14 seconds during the interval.
Ⓦ	Waiting. The target subject is between work activities and waiting for additional materials.
Ⓦ̸	Not waiting. The target subject is engaged in a specified work activity.
Ⓞ	On-task. The target subject is engaged is assigned work or talking to the supervisor.
Ⓞ̸	Off-task. The target subject is not engaged in assigned work and opportunity for work exists.

interactions, when the participants changed. In addition, observers recorded whether the supervisor was present for at least a part of the interval and whether the subject had an opportunity to interact. For all work observations a time sampling procedure was utilized during each interval to record on-task behavior and whether the target subject was waiting for additional work materials.

Prior to beginning observations, a two-week orientation procedure was conducted at both sites. First, potential subjects were told about the project and asked to participate. After informed consent was obtained, preliminary (trial) observations of each individual were conducted. These trial observations were used with all subjects to allow them to accomodate to the observation process. Following each observation, observers completed a Subject Orientation Worksheet which asked for information about employees' jobs and their daily schedules. When a subject appeared comfortable with the observation process, actual data collection began.

The observation procedure for data collection was similar to the orientation procedure. Each worker was observed for five to ten minutes at a time. A minimum work sample of 60 minutes and a minimum break sample of 30 minutes per individual was collected. Following each SIOS observation, the observer completed the Field Observation Checklist.

The Field Observation Checklist overlapped and supplemented the SIOS observations (see checklist Appendix I). The checklist was comprised of 35 questions that focused on the context of interactions (Table 2.2). For

Insert Table 2.2 about here

example, several questions referred to whether conversations were work-related or nonwork-related, whether interactions included cooperation or

TABLE 2.2

Field Observation Checklist

I. Individuals Present During the Observation

Was the supervisor present?

Was co-worker(s) present?

II. Participants in Interactions

Did the target subject and supervisor talk?

Did the supervisor talk to someone other than the target subject?

Did the target subject talk with a peer or co-worker?

Did the target subject talk with two or more co-workers?

III. Content of Conversations

A. General Content

Did the target subject talk about a work-related topic?

Did the target subject talk about a non-work-related topic?

B. Cooperation, Helping, and Sharing

Did the target subject give help or work cooperatively with peers?

Did the target subject ask for help?

Did the target subject receive help?

Did the target subject refuse to help or work cooperatively?

Did the supervisor give individual help to the target subject?

Did the supervisor give individual help to someone besides the target subject?

C. Criticism

Did the supervisor criticize the target subject?

Did a peer criticize the target subject?

Table 2.2 (continued)

Did the target subject criticize anyone?

D. Kidding Around

Did the target subject engage in roughhousing?

Did others engage in roughhousing?

Did the target subject verbally joke or laugh?

Did others verbally joke or laugh?

E. Inappropriate Behavior

Did the target subject engage in physical behavior that was grossly inappropriate?

Did others engage in physical behavior that was grossly inappropriate?

Did the target subject engage in bizarre verbal behavior?

Did others engage in bizarre behavior?

Did the target subject interrupt a conversation?

Did anyone interrupt the target subject?

Did the target subject inappropriately boss or order anyone around?

Did a co-worker inappropriately boss or order anyone around?

Did the target subject throw things or destroy property?

Did others throw things or destroy property?

Did the target subject curse, swear, or use profane language?

Did others curse, swear, or use profane language?

F. Social Isolation

If the target subject did not talk, were others talking?

Did the target subject sit or stand alone while others were sitting or standing in groups?

criticism either to or by the subject, and whether others interacted when the target subject interacted very little.

Observers were instructed to respond to each question with one of three responses: a) Yes; b) No, or; c) Don't know. The observer recorded "yes" to a question when the described situation occurred at least once during the observation. The category "no" was recorded when the situation did not occur any time during the observation and "don't know" was recorded when the observer was unsure if the situation had occurred. In some cases, a question was not applicable for a given situation. For example, if the observer indicated the supervisor was not present, the question of interaction between the supervisor and subject was not applicable. Rather than burden the observer with the need to master a complex series of conditional discriminations, the observer was instructed to respond to each question independently. Prior to analysis, a computer program applied a series of conditional discriminations (Table 2.3) to each Field Observation Checklist to screen out nonapplicable questions. For example, if it was reported that the supervisor was not present in a particular observation, then questions that pertained to the supervisor's interaction were screened out as "Not Applicable".

Insert Table 2.3 about here

Training

Observers were trained in coding conventions prior to collecting data at the work sites. For both observation instruments, a two-phase training process was followed. The first phase utilized a videotape of work situations and focused on the observer learning the recording codes. The

TABLE 2.3
Field Observation Checklist
Conditional Discriminations

Conditional Question	Conditional Response	Not Applicable Questions
Was supervisor present?	No	Did the target subject and supervisor talk?
		Did the supervisor talk to someone other than the target subject?
		Did the supervisor criticize the target subject?
		Did the supervisor give individual help or instruction to the target subject?
		Did the supervisor give individual help to someone besides the target subject?
Was co-worker(s) present?	No	Did the target subject talk with a peer or a co-worker?
		Did the target subject talk with two or more co-workers?
		Did the target subject give help or work cooperatively with peers?
		Did a peer criticize the target subject?
		Did a co-worker inappropriately boss or order others around?
Was supervisor present?	No	If the target subject did not talk, were others talking?
Was co-worker(s) present?	No	
		Did the target subject criticize anyone?
Did the target subject and supervisor talk?	Yes	If the target subject did not talk, were others talking?
Did the target subject talk with a peer or co-worker?	Yes	

second phase, conducted in actual work environments, focused on training observers to a criterion of at least 80% agreement in all code categories for a minimum of ten interactions across two different co-observers.

Reliability

Interobserver reliability was assessed by a second observer who simultaneously, but independently, observed and recorded the social interactions of employees. Reliability observations were conducted for approximately 30% of all observations on both the SIOS and Field Observation Checklist across subjects, settings, and times of day. Interobserver agreement on the SIOS was calculated for overall interactive code agreement, initiations, duration of interaction, and contextual information. An agreement was defined as both observers having recorded the same code in the same interval. Reliability coefficients for each code category were derived by dividing agreements by agreements plus disagreements and multiplying by 100. The mean overall code agreement for work was 82% and for break was 91%. Initiations, duration of interaction and contextual code agreements are presented in Table 2.4.

Insert Table 2.4 here

Reliability for the Field Observation Checklist was calculated for each observation by dividing the number of agreements on each checklist by agreements plus disagreements and multiplying the dividend by 100. When a question was responded to with "Don't Know" or "Not Applicable" that question was discarded for that observation. The mean interobserver agreement for work and for break was 93% for the Field Observation Checklist.

TABLE 2.4

Social Interaction Observation System

Interobserver Agreement

	Interaction Codes				Context Codes		
	Overall Agreement	Initiations	Duration of Interactions	Supervisor Presence	Opportunity for Interaction	Waiting for Work	On-Task
Work	.82	.81	.85	.96	.95	.96	.97
Break	.91	.73	.87	.97	.98		

RESULTS

Analysis of the naturalistic observation data focused on: (a) the rate of social interactions; (b) the participants in social interactions; (c) the direction of initiations; (d) the extent of active participation in interactions; and (e) the content of social interaction. For a few individuals, the percent occurrence on one or more dependent variables in the SIOS was either extremely high or extremely low. Thus, it was determined the most useful measures to describe the distribution of each dependent variable (see Table 2.5 and Figures 2.1 - 2.4) were the median and the interquartile range (the distance from the 25th to the 75th percentile of the distribution).

Insert Figures 2.1 - 2.4 and Tables 2.5 - 2.6 about here

The mean proportions of "yes" responses across subjects for each Field Observation Checklist questions are displayed in Table 2.6. The percent of "yes" responses was calculated by dividing the number of "yes" responses by the number of "yes" plus "no" responses for each subject.

Social Interactions During Work

Rate of social interactions. Target subjects had opportunity to interact for almost all work intervals in which they were observed. Handicapped individuals interacted slightly less often than nonhandicapped individuals. Handicapped workers interacted a median of 19% of all intervals (interquartile distribution ranged from 0.11 - 0.29). This resulted in a median interaction rate of 0.32 interactions per minute. For

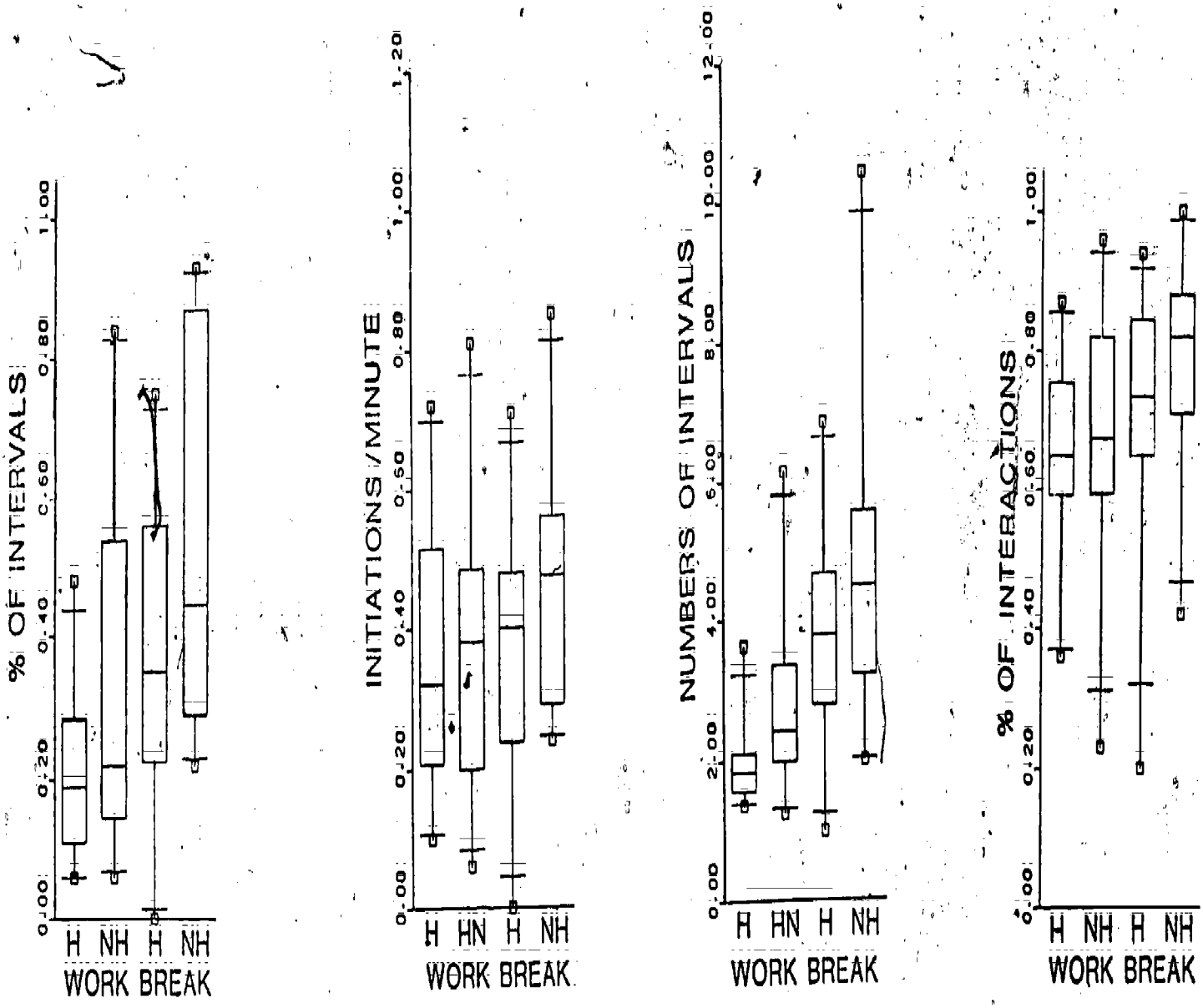


Figure 2.1: Box and whisker diagrams (Tukey, 1977) showing the rate of interaction for handicapped (H) and nonhandicapped (NH) subjects during work and during breaks. The ends of the boxes mark the 25th and 75th percentiles. The horizontal line inside the box marks the median. The small vertical lines (whiskers) extend to boxes that mark the extreme values. The whiskers that intersect the horizontal lines signify the 5th percentile and the 95th percentiles.

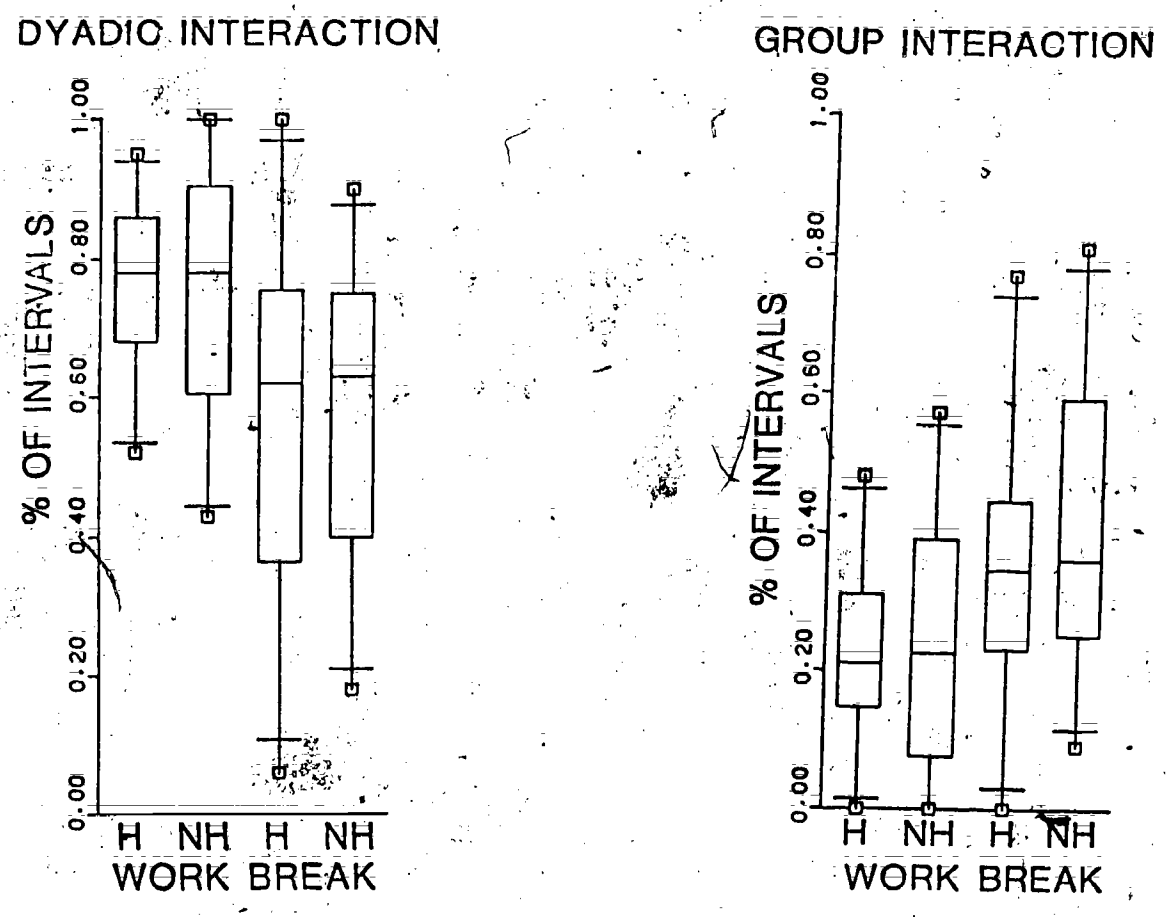


Figure 2.2: Box and whisker diagrams (Tukey, 1977) showing dyadic and group interactions of handicapped (H) and nonhandicapped (NH) subjects during work and during breaks.

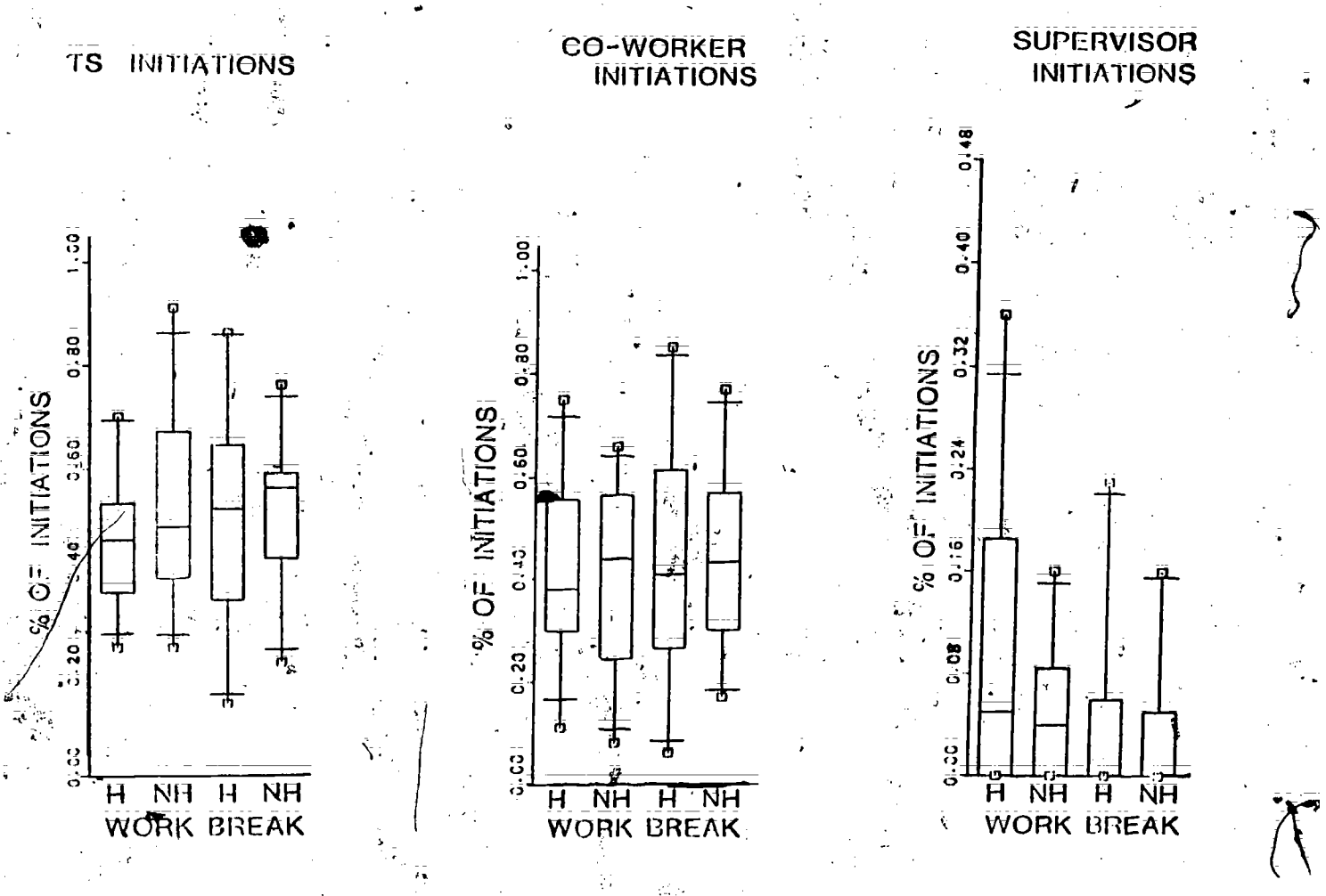


Figure 2.3: Box and whisker diagrams (Tukey, 1977) showing the direction of social initiations for handicapped (H) and nonhandicapped (NH) subjects during work and during breaks.

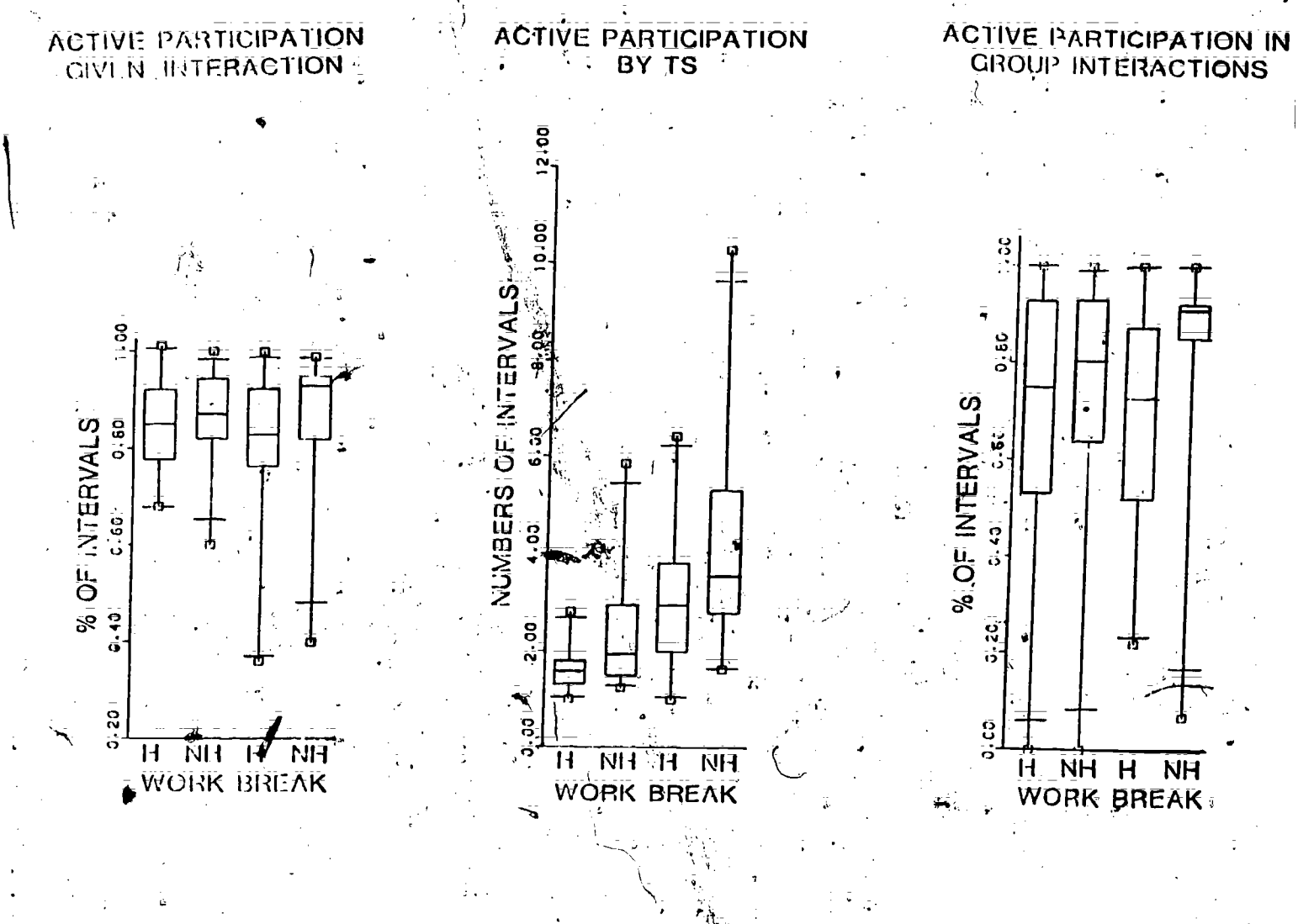


Figure 2.4: Box and whisker diagrams (Tukey, 1977) showing active participation in interaction by handicapped (H) and nonhandicapped (NH) subjects during work and during breaks.

TABLE 2.5

Social Interaction Observation System Data

	Median Proportion and Interquartile Range			
	Handicapped Subjects Work	Nonhandicapped Subjects Work	Handicapped Subjects Break	Nonhandicapped Subjects Break
Intervals with Interaction	0.19 0.11 - 0.29	0.22 0.15 - 0.54	0.35 0.23 - 0.56	0.45 0.29 - 0.87
Initiations/Minute	0.32 0.21 - 0.52	0.38 0.20 - 0.49	0.40 0.24 - 0.48	0.48 0.29 - 0.56
Intervals/Interaction	1.84 1.57 - 2.11	2.42 1.99 - 3.35	3.78 2.79 - 4.66	4.48 3.20 - 5.55
Continuing Interactions	0.65 0.59 - 0.76	0.68 0.60 - 0.82	0.74 0.65 - 0.85	0.82 0.71 - 0.88
Intervals of Dyadic Interaction	0.78 0.68 - 0.86	0.78 0.60 - 0.91	0.62 0.37 - 0.76	0.63 0.40 - 0.75
Group Interactions	0.16 0.12 - 0.24	0.17 0.07 - 0.28	0.28 0.21 - 0.38	0.28 0.15 - 0.40
Intervals of Group Interaction	0.21 0.15 - 0.31	0.23 0.08 - 0.39	0.35 0.23 - 0.45	0.36 0.25 - 0.59
Target Subject Initiations	0.46 0.36 - 0.53	0.49 0.39 - 0.67	0.52 0.34 - 0.65	0.56 0.42 - 0.59
Co-Worker Initiations	0.38 0.30 - 0.56	0.44 0.27 - 0.57	0.41 0.27 - 0.62	0.44 0.30 - 0.57
Supervisor Initiations	0.05 0.0 - 0.09	0.04 0.0 - 0.06	0 0.0 - 0.06	0 0.0 - 0.05
Initiations with the Target Subject and a Co-Worker	0.95 0.76 - 1.00	0.93 0.83 - 1.00	0.98 0.84 - 1.00	1.0 0.92 - 1.00
Initiations with the Target Subject and a Supervisor	0.05 0.0 - 0.23	0.06 0.0 - 0.14	0 0.0 - 0.16	0 0.0 - 0.08
Active Participation by the Target Subject	0.85 0.78 - 0.92	0.87 0.82 - 0.95	0.83 0.77 - 0.93	0.93 0.82 - 0.95
Intervals of Active Participation by the Target Subject	1.60 1.32 - 1.82	1.96 1.51 - 2.96	2.96 2.01 - 3.82	3.57 2.80 - 5.31
Intervals of Active Participation by the Target Subject in groups	0.75 0.53 - 0.93	0.81 0.64 - 0.93	0.73 0.52 - 0.87	0.91 0.85 - 0.92
Initiations by the Target Subject not responded to	0.15 0.0 - 0.27	0.09 0.0 - 0.22	0.12 0.0 - 0.17	0.0 0.0 - 0.19
Initiations to the Target Subject not responded to	0.07 0.0 - 0.20	0.0 0.0 - 0.08	0.0 0.0 - 0.17	0.0 0.0 - 0.11
Intervals with the Supervisor Present	0.34 0.20 - 0.56	0.26 0.12 - 0.42	0.34 0.06 - 0.40	0.18 0.01 - 0.68
Intervals with Opportunity for Interaction	1.00 0.99 - 1.00	1.00 0.99 - 1.00	1.00 0.99 - 1.00	1.00 0.99 - 1.00
Intervals where the Target Subject was On-Task	1.00 0.95 - 1.00	1.00 0.99 - 1.00		

TABLE 2.6

Field Observation Checklist Data

Question	Mean Proportion of "Yes" Responses			
	Handicapped Subjects Work	Nonhandicapped Subjects Work	Handicapped Subjects Break	Nonhandicapped Subjects Break
Was supervisor present?	0.68	0.56	0.55	0.49
Was co-worker(s) present?	0.96	0.96	0.96	1.0
Did the target subject and supervisor talk?	0.45	0.41	0.38	0.49
Did the supervisor talk to someone other than the target subject?	0.81	0.78	0.90	0.83
Did the target subject talk with a peer or co-worker?	0.79	0.82	0.81	0.96
Did the target subject talk with two or more co-workers?	0.58	0.56	0.67	0.76
Did the target subject talk about a work-related topic?	0.86	0.87	0.34	0.45
Did the target subject talk about a non-work-related subject?	0.28	0.33	0.75	0.96
Did the target subject give help or work cooperatively with peers?	0.78	0.78	0.38	0.50
Did the target subject ask for help?	0.01	0.15	0.0	0.07
Did the target subject receive help?	0.24	0.22	0.02	0.08
Did the target subject refuse to help or work cooperatively?	0.02	0.02	0.0	0.02
Did the supervisor give individual help to the target subject?	0.32	0.24	0.0	0.0
Did the supervisor give individual help to someone besides the target subject?	0.41	0.31	0.04	0.0
Did the supervisor criticize the target subject?	0.05	0.04	0.0	0.0
Did a peer criticize the target subject?	0.05	0.01	0.0	0.0
Did the target subject criticize anyone?	0.04	0.01	0.0	0.0
Did the target subject engage in roughhousing?	0.0	0.01	0.03	0.0
Did others engage in roughhousing?	0.01	0.01	0.0	0.02
Did the target subject verbally joke or laugh?	0.17	0.40	0.40	0.54
Did others verbally joke or laugh?	0.15	0.40	0.50	0.60
If the target subject did not talk, were others talking?	0.33	0.18	1.0	1.0
Did the target subject sit or stand alone while others were sitting or standing in groups?	0.05	0.05	0.10	0.15

each episode, handicapped workers interacted a median of 1.84 intervals. In addition, within an episode, participants generally spoke more than once. A median of 65% of all interactions continued beyond the initial reciprocated response for handicapped workers, (interquartile distribution = 0.59 - 0.76). In contrast, interactions of nonhandicapped workers had a slightly higher median (0.38 interactions per minute). Interaction occurred in 22% of all intervals with opportunity for interaction (interquartile distribution = 0.15 - 0.54). They lasted a median of 2.42 intervals and a median of 68% of all interactions continued beyond a single speaking turn for each participant (interquartile distribution = 0.60 - 0.80).

Participants in social interactions. Co-workers were present almost all the time when both handicapped and nonhandicapped workers were observed ($\bar{X}$ = 96% of all checklist observations). Thus, most social interactions observed were between the target subjects and their co-workers ($\bar{X}$ = 95%). Approximately 75% of the time, target subjects talked to at least one co-worker (handicapped $\bar{X}$ = 79%; nonhandicapped $\bar{X}$ = 76%) during an observation. Approximately 70% of the time, the target subject talked with two or more co-workers during an observation. These interactions were primarily dyadic (median = 0.78) for both handicapped and nonhandicapped subjects.

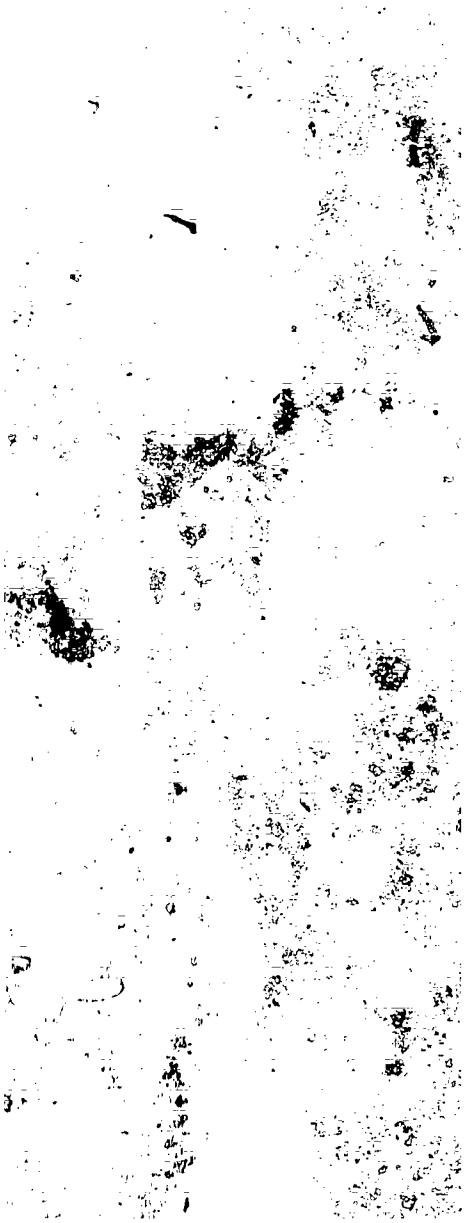
The supervisor was present for at least a part of 56% of all checklist observations with handicapped workers and 68% of all observations with nonhandicapped workers. When supervisors were present, they interacted with target subjects less than half the time (handicapped $\bar{X}$ = 30%; and nonhandicapped $\bar{X}$ = 23% of subjects). Further, there were relatively few initiations between target subjects and supervisors (handicapped median = 0.12; nonhandicapped median = 0.10).

Direction of initiations. Nonhandicapped target subjects initiated

interactions (median = 0.49; interquartile range = 0.28) slightly more often than handicapped subjects (median = 0.46; interquartile range = 0.17). Similarly, co-workers initiated to nonhandicapped subjects (median = 0.44; interquartile range = 0.22) more often than they initiated to handicapped subjects (median = 0.38; interquartile range = 0.26). Although supervisors initiated at a low rate, the interquartile range for initiations to handicapped workers (0.19) was higher than for nonhandicapped workers (0.09). Analysis of the distribution of supervisor initiations indicates 41% of all handicapped individuals were outside the interquartile range for nonhandicapped workers.

When either handicapped or nonhandicapped subjects initiated an interaction, the co-worker or supervisor generally responded. Likewise, when either handicapped or nonhandicapped subjects were initiated to, they generally responded. However, there were cases when the co-worker, supervisor or target subject did not respond to an initiation. This occurred more often when handicapped individuals initiated (median = 0.15; interquartile range = 0.27) than when nonhandicapped individuals initiated (median = 0.09; interquartile range = 0.22). Similarly, handicapped workers did not respond to initiations (median = 0.07; interquartile range = 0.20) slightly more often than nonhandicapped workers (median = 0; interquartile range = 0.08).

Handicapped and nonhandicapped workers' active participation in social interactions. To determine the degree of handicapped and nonhandicapped subjects' involvement in social interactions, observers recorded the occurrence of a subject's physical or verbal interaction in each interval. Participation was almost always conversational rather than physcial. Both handicapped and nonhandicapped subjects were active participants in both



dyadic and group interactions. Nonhandicapped workers, in general, were slightly more active interactors than handicapped workers. Nonhandicapped workers were active participants for approximately 87% of the intervals in which they interacted (interquartile range = 0.13). Thus, for each interaction, nonhandicapped workers actively participated for a median of 1.96 intervals of the interaction (interquartile range = 1.47). In contrast, handicapped workers were active participants for approximately 85% (interquartile range = 0.14) of the intervals in which they interacted. Handicapped individuals interacted for a median of 1.60 intervals of the interaction (interquartile range = 0.05).

In group interactions, there was greater variation among individuals in the extent of active participation (handicapped = 0.40 intervals/ interaction; and nonhandicapped = 0.64 intervals/ interaction) than in the extent of active participation in both dyadic and group interactions combined (interquartile range = 0.14 intervals/interaction). In addition, one handicapped and one nonhandicapped individual did not interact at all in interactions that involved groups of people. Thus, when interactions have more than two individuals, one person may not be required or have the opportunity to interact as frequently as when the interaction is dyadic.

Content of social interactions. During most observations the conversations included some work-related information (reference to job or objects within the work environment) with both handicapped ($\bar{X}$ = 86%) and nonhandicapped subjects ($\bar{X}$ = 87%). In a smaller proportion of observations, conversations included non-work-related information (handicapped $\bar{X}$ = 28%; nonhandicapped $\bar{X}$ = 33%). Workers being observed were almost never off-task. Interactions generally took place in the context of helping or working cooperatively with co-workers ($\bar{X}$ = 78%). Both handicapped and nonhandicapped workers ($\bar{X}$ = 15%) seldom requested additional help from co-

workers (handicapped $\bar{X}$ = 1%; nonhandicapped $\bar{X}$ = 15%) and almost never refused to help a co-worker ($\bar{X}$ = 2%).

Supervisors helped handicapped workers ($\bar{X}$ = 32%) more often than nonhandicapped workers ($\bar{X}$ = 24%). In addition, supervisors helped those working in the same area as handicapped workers ($\bar{X}$ = 41%) more often than those working in the same area as nonhandicapped workers ($\bar{X}$ = 31%). Supervisors and co-workers seldom critized the target subject and the target subject almost never criticized others. No individuals engaged in inappropriate physical behaviors such as throwing objects or inappropriate verbal behaviors, such as cursing. Neither the target subjects nor other employees bossed others without authority. Finaly, nonhandicapped workers kidded and joked ($\bar{X}$ = 40%) more often than handicapped workers ($\bar{X}$ = 17%).

In summary, during work, nonhandicapped subjects interacted slightly more often than handicapped subjects. The conversations of both handicapped and nonhandicapped workers continued beyond single exchanges. The majority of social initiations involved target subjects and their co-workers; supervisory initiations were relatively infrequent. However, when supervisors did initiate, they initiated at a higher rate to a greater proportion of handicapped workers than to nonhandicapped workers. Both handicapped and nonhandicapped subjects actively participated in interaction. Interactions generally involved work-related topics and took place in the context of working cooperatively with co-workers. Nonhandicapped individuals joked and kidded more often than handicapped individuals. Finally, little or no inappropriate behavior occurred.

Social Interactions During Break

Rate of social interactions. The social interaction pattern during break observations was similar to the interaction pattern observed in work

observations. During breaks, target subjects had opportunity to interact in almost all intervals in which they were observed during break. Nonhandicapped employees interacted more often than handicapped employees (handicapped median = 0.35; interquartile distribution = 0.23 - 0.56; nonhandicapped median = 0.45; interquartile distribution = 0.29 - 0.87). The median interaction rate for nonhandicapped individuals was 0.48 initiations per minute (interquartile distribution = 0.29 - 0.56). Episodes lasted a median of 4.48 fifteen-second intervals (interquartile distribution = 3.20 - 5.55) and a median of 82% of all interactions continued beyond the initial reciprocated response (interquartile distribution = 0.71 - 0.88). Handicapped employees interacted at a lower rate of 0.40 initiations per minute (interquartile distribution = 0.24 - 0.48). Episodes lasted a median of 3.78 intervals and a median of 74% of all interactions continued beyond a single speaking turn for each participant (interquartile distribution = 0.65 - 0.85).

Participants in social interaction. During breaks, co-workers were present almost all the time when subjects were observed (handicapped $\bar{X}$ = 96%; nonhandicapped $\bar{X}$ = 100%). Almost all interactions were between target subjects and their co-workers ($\bar{X}$ = 92%). Nonhandicapped subjects interacted more during breaks than handicapped subjects. Nonhandicapped subjects talked with at least one co-worker, a mean of 86% of the time, and with two or more co-workers 76% of the time. In contrast, handicapped subjects interacted with at least one co-worker 81% of the time and with two or more co-workers 67% of the time. Both handicapped and nonhandicapped workers engaged in fewer dyadic interactions during breaks (handicapped median = 0.62; nonhandicapped median = 0.63) than during work (median = 0.78). Conversely, they engaged in more group interactions

during breaks (median = 0.28) than during work (median = 0.16).

The supervisor was present during break observations approximately 50% of the time (handicapped $\bar{X}$ = 55%; nonhandicapped $\bar{X}$ = 49%). When supervisors were present, they interacted less than half the time with target subjects. Interactions occurred more often with nonhandicapped subjects ($\bar{X}$ = 49%) than with handicapped subjects ($\bar{X}$ = 38%). Almost no initiations occurred between target subjects and supervisors during breaks (handicapped median = 0.01; interquartile distribution = 0 - 0.16; nonhandicapped median = 0.01; interquartile distribution = 0 - 0.08). Thus, most supervispry interactions during breaks occurred with groups of people.

Direction of initiations. Nonhandicapped subjects initiated interactions (median = 0.56; interquartile range = 0.17) more often than handicapped subjects (median = 0.52; interquartile range = 0.31). Similar to the interaction pattern during work, co-workers initiated to nonhandicapped subjects (median = 0.43; interquartile range = 0.27) slightly more often than they initiated to handicapped subjects (median = 0.41; interquartile range = 0.35).

When either handicapped or nonhandicapped subjects initiated an interaction the co-worker generally responded. Likewise, when co-workers initiated to the target subject, the target subject generally responded. In those few cases when subjects' initiations were not responded to, handicapped subjects' initiations (median = 0.11; interquartile range = 0.17) were not responded to more often than nonhandicapped subjects' initiations (median = 0.01; interquartile range = 0.15). Conversely, when subjects were initiated to by a co-worker, more handicapped subjects (interquartile range = 0.17) than nonhandicapped subjects (interquartile range = 0.11) did not respond.

Handicapped and nonhandicapped workers' active participation in social

Interaction. Both handicapped and nonhandicapped subjects were active participants in social interactions. Similar to subjects' active prticipation during work, active participation during breaks was almost always conversational rather than physical. Nonhandicapped subjects, in general, were more active participants than handicapped subjects (handicapped median = 0.83; interquartile range = 0.16; nonhandicapped median = 0.93; interquartile range = 0.13). For each break interaction, nonhandicapped individuals actively participated for a median of 3.57 intervals (interquartile range = 2.51) and handicapped individuals were active participants for a median of 2.96 intervals (interquartile range = 1.81). In group interactions, nonhandicapped subjects were more active than handicapped subjects (handicapped median = 0.73; interquartile range = 0.35; nonhandicapped median = 0.91; interquartile range = 0.07). The interquartile range for handicapped individuals was five times that of nonhandicapped individuals indicating greater variability among handicapped individuals' active participation in group interactions.

Content of social interactions. During most observations, handicapped and nonhandicapped workers' conversations were primarily nonwork-related. Nonhandicapped subjects discussed both nonwork-related topics ($\bar{X}$ = 96%) and work-related topics ($\bar{X}$ = 45%) more often than handicapped subjects (work-related $\bar{X}$ = 75%; non-work-related $\bar{X}$ = 34%).

Interactions generally took place in the context of taking refreshments and relaxing. There were fewer situations during breaks than during work where the target subject gave help or worked cooperatively with a coworker (handicapped $\bar{X}$ = 38%; nonhandicapped $\bar{X}$ = 50%). In those few situations when help was requested, the target subject never refused the request.

Supervisors almost never offered help to target subjects or others

during breaks. Neither supervisors nor co-workers criticized the target subject and the target subject never criticized others.

More kidding and joking took place during breaks than during work. Again, nonhandicapped workers kidded and joked ($\bar{X}$ = 54%) more often than handicapped workers ($\bar{X}$ = 40%). Neither the target subject nor other employees bossed others without authority nor engaged in any inappropriate behaviors. Occasionally subjects did not interact with others during breaks (handicapped $\bar{X}$ = 10%; nonhandicapped $\bar{X}$ = 15%). In those situations, there were usually other individuals in the area who were interacting.

In summary, the interaction pattern during breaks was similar to the interaction pattern during work. Nonhandicapped subjects interacted more often than handicapped subjects. Both handicapped and nonhandicapped subjects interacted more during breaks than during work. In general, conversations lasted longer during breaks than during work and nonhandicapped individuals engaged in conversations longer than handicapped individuals. Almost all initiations involved target subjects and their co-workers. Supervisors almost never initiated conversations, although there were participants in some group interactions. Both handicapped and nonhandicapped subjects were active participants in both dyadic and group interactions. Nonhandicapped individuals were more active in group interaction than handicapped individuals. The content of conversations generally focused on nonwork-related topics. Nonhandicapped subjects engaged in nonwork-related discussions and work-related discussions more often than handicapped workers. Finally, nonhandicapped subjects joked and kidded more often than handicapped subjects and more joking and kidding took place during breaks than during work.

DISCUSSION

The descriptive data from the naturalistic observation study suggests

a broad social interaction pattern exists among successful employees. Both handicapped and nonhandicapped individuals observed were steady employees who, for the most part, lived independently. Their general social patterns were characterized by interactions that principally involved co-workers and usually extended beyond an initial reciprocated response. Some differences were noted between handicapped and nonhandicapped individuals, which, although small, were consistent across a variety of dependent variables. The general rate of social initiations, the duration of social interactions, and the extent of active participation was less for handicapped than for nonhandicapped employees.

The general pattern of interaction during breaks was different than the pattern during work in several respects. Supervisors almost never initiated interaction during breaks. Interactions during breaks were more frequent and lasted longer than those during work. In group interactions, nonhandicapped individuals were generally more active participants during breaks than they were during work. In addition, general content data suggests individuals may need to be able to carry on conversations about nonwork-related as well as work-related topics. It is possible that a different repertoire of social skills is necessary for individuals during work than that which is required during breaks. Further research is necessary to identify social repertoires among employees in different work settings and to identify which repertoires are most important to work success.

The purpose of Goal Three was to assess the relationship between observed social interaction patterns of handicapped youth in work settings and selected employment incidents as documented by employment-officers' contact reports. Goal Three was not accomplished as stated, but the investigators believe its intent was achieved. When the proposal was written, the authors had reason to believe that incident reports were a viable source of information. Once the project was underway, it became apparent that the use of incident reports was questionable for two reasons.

First, little time of the staff of the vocational training centers in this area is assigned to the monitoring of work placements; and second, recording of incidents occuring at work placement sites lacked any discernible consistency either in frequency or in procedure. For that reason, incident or contact reports were not a useful supportive source of information to determine which of the social protocols observed through the naturalistic study would be of most concern or importance to employers.

In the interests of obtaining information related to the intent of Goal Three, the activities of Goal One were expanded and upgraded to the extent that both a questionnaire and an interview study were completed. On-line supervisors of employees in nonskilled positions were chosen to participate because these types of positions could potentially be filled by handicapped persons. In some respects, directly asking work supervisors to describe specific examples of social situations that are of concern to them provides a more substantive base upon which to determine social requirements of work than would examination of work placement reports, even if they had been sufficiently consistent. The procedures and the results of the employer interviews are reported in the section entitled Goal One

because they are examined in relation to results of the questionnaire study in that section.

The purpose of Goal 4 was to integrate the information gathered in the preceding research to arrive at a list and a description of social protocols that are important in employment. The process for reducing the list to the most important social protocols was as follows: First, each questionnaire item on the survey was characterized as either positive or negative. Positive social protocols are things employees should do to perform satisfactorily on the job. Negative protocols refer to things employees should not do (such as ridiculing and threatening). The composite that is presented below includes the top ten positive social protocols and the top five negative ones. The next step in the integration process was to rank order each questionnaire item by the mean rating it received in the survey. Next, questionnaire items were rank ordered based on the frequency with which they were selected as of "most concern" by managers in the interview process. Fourth, information gained in the final part of the interviews allowed survey items to be rank ordered in terms of the mean number of transgressions that would lead to being fired or suspended. Those three lists were compared to one another. Items that appeared on all three lists or, at least two of the three lists are included in the top ten positive social protocols and the top five negative social protocols that follow.

Table 4.1 presents a list of positive and negative social protocols

Insert Table 4.1 about here

with their associated data on the ratings of importance and "most concern" and the number of offenses that would lead to firing or suspension. It may be seen that, among the positive social protocols, seven were high priority on all three lists. Three of the items (ending conversation at appropriate

Table 4.1
Employer Ratings of Positive and Negative Social Protocols

Positive Protocols

Questionaire Item No.	Title	% rating of importance	% of times chosen as most concern	% # of offenses to fire or suspend
1	Following Instructions (immediate)	4.4	47%	5.2
2	Following Instructions (delayed)	—	33%	5.5
28	Job-related Emergencies	4.2	20%	4.5
12	Offering to help co-workers	4.1	23%	5.4
13	Using social amenities	4.1	13%	4.0
15	End conversation at appropriate points in time	4.1	—	5.7
4	Getting necessary information for new task	—	33%	6.0
3	Providing Job Related Information	3.9	—	5.3
9	Praising Co-Workers	3.9	23%	—
21	Expressing Appreciation	3.9	23%	4.0
31	Appropriate Tone and Level of Voice	3.9	13%	6.0

Negative Protocols

Questionaire Item No.	Title	% rating of importance	% of times chosen as of most concern	% # of offenses to fire or suspend
33	Using Weak, phoney excuses	4.1	30%	4.2
25	Arguing with co-workers or supervisor	4.0	13%	6.0
35	Having a friends around during work	4.0	17%	3.5
36	Grumbling about company policies	—	17%	4.8
17	Ridiculing, Threatening	—	13%	4.8

points in time, following delayed instructions, and getting necessary information before performing a new task) were top priorities on two of the three. All the negative social protocols were top priority in all three of the measures. It should also be noted that, in general, transgressions within the class of negative social protocols lead more rapidly to firing or suspension than trangressions within most of the positive social protocols.

The direct observation studies (Goal 2) corroborated the top items on the social protocol list and provided additional information about the antecedent events, the response variations, and the settings in which they occur. The direct observation data also provided specific information about the parameters within which social interaction occurs on the job.

Next, descriptions of social protocols are provided. The positive social protocols are provided first, followed by the negative social protocols. The description of each protocol includes the title, a brief description of the responses in question, an indication of the setting and other antecedent events in which the responses occur, and a few additional comments for each as necessary.

Social Protocols

Table 4.2 lists the social protocols within a matrix that describes the circumstances in which they occur. These include response variations,

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Insert Table 4.2 about here

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settings, actors, and response formats.

Positive Protocols

Number 1. Following instructions: There are two categories of fol-

Table 4.2
Social Protocol Matrix

Response Category	Response Variations		Settings		Actors			Response Format		Comment
	Responds To	Initiates	Work	Break	Co-worker	Supervisor	Others	Dyad	Group	
A. Positive Protocols										
1a. Following Immediate Instructions	X	X	X		X	X		X	X	Teach "Responding to" before "initiating." Highest ranking protocol across measures
1b. Following Delayed Instructions	X	X	X		X	X		X	X	"Responding to" should precede "initiating"
2. Responding to Job Related Emergencies		X	X	X	X	X	X	X	X	"Getting help" may be the best generic response to teach
3. Offering to Help	X	X	X		X			X		Most commonly co-worker, but could be others on occasion
4. Using Social Amenities	X	X	X	X	X	X	X	X	X	Local culture may dictate specific topographical variations
5. End Conversation at appropriate times	X	X	X	X	X	X		X	X	running on without pause is the most common problem
6. Getting necesary information for a new task		X	X		X	X		X		This protocol serves in lieu of waiting indefinitely to be told or doing something wrongly
7. Providing job-related information to others		X	X		X	X		X		The ability to pass along information was of consistant importance across employers
8. Praising Co-workers Workers	X	X	X		X		X			These are most freqeuntly applicable with co-workers in dyads but may also be appropriate with supervisors
9. Expressing Appreciation	X	X	X		X			X		
10. Appropriate tone and loudness of voice	NA	NA	X	X	X	X	X	X	X	
B. Negative Protocols										
1. Using Weak Excuses		X	X				X	X		
2. Arguing	X	X	X		X	X		X	X	
3. Having Friends Around [illegible] work		X	X	X			X	X	X	This seems especially applicable to restaurant employees
4. Grumbling About Company Policies	X	X	X	X	X			X	X	
5. Ridiculing, Threatening		X	X	X	X			X	X	

lowing instructions. One refers to instructions that require an immediate response and the other refers to instructions that require a response after a delay. The observational research suggested that this protocol occurs primarily during work periods rather than at break. Further, it was found that both supervisors and co-workers might be the source of instructions. Indeed, in normal work situations, supervisory presence was limited. Frequently an experienced co-worker functioned as a supervisor, at least in some limited ways. In many jobs, a worker needs to be able to initiate instructions with other co-workers as well as follow them. Moreover, instructions can occur in a dyadic or in a group situation, although the dyadic format was more common in our observations. The importance of following instructions seems to be generic. This protocol was consistently rated the highest among all types of employers.

Number 2. Responding to job-related emergencies: This repertoire includes a broad range of potential responses. In some cases, employers were referring to accidents or injuries such as broken bones, heart attacks, etc. In other cases they were referring to emergencies such as broken plumbing or equipment. In any case, the employee would be expected to identify the situation as an emergency and initiate some series of responses to appropriately deal with it. These emergencies can happen when an individual is at work or on break. It may involve any category of other people (e.g., co-workers, customers) and it may occur in a dyadic or in a group situation. It is not possible to anticipate all the variety of specific emergencies that could arise in the array of employers that we surveyed. Thus, for purposes of training, the most feasible alternative might be to teach potential employees to seek help or to call any unusual situations to the attention of a supervisor or a trusted co-worker.

Number 3. Offering to help: This category includes any offers made

by a worker to help another worker or a supervisor in the course of getting some job accomplished. Employees need to be able to respond appropriately to others' offers to help as well as to know when to initiate offers themselves. Although this could happen during breaks, it is more frequent and more important during the work periods. The observational research suggested that offering to help is more frequent among co-workers although it could happen with a supervisor also. Likewise, offers to help are likely to be more frequent in dyadic than in groups situations.

Number 4. Using social amenities: Use of social amenities includes responses such as please, thank you, excuse me, you're welcome, and their common variations. Our observations suggested that employees need to appropriately respond to these amenities as well as to initiate them. The use of social amenities is expected protocol both during work and break, and with all categories of other employees. Likewise, their use is expected both in dyadic and in group formats. There are some differences in form that social amenities take across various types of employers and, even more, among local cultures. Thus, local situations must dictate the specific topographical variations that are taught to handicapped employment trainees.

Number 5. Ending conversations at appropriate points in time: The definition of this response refers to keeping conversations appropriately limited in time and it refers to giving other people an opportunity to talk. The observational data collected under Objective 2 suggested that duration of an utterance during work time was 38 seconds with an interquartile range from 30 to 60 seconds. It also suggested that most conversations continue beyond one reciprocation. Ending conversation at appropriate times is applicable to both work and break situations as well as to

all categories of actors and response formats. A failure to end conversations appropriately during work times may, in some circumstances, be taken as procrastination.

Number 6. Getting necessary information before starting a new task: This category of responses calls for an employee to discriminate that he is facing a new task and doesn't have adequate information to perform it correctly. The nature of the task, of course, would vary across employers and jobs. In the face of this situation, the employee is expected to first initiate some inquiry to either a co-worker or a supervisor to obtain the necessary information, and then to proceed to the task. This protocol is applicable to work rather than to break times and usually results in a dyadic interaction. The failure to demonstrate this repertoire may result in an employee who waits indefinitely to be told what to do or may result in an employee doing something the wrong way.

Number 7. Providing job-related information to others: This category requires that employees be able to receive information from one person and pass it along to another person. The nature of many places of employment seems to involve fluctuations from day to day and week to week in specific tasks, materials, or operations. Frequently, it seems that rather than talking to all employees at one time, supervisors give information to selected employees and expect them, in turn, to pass that information along. This response category is more applicable to work than to break situations and may incorporate both co-workers and supervisors. Usually these interactions are in a dyadic rather than a group format.

Number 8. Praising co-workers for a job well done: This category requires that an employee praise his or her co-workers when a job is completed well. Employees need to be able to respond appropriately to praise as well as to give it. It is more applicable during work times

than break times and to co-workers rather than supervisors. Although it could happen in a group, it most commonly occurs in dyadic interactions.

Number 9. Expressing appreciation: This requires that employees, on occasion, express their appreciation to another employee who has done something for them. The employee is expected to respond appropriately to expressions of appreciation from others as well as to initiate them. This protocol is more common during work than break times, and with co-workers rather than supervisors. Likewise, it is more common in dyadic than in group interactions.

Number 10. Using appropriate tone and loudness of voice: This protocol requires that employees use a tone and loudness of voice which is appropriate to the message that they intend to give. Speaking too loud will be upsetting to many listeners and speaking too softly will make it difficult for them to hear what is said. Likewise, an inappropriate tone of voice could easily be mistaken for a sarcastic or angry remark. The importance of appropriate tone and loudness of voice are applicable to conversational interactions during both work and break and with co-workers, supervisors or others. Similarly, it is applicable in both dyadic and group situations.

Negative Protocols

Number 1. Using weak or phony excuses: This category includes excuses such as the flat tire that caused lateness four days in one week, or the aunt that died six times this year causing the employee to be absent. The specific topographical variations on these responses are boundless according to the employers that we surveyed. However, they are characterized by the use of improbable events on multiple occasions as excuses for being late or absent for work or for otherwise inadequate performance.

They are most applicable to work situation interactions with supervisors in a dyadic format.

Number 2. Arguing with employees or supervisor: This negative protocol refers to argumentative behavior by the employee either as responses to someone elses comments or as initiations. Although our observations suggest that arguing can occur occasionally during break times, it is more serious when it occurs during work times. This protocol can occur during interactions with co-workers or with the supervisor and it may occur in dyads and in group response formats.

Number 3. Having friends around during work times: This protocol reflects situations in which employees have friends who hang around their place of work and attempt to interact during work times. The situation appears to be most frequently applicable in restaurant employees. It seems that friends may "hang out" in the restaurant and the employee may be distracted from his/her work or from customers by the presence of these friends. In addition, during breaks, employees may interact with these friends and return late from their break.

Number 4. Grumbling about company policies: In this social protocol, an employee complains repeatedly to other employees about the policies of the company. Employees may initiate these responses or respond to complaining and grumbling by other employees, thus encouraging it. These interactions occur at work and during breaks. They are primarily among co-workers rather than with the supervisor. They may occur in either a dyadic or a group response format. During the interviews, employers suggested that grumbling and complaining hurts morale and may undermine their authority.

Number 5. Ridiculing and threatening: The definition of this protocol includes making fun of others, belittling them personally or their

work, and threatening them with either physical harm or damage to their reputation. It may occur during work or break times and usually involves co-workers rather than supervisors. This social protocol may occur within dyadic or a group response format. Among all the social protocols that we examined, this one leads most rapidly to being fired or suspended.

Summary of Protocols

The social protocols described above could be logically arranged into two main groupings. There are those that are directly related to the performance of work tasks and those that are related to being a pleasant, amiable individual. The first category includes protocols such as; following instructions, responding appropriately to job related emergencies, offering to help others, getting necessary information before attempting a new task, providing job related information to others and, on the negative side, having friends around during work hours and using weak or phoney excuses. The protocols that reflect amiability are; the use of social amenities, conversational protocols (including ending conversations at appropriate times as well as using appropriate tone and loudness of voice), praising co-workers for a job well done and expressing appreciation to co-workers. On the negative side are ridiculing or threatening others, grumbling, complaining, and arguing.

Our observations suggest that effective preparation for employment will attend to both social protocols that relate to productivity and those that relate to being pleasant. Most of the social protocols described above seem to be generically applicable to the variety of employers that were surveyed, although a few, such as having friends around during work hours, may be more applicable to one type of employer than another. All the protocols described above are subject to requirements for specific

response topographies and antecedent conditions that are determined by particular employers, local cultures, and, in some cases, specific co-workers or supervisors that are involved.

These data suggest that a successful training or assessment program will probably have to operate on several levels. First, there is the evaluation of generic skills that are reflected in these protocols (e.g., conversation, amiability). Next, there is the determination of specific types of employers or specific types of jobs wherein one set of protocols may be more heavily emphasized than another. Finally, the process of assuring success of a particular individual in a specific work situation will require a detailed analysis of the behavioral topographies and protocols that are peculiar to that employer, that job, and those co-workers and supervisors.

Concluding Remarks

Summaries of findings for the survey research and for the observational research were presented for Goals One and Two, respectively. Those findings were integrated in relating to Goal Four where a prioritized set of protocols for social responding were described. Thus, this section will not further summarize findings, but rather attempt to draw out their limitations and recommend future directions for research and development.

First, one must ask whether the social protocols described in this project are sufficiently complete. The initial sources for social protocols included in this research came from the current literature in vocational training and placement. To this were added social protocols that became evident in our own preliminary research. It seems likely that further research will identify additional social repertoires that are important for vocational success that were not included in this research.

In the survey research, work supervisors responding with a referent to their own nonhandicapped employees. Thus, the findings reflect competitive employers' judgments about important social behavior attributes of workers in general. It is probable that, among the population of handicapped people, especially the more severely handicapped, social performance deficits will be manifest at a more severe level than that of the general population. Thus, some social repertoires that employers rated as of little concern in this study might be of far greater concern to them if they were responding with reference to severely handicapped people. Since relatively few competitive employment supervisors have direct experience with handicapped workers, and since sheltered workshop or day activity supervisors may not apply standards comparable to competitive employment supervisors, it is unlikely that this issue can be successfully broached

exclusively through survey research. Rather, research projects will be needed that use competitive work supervisors to evaluate social repertoires of handicapped people when they are placed in competitive employment sites.

Another series of questions regard whether the social protocols, as written in this document, are sufficiently defined or whether they need to be subdivided in order to be useful to vocational training and placement personnel. As described the social protocols are of a class of responses (e.g., following instructions) with a delineation of some of the situational variables that surrounded their occurrence. However, those situational characteristics may need far more precise description to be more precisely differentiated for different kinds of working environments. For example, following instructions was clearly the most important social skill consistently cited by employers. But there are a multitude of different kinds of instructions. Instructions may be very easy or very difficult; instructions may be very urgent or not; instructions may be given subtly or very forcefully; instructions may be presented very clearly or in a muddled way. The issue becomes whether it is sufficient to know that following instructions is important. Rather, will further research be needed to differentiate the importance of responding to different kinds of instructions, in different circumstances, given by different people. The parallel question is if a class of social protocols are subdivided that finely, will they retain any useful generality?

Another issue that needs to be addressed is the reliability of the findings of the observational and survey research across different managers, across geographical areas, types of employers, and across different types of jobs. This survey research included thirty managers, all from a rural area of northern Utah. The results were analyzed for three types of em-

ployers (food service, other service, and manufacturers). There was no reference to any specific jobs in regard to the responding of managers in this survey. A series of systematic replications will be necessary to assess whether the findings reported herein are applicable across other variables. In our survey research, no clear differences were found between the responses of the three categories of managers that we examined in regard to questionnaire ratings. However, the small number of respondents within groups (n = 10) might have precluded finding those differences, if they do exist. Moreover, it is not clear that the three categories defined for this study are the most functional ones that might differentiate between types of employers. Moreover, there were differences between the categories of employers in regard to the pattern of disciplinary consequences that they employed. It seems likely that different kinds of jobs might call for different kinds of social skills. For example, an assembly line worker in a factory in Detroit might require, at least in some ways, a different array of social skills than a dishwasher. And that may again be different for a waitress or for a custodian. Since in this research managers were not asked to respond with any specific job in mind, these findings contain no data that would shed light on this question. A systematic replication of this survey in which managers were asked to respond in light of specific jobs would be of interest. The issues described in this section in relation to the survey research apply equally to the observational research.

Most difficult are the issues of validity. The managers' responses to relatively abstract questions asked verbally do not necessarily parallel their responses to social behaviors as they occur in the place of business. Second, what actions a manager says he takes are not necessarily identical to what he actually does. Third, it would be a mistake to assume that employers are necessarily cognizant of all the variables that affect their

opinions about employees. There are a variety of ways that future research might address these issues. One is to ask managers to rank order their current employees and then relate rankings of those employees to each of the social protocols listed in the survey. In that way one might isolate specific social profiles that correlate with high and low ranked employees. If that were done across a sufficient number of managers, one could also assess the extent to which different types of managers concur. Another cross-sectional approach would be to attempt to directly observe the occurrence of these social protocols among employees in their place of business. The problems of intrusive measurement impedes this approach. Perhaps the best but most laborious approach is longitudinal. In the final analysis, the issue of validity can only be broached by looking at employees over a relatively long span of time to see which employees with which set of social behavioral skills are successful at securing, retaining, and advancing their vocational prospects.

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Appendix A

SIOS

nning Time _____ Target _____ Date _____ Site _____

ng Time _____ Observer _____ Setting - J B Activity - C M

Co-Observer _____ Supervisor Present - YES NO

O W _ S	2. O W _ S	3. O W _ S	4. O W _ S	5. O W _ S	6. O W _ S	7. O W _ S	8. O W _ S
O W _ S	10. S	O W _ S	12. O W _ S	13. O W _ S	14. O W _ S	15. O W _ S	16. O W _ S
O W _ S	18. O N _ S	19. O W _ S	20. O W _ S	21. O W _ S	22. O W _ S	23. O W _ S	24. O W _ S
O W _ S	26. O W _ S	27. O W _ S	28. O W _ S	29. O W _ S	30. O W _ S	31. O W _ S	32. O W _ S
O W _ S	34. O W _ S	35. O W _ S	36. O W _ S	37. O W _ S	38. O W _ S	39. O W _ S	40. O W _ S

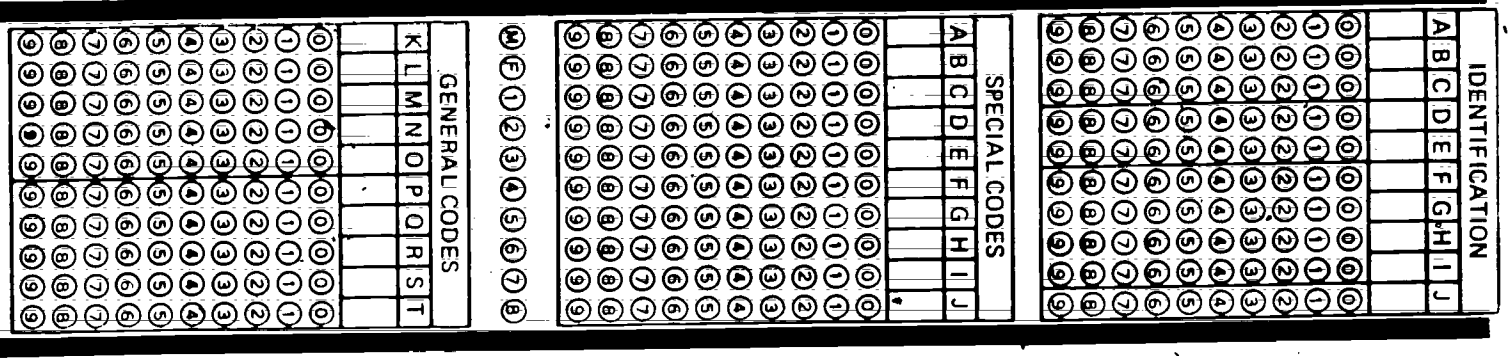
Appendix B

Date

FIELD OBSERVATION CHECKLIST

Observation Information

SR/SPRT
Subject Information



		Yes	No	DK.
1.	Was supervisor present?			
2.	Was co-worker(s) present?			
3.	Did TS and supervisor talk?			
4.	Did supervisor talk to someone other than TS?			
5.	Did TS talk with a peer or co-worker?			
6.	Did TS talk with two or more co-workers?			
7.	If TS did not talk during observation, were others talking in the vicinity?			
8.	Did TS give help or work cooperatively with peers (e.g. comply with request, hold same materials as someone, do one step in a several step task involving others)? (Do not count working individually with supervisor.)			
9.	Did TS refuse to help or work cooperatively (either verbally or by failure to comply with request)?			
10.	Did TS talk about a work-related topic?			
11.	Did TS talk about a non-work related topic (something happening outside of work, something they like/dislike not related to work, comment on clothes or someone's appearance.			
12.	Did supervisor criticize TS (say they did something wrong or they shouldn't so something or they look funny)?			
13.	Did peer criticize TS?			
14.	Did TS criticize anyone?			
15.	Did TS interrupt a conversation? (Inappropriately breaking into a conversation)			
16.	Did anyone interrupt TS?			
17.	Did TS ask for help?			
18.	Did the TS receive help?			
19.	Did TS sit or stand alone when others were sitting or standing in groups? (Cross out the boxes if TS stayed at a fixed work station.)			
20.	Did supervisor give individual help or instruction to TS?			
21.	Did supervisor give individual help to someone besides TS?			
22.	Did TS verbally joke or laugh?			
23.	Did others verbally joke or laugh?			