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The effects of overt and covert observation on the clinical behavior emitted by untrained clinicians

Carol L.K. Middleton
Portland State University

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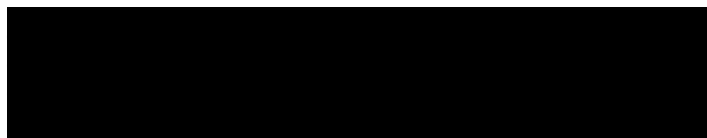
AN ABSTRACT OF THE THESIS OF Carol L.K. Middleton for the Master of Science in Speech Communication, with an emphasis in Speech-Language Pathology presented on October 13, 1982.

Title: The Effects of Overt and Covert Observation on the Clinical Behavior Emitted by Untrained Clinicians.

APPROVED BY MEMBERS OF THE THESIS COMMITTEE:



Joan McMahon, Chairperson



Robert H. English



Kerry Lewis

This study examined the effects overt and covert observation of live clinical sessions have on the number of social/neutral verbal behaviors emitted by untrained speech clinicians and their respective clients enrolled Summer Term, 1980, in the Articulation and Language Clinic at Portland State University, Speech and Hearing Sciences. The

Boone-Prescott Interactional analysis System (Boone and Prescott, 1972), a numerically coded system, was used to record clinician-client interactions. Data were obtained for a randomly selected five minute period from each of forty clinical sessions.

Results of this research do not indicate the presence of a relationship between overt and covert observation of live clinical sessions and the frequency of social/neutral behaviors emitted by untrained clinicians.

Results do indicate, however, that the frequency of social/neutral behaviors emitted by untrained clinicians decreased over time, i.e., as clinical training time increased. It appears then that some aspect or aspects of clinical training does affect the frequency of social/neutral behaviors emitted by untrained clinicians leading to clinical growth.

THE EFFECTS OF OVERT AND COVERT OBSERVATION
ON THE CLINICAL BEHAVIOR EMITTED
BY UNTRAINED CLINICIANS

by

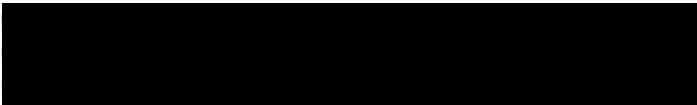
CAROL L.K. MIDDLETON

A thesis submitted in partial fulfillment of the
requirements for the degree of
MASTER OF SCIENCE IN SPEECH COMMUNICATION:
with an emphasis in
SPEECH-LANGUAGE PATHOLOGY

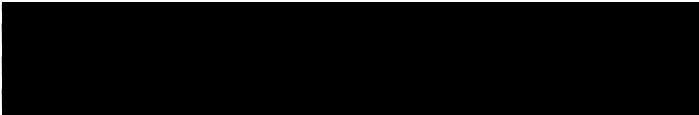
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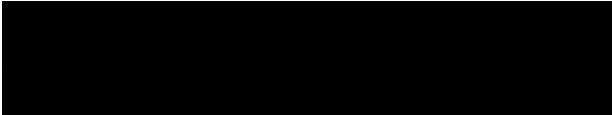
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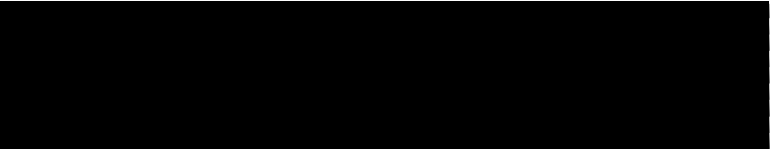


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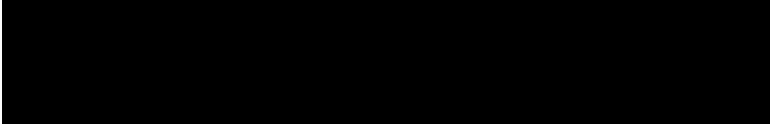


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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iii
LIST OF TABLES	vii
LIST OF FIGURES	ix
 CHAPTER	
I INTRODUCTION AND PURPOSE	1
Introduction	1
Purpose	3
II REVIEW OF THE LITERATURE	5
Supervision and the Attainment of Clinical Competence	5
Definition of Supervision	7
Observation of Clinical Practicum	9
Direct Observation Methods	11
Interactional Analysis Systems	13
Behavioral Difference Between Experienced and Inexperienced Clinicians	14
Conclusions	16
III METHODS	18
Subjects	18
Instrumentation	19
Investigator	20
Investigator Training	20
Reliability of the Investigator	21
Procedures	22
Test Setting	23
Behavior Recording	25
Mode of Recording	26
Covert Observations	26
Overt Observations	27
Data Analysis	27
IV RESULTS AND DISCUSSION	30
Results	30
Discussion	38

V	SUMMARY AND IMPLICATIONS	44
	Summary	44
	Research Implications	45
	Clinical Implications	46
	BIBLIOGRAPHY	48
	APPENDIX	
A	Boone-Prescott Content and Sequence Analysis System	52
B	Informed Consent	53
C	Informed Consent	55
D	Sample Tracking Sheet	57
E	Ten-Category Speech and Hearing Therapy Session Scoring Form	58

LIST OF TABLES

TABLE		Page
I	Order of Covert-Overt Conditions	23
II	The Six Comparisons Made Between the Phases and Observation Conditions	29
III	One-Tailed and Two-Tailed t -Test for Dependent Means	31
IV	Comparison of Phase I, Overt to Phase I, Covert Observation Condition (II-O and II-C) ...	33
V	Comparison of Phase II, Overt to Phase II, Covert Observation Condition (II-O and II-C)	34
VI	Comparison of Phase I, Overt to Phase II, Overt Observation Condition (I-O and II-O)	35
VII	Comparison of Phase I, Covert to Phase II, Covert Observation Condition (I-C and II-C)	36
VIII	Comparison of Phase I, II Overt to Phase I, II Covert Observation Condition (I, II-O and I, II-C)	37
IX	Comparison of Phase I, Overt and Covert to Phase II, Overt and Covert Observation Conditions (I-O, C and II-O, C)	38
X	Subject Tallies for the Occurrence of Social/Neutral Behaviors in Three Compari- sons of Phase I and Phase II Data	43
XI	Subject Tallies for the Occurrence of Social/Neutral Behaviors in Three Compari- sons of Overt and Covert Observation Conditions	43

LIST OF FIGURES

Page

FIGURE

1. Schematic Diagram of a Typical Observation
Clinic Room Setting, Portland State
University 24

CHAPTER I

INTRODUCTION AND PURPOSE

Introduction

The important role of supervision in the development of clinical competency has been recognized in the literature pertaining to speech-language pathology since the mid 1960's (Kaplan and Dreyer, 1974; Oratio, 1977). It has only been in recent times, however, that the profession has sought to identify and further specify the characteristics which comprise the supervisory role (Carnese, 1975).

According to the literature, a primary objective of supervision is to guide clinical behavior change and to promote clinician autonomy (Halfond, 1964; Ward and Webster, 1965; Prather, 1967; Oratio, 1977). It is believed that supervision will aid in the development of clinical competence (Oratio, 1977).

Reportedly, an essential function of the clinical supervisor is observation of the student clinician in the clinical management setting (Haller, 1967; Anderson, 1974; Payne and Koller, 1974; Culatta, Colucci, and Wiggins, 1975; Carnese, 1975; Oratio, 1977; Culatta and Helmick, 1980; Hanlan, 1980).

Anderson (1974) has stated the supervisor must develop

infinite skills in behavioral observation and be willing to employ a variety of techniques to insure objective observation takes place. Information pertaining to various observational methods may be found in Halfond (1964), Brooks and Hannah (1966), Kunze (1967), Goldhammer (1969), and Boone and Prescott (1972), among others. A review of the current literature suggests supervisory observation and methodologies have been viewed primarily as a means by which the supervisor can obtain objective data or feedback pertaining to student clinician skills (Ward and Webster, 1965; Culatta, Colucci, and Wiggins, 1975; Oratio, 1977). Halfond (1964) stated methods of observation and the observational process itself should be considered in relation to the effect they have on clinician-client interactions within the clinical session undergoing observation. At present the influence of supervisory observation on student clinician behaviors emitted within the clinical session does not appear to be well understood (Culatta and Helmick, 1980). A study by Samph (1976) indicates supervisory observation may have some influence on clinician behaviors and reflects the need for further research in this area.

Recently, a number of researchers have used interactional analysis systems to describe and compare the clinical behaviors emitted by experienced and inexperienced clinicians (Stech, 1969; Olsen, 1972; Schubert, Miner, and Prather, 1972; Grandstaff, 1974). The Grandstaff study (1974) revealed that inexperienced clinicians spoke a significantly higher number

of words unrelated to behavioral change than did moderately trained or highly trained clinicians. Behaviors unrelated to clinic goals which are emitted within the clinical session have been described by Boone and Prescott (1972) as social/neutral behavior. Henceforth, in this investigation, behavior unrelated to clinic goals emitted within the clinical session will be referred to as social/neutral behavior.

According to Oratio (1977), the aforementioned studies suggest some aspect or aspects of clinical training result in higher levels of professional clinical behavior and indicate the need for further research to determine which aspects of training facilitate positive behavioral change in student clinicians and which aspects impede this growth. These comments and those of Halfond (1964) regarding supervisory observation indicate the need to determine what effect supervisory observation has on the clinical behavior exhibited by student clinicians during various levels of clinical training.

Purpose

The purpose of this investigation was to determine what effects overt and covert supervisory observation had on the clinical behavior of novice student clinicians. Specifically, this study employed the Boone-Prescott Interactional Analysis System (Boone and Prescott, 1972) to record behavioral events emitted in clinical sessions (see Appendix A).

The question asked was: What effects do overt and covert observation of live clinical sessions have on the number of social/neutral verbal behaviors emitted by untrained speech-language clinicians?

CHAPTER II

REVIEW OF THE LITERATURE

Supervision and the Attainment of Clinical Competence

According to Darley (1969), the paramount concern and goal of professionals in the field of speech and language pathology should be high quality client care. Necessary to the attainment of this goal is the development of clinical competence within our profession (Villarreal, 1964; Van Riper, 1965).

Clinical competence begins with academic work followed by supervised clinical experience and culminates in independent clinical management (Halfond, 1964). According to Brown (1967), the main purpose of speech-language pathology training centers is to prepare students to be competent clinicians as defined by the American Speech-Language-Hearing Association (ASHA, 1976).

A crucial and vital aspect in the development of clinical competency is supervision (Halfond, 1964). Van Riper (1965) viewed clinical supervision as one of the most important staff functions in our training centers. Villarreal (1964) summarized the importance of clinical supervision in the attainment of clinical competence as follows:

Clinical practicum is a critical part of the total preparation of one who would prepare himself for the evaluation and alleviation of speech and hearing disorders. Before knowledge learned from books and classroom lectures can be put to use, a considerable degree of clinical competence must be developed. For this, the speech pathologist must practice under careful supervision until there is no doubt he can work independently.

Further, Darley (1969) stated all students should be afforded the opportunity to learn how to effectively interact with people, modify their behavior, and use the tools of their occupation from clinical experts in a variety of clinical settings.

The American Speech-Language-Hearing Association (ASHA) recognizes the important role of supervision in the development of clinical competence and stipulates a specified number of supervised clinical practicum hours must be completed, among others, prior to application for the American Speech-Language-Hearing Association Certificate of Clinical Competence (ASHA, 1978). ASHA further specifies that at least one-fourth of the total practicum hours be directly observed by the clinical supervisor who holds a Certificate of Clinical Competence in the area being supervised (ASHA, 1978). Beyond these requirements the exact characteristics of clinical supervision are not specified.

While the importance of supervision has been recognized in the literature since the mid 1960's (Kaplan, 1974; Oratio, 1977), it has only been in recent times that the profession has sought to identify and further specify the characteristics which comprise the supervisory role (Culatta and

Helmick, 1980).

Definition of Supervision

Oratio (1977) organized a definition of clinical supervision based on three major concepts which he delineated as function, structure, and process. The function of clinical supervision is the operation or task of the supervisor. Specifically, this task is to aid students in the development of optimal clinical skills, to include the establishment of directions, goals, and priorities within the clinical setting. The structure of supervision pertains to the arrangement of the supervisory functions or task. The supervisor provides the student clinician with materials, ideas, methods, and procedures which can be used to effect change within the clinical management session. The process of supervision refers to the interaction of the supervisor and clinician. This interaction may take the form of written reports, verbal conferences, or a combination of both. The function, structure, and process of supervision collectively constitute the objective role of the supervisor (Oratio, 1977; Hanlan, 1980).

Comments by Villarreal (1964) and Eye and Netzer (1965) support these statements in that they distinguish the role of effective supervision as being one which directs and stimulates student clinician growth, rather than one that merely monitors student clinician activities. Villarreal (1964) further specified the supervisory role to include the demonstration and clarification of clinical techniques, the

teaching of clinical content, and the mature counseling of the student in relation to his clinical training, inclusive of written and verbal feedback through supervisor-clinician conferences. In a similar vein, Klevans and Volz (1974) described the supervisory role as one of teacher, program administrator, model, consultant, counselor, facilitator, and evaluator.

Hanlan (1980) summarized supervision as a process of interaction between the supervisor and student clinician within the parameters of structure and function as delineated by Oratio (1977). The primary objectives of this interactional process between the supervisor and student clinician are to change clinician behavior (Halfond, 1964; Ward and Webster, 1965; Prather, 1967) and promote clinical autonomy which will aid in the development of clinical competence (Oratio, 1977).

A major function inherent in the supervisory role and essential to the attainment of the foregoing objectives is observation of student clinicians during clinical management sessions (Anderson, 1974; Carnese, 1975; Oratio, 1977; Culatta and Helmick, 1980; Hanlan, 1980). The present review will now focus on this aspect of the supervisory process. Supervisory observation and various methods employed in the accomplishment of this task will be discussed.

Observation of Clinical Practicum

Supervisory observation of clinical management sessions does take place (Halfond, 1964; Van Riper, 1965; Kunze, 1967; Darley, 1969; Boone and Prescott, 1972). As previously discussed, ASHA stipulates at least one-fourth of the supervised clinical practicum hours necessary for certification in clinical competence must be observed by the supervising clinician (ASHA, 1978). Van Riper (1965) suggests these observational requirements may be inadequate. Concerns pertaining not only to the quantity but the quality of supervisory observation are also present in the literature (Halfond, 1964; Van Riper, 1965; Kunze, 1967; Darley, 1969; Boone and Prescott, 1972). According to Halfond (1964) the supervisor must employ objective observation techniques in order to effect clinical growth on the part of the student clinician. Oratio (1977) points out that supervisory observation is not passive but an active process mediated for the purpose of effecting change in student clinician behavior. The observational methodologies employed by a given supervisor reflect the philosophical views of the said supervisor (Goldhammer, 1969) and should take into account the individual needs of the clinician to be observed (Ward and Webster, 1965; Van Riper, 1965; McMahon, 1980). Although supervisors may differ in their philosophical views, generalities pertaining to observational techniques employed by supervisors in the field of Speech-Language Pathology do exist (Brooks and Hannah, 1966;

Oratio, 1977; Hanlan, 1980).

Both direct (live) and indirect (videotape or audiotape) observation of clinical management sessions take place in the majority of clinical training centers (Halfond, 1964; Brooks and Hannah, 1966; Kunze, 1967; Boone and Stech, 1970; Boone and Prescott, 1972). Direct or live observation is that which takes place during the course of the actual clinical session. Indirect or taped observation refers to the use of videotape or audiotape to record the actual clinical session for later viewing by the supervising clinician. Direct and indirect observation can be overt, in which the clinician is aware that supervisory observation is taking place, or covert, in which the clinician is not aware that supervisory observation is occurring (Hanlan, 1980). The most frequently used manner of observation is a direct one in which the clinical session is observed through an observation window (Culatta and Helmick, 1980). There is an increasing trend for the use of indirect observation in the supervision of clinical management sessions (Hanlan, 1980). The Hanlan study (1980) reported that videotaped recordings of clinical management sessions yield the same quality of results as do direct observational methods at the .02 level of confidence. Germane to the purposes of the present investigation is a discussion of direct observation methodologies.

Direct Observation Methods

A review of the literature reveals three main methods for direct observation. Direct observation may take place with the supervisor present in the clinic room (Samph, 1976; Brophy, 1979), behind a two-way mirror utilizing an audio speaker system (Van Riper, 1965; Brooks and Hannah, 1966; Goldhammer, 1969), or behind a two-way mirror utilizing an induction loop system (Brooks and Hannah, 1966).

According to Brooks and Hannah (1966), most supervisors prefer to observe the clinical session through a two-way mirror rather than from within the clinic room. The presence of the supervisor in the clinic room may serve as a visual distractor, inhibit the development of a close interpersonal relationship between the client and the student clinician, and/or create other observational artifacts (Brooks and Hannah, 1966; Goldhammer, 1969). Although direct observation via a two-way mirror appears to be the method of choice, some disadvantages of this form of observation are reported in the literature. Van Riper (1965) and Goldhammer (1969) note some student clinicians are uncomfortable with the possibility of hidden scrutiny, and that the integrity of the client clinician relationship might be upset by this form of observation. Brooks and Hannah (1966) state the greatest disadvantage of two-way mirror viewing that does not employ the induction loop system is the impossibility of supervisor-clinician communication during management without

interrupting the clinical session. Apart from not interrupting the clinical session, two-way mirror observation which employs an induction loop system is useful in the provision of immediate supervisory feedback (Brooks and Hannah, 1966). Disadvantages inherent in this type of observation include the tendency for the supervisor to dominate the clinical process or the student to become overly dependent on supervisory input within the clinical setting (Brooks and Hannah, 1966).

To date, the literature has focused on the informational product or supervisory feedback pertaining to student clinician-client dyad interactions generated through the use of these various observational techniques. Halfond (1964) suggests methods of observation should be considered in relation to the effect they have on clinician-client dyad interactions within the clinical session undergoing observation. Halfond (1964) recognized that being the subject of observation, in and of itself, may affect student clinician behavior. The influence that participation in an experiment or certain set of conditions such as supervisory observation may have upon the participants is referred to as the Hawthorne Effect (Anastasi, 1964). Current information in respect to this aspect of observation appears limited. Samph (1976) found the verbal behaviors of teachers more closely approximated perceived ideals during conditions of direct/in-the-room, overt, observation than for conditions of direct/out-of-room, overt, observation of the audio portion of the session. These findings appear to have significance for supervisory

observation, and indicate the need for further investigation to ascertain what effects various forms of supervisory observation have on student clinician behavior. At present, supervisory observation is primarily viewed as a means by which the supervisor can obtain objective data or feedback pertaining to student clinician skills. This type of information can be obtained through the use of an interactional analysis system which allows for behavioral event recording simultaneous to the observation of these events (Schubert and Laird, 1974).

Interactional Analysis Systems

According to Simon and Boyer (1967) an interactional analysis system is an observational system which allows for the description of behaviors by which we communicate. It is descriptive rather than evaluative and deals with pieces of behavior which can be categorized and measured, rather than with global concepts.

Numerous interactional analysis systems have been developed to describe clinician-client behavior unique to the speech-language pathology setting (Johnson, 1969; Stech, 1969; Schubert and Miner, 1972; Boone and Prescott, 1972; Conover, 1974; Grandstaff, 1974). These systems have been utilized to record observed behavioral interactions which occur in the speech-language management session for a variety of purposes. Reports in the literature indicate interactional analysis systems have been used to: determine the minimum

length of time necessary to obtain a representative sample of clinician-client interaction in the clinical setting (Schubert and Laird, 1974); provide objective supervisory feedback (Prescott, 1970); provide student clinicians with a method by which to self-monitor their own clinical behavior (Boone and Prescott, 1972); study various aspects of supervisory styles (Culatta and Seltzer, 1976; Culatta and Seltzer, 1977); compare direct and indirect methods of observation (Boone and Prescott, 1972; Hanlan, 1980); and to research behavioral differences between experienced and inexperienced clinicians (Oratio, 1977).

Behavioral Difference Between Experienced and Inexperienced Clinicians

Recently, some researchers have used interaction systems to study the clinical behavior emitted by experienced and inexperienced clinicians. Stech (1969) studied behavioral changes in the clinical performance of student clinicians under videotaped self-confrontation and self-evaluation. Results indicated initial reinforcement ratios were related to personality and experience variables, with high reinforcement rates being emitted by extraverted, highly self-esteemed, and highly experienced subjects. A multiple correlation of +.75 was obtained for the predictors of this change measure.

Olsen (1972) used the Prescott Nineteen Category System to investigate the behavioral differences between experienced and inexperienced clinicians engaged in articulation,

language, prosody, and voice management. The results showed that the Prescott Nineteen Category System was sensitive enough to detect differences between experienced and inexperienced clinicians in the four parameters of speech disorders studied. Olsen (1972) did not elaborate, however, on the exact nature of these differences.

The behavioral differences between beginning and advanced student clinicians were measured by Schubert, Miner, and Prather (1972), using the ABC system. Results revealed significant differences between the two groups in ten of the twelve categories recorded. Further, beginning clinicians were observed to modify their lesson plan less often than advanced student clinicians.

Grandstaff (1974) investigated the differences in behaviors exhibited during articulation management between three groups of clinicians with different levels of training: 10 untrained student clinicians with two to ten clock hours of clinical practicum, 10 moderately trained student clinicians with seventy-five to one-hundred clock hours of practicum, and 10 trained clinicians who were university graduates, state certified, and had two years employment in the public schools. This study revealed four behavioral differences between populations at the .05 level of confidence: 1) trained clinicians elicited a significantly higher number of correct client responses than moderately trained clinicians; 2) moderately trained clinicians elicited a significantly higher number of correct client responses than untrained clinicians;

3) untrained clinicians spoke a significantly higher number of words unrelated to behavioral change than did moderately trained or trained clinicians; 4) generally, the more experienced clinicians provided more feedback as to the degree to which the client was approximating the target response and more feedback as to why errors occurred.

Collectively, these studies suggest that regardless of how clinician experience is defined, more highly trained clinicians are perceived as behaving more consistently with the goals of speech-language management than inexperienced clinicians.

Differences between experienced and inexperienced clinicians have been observed in the amount and type of reinforcement used, the amount of socialization and correct responses which occurred during management, the amount of feedback given to the client, the modification of management to meet client needs, and generally in the overall quality of service delivered to the client (Oratio, 1977).

These studies demonstrate that some aspect or aspects of clinical training do result in higher levels of professional clinical behavior (Oratio, 1977).

Conclusions

Studies by Stech (1969), Olsen (1972), Schubert, Miner, and Prather (1972), and Grandstaff (1974) indicate some aspect or aspects of clinical training result in higher levels of professional, clinical behavior on the part of the student

clinician. Oratio (1977) suggests further research is needed to determine which aspects of clinical training facilitate positive behavioral change on the part of the student clinician and which aspects impede this growth.

In a similar vein, Halfond (1964) stated supervisory observation should be investigated in relation to the effect it has on clinician-client dyad interactions in clinical sessions undergoing such observation.

Taken, collectively, these comments reveal a need for information pertaining to training procedures and their effects on student clinician behavior. Specifically, research is needed to determine what effect supervisory observation has on the clinical behaviors exhibited by student clinicians during various levels of clinical training.

CHAPTER III

METHODS

Subjects

Subjects were five novice student clinicians and their respective clients enrolled for clinical practicum in articulation and language management at Portland State University Speech and Hearing Sciences Clinic. There were a total of ten clients (two clients per each student clinician) who ranged in age from 4 years, 0 months, to 8 years, 7 months, with a mean age of 5 years, 6 months. Six of the ten clients were enrolled for articulation and language management, three for articulation management, and one for language management. Each student clinician participating in the study had completed a minimum of twenty-five hours of directed clinical observation and had no clinical experience prior to participation in the articulation and language clinic investigated herein. At the time observations for this study were undertaken, each student clinician had completed at least two clinical practicum hours and no more than ten in the above mentioned clinic. Student clinicians ranged in age from 22 years, 0 months, to 25 years, 1 month, with a mean age of 23 years, 7 months.

The clinician/client interactional dyads observed in

this study numbered ten, each clinician having two clients (hereinafter designated as client a and b respectively). Observations on each clinician/client interactional dyad numbered four (two under conditions of direct-overt observation and two under conditions of direct-covert observation), and were completed in two phases (see Procedures). Thus, forty discrete observational analyses (one observation analysis for each observational condition in each phase for each clinician-client dyad) are available for inspection. Informed Consent Forms (Appendices B and C) were signed by the student clinicians and the guardians of their respective clients prior to inclusion in this study.

Instrumentation

The Boone-Prescott Interactional Analysis System (Boone and Prescott, 1972) was utilized in the collection of the raw data. This analysis system allows for the numerical coding of ten categories of clinical behaviors and may employ vertical line recording of the observed behaviors in the order of their occurrence within the clinical session (see Appendix D). Five of the ten numerical categories pertain to clinician-centered behaviors, and five pertain to client-centered behaviors (Appendix E). Session analyses were recorded on separate Speech and Hearing Management Scoring Forms (see Appendix E), which allow for the summarization of the total number of certain specific behavioral sequences. Additionally, the individual category calculations may be utilized in

various ratios to determine the percentage of correct responses, incorrect responses, good evaluations, bad evaluations, inappropriate responses, direct control (by the clinician), and socialization by both the clinician and client. Germane to the purposes of this investigation were the total number of social/neutral behaviors emitted by the clinician under each observational condition in each phase, and the percentage of the total clinician interactions they constituted.

Investigator

The investigator was a second year graduate student enrolled in a two year masters program in Speech and Hearing Sciences at Portland State University. Additionally, the investigator served as a teaching assistant and taught one class for three terms prior to the commencement of this investigation. Investigator training and reliability, as delineated below, follow Hanlan (1980).

Investigator Training

Investigator training in observation and in the use of the Boone-Prescott Interactional Analysis System was completed under the management of a clinical supervisor who holds the Certificate of Clinical Competence in Speech-Language Pathology. The investigator performed Boone-Prescott Analyses on ten, five-minute videotaped sessions. Following completion of these ten analyses, to the satisfaction of the clinical

supervisor, the investigator compiled data for interjudge reliability examination.

Reliability of the Investigator

An interjudge reliability examination was performed on the analyses data, independently generated by two judges, and this investigator, using the Boone-Prescott Interactional Analyses System (Boone and Prescott, 1972). The two judges were clinical supervisors in the Portland State University Speech and Hearing Clinic. Each judge holds the Certificate of Clinical Competence in Speech-Language Pathology. Additionally, the judges had developed skill in the use of interactional analysis through the use of one or more of these systems in the evaluation of clinical interactions on approximately thirty clinical sessions per term for the past four years. Ten, one-minute videotaped samples, randomly selected from clinical tape files, were dubbed onto a master videotape for use in the interjudge reliability examination. The categories for each analysis completed by the coders were compared, using the Pearson r correlation coefficient. Interjudge correlation coefficients for each videotaped sample were .99 and .98 between the investigator and judges one and two, respectively, and are indicative of high interjudge reliabilities between this investigator and the two judges.

Two weeks following the interjudge procedure, the investigator reanalyzed the sample tapes and reached a correlation coefficient of .98, indicating high intrajudge

(test/retest) reliability.

Procedures

The ten clinician-client dyads in this study were randomly assigned a subject number and divided into two sets (set 1 and set 2), containing five clinician-client dyads each. The clinician-client dyads in set 1 were initially observed using direct-overt observation (clinicians were informed that the observation was being performed) and set 2 dyads were observed using direct-covert observation (clinicians were not informed the observations were being performed). On a different day, the observational conditions for the two sets were reversed, hence, set 1 was observed using direct-covert observation and set 2 was observed using direct-overt observation. The foregoing observations were completed over a four day period during the second week of clinical management and constitute Phase I of a two phase procedure. Phase II observations took place over four days during the fifth week of clinical management. During Phase II replication, set 1 dyads were initially observed using direct-covert observation and set 2 dyads were initially observed using direct-overt observation. On a different day, the observational conditions for the two sets were reversed. The order of the overt/covert conditions during Phase I and II of the procedure are summarized in Table I.

The investigator performed an analysis on the clinician/client interactions during each observational condition employed in Phases I and II. The analysis data recorded during each observation was transferred to a Boone-Prescott Ten-Category Speech and Hearing Management Session Scoring Form (see Appendix E) the same day it was recorded. The analysis tracking sheet (see Appendix D) and the Session Scoring Form were then marked with the subject number, coded as direct-overt or direct-covert data, dated, and placed in the file cabinet of the clinical supervisor. The investigator did not review any of the data obtained prior to completion of all Phase II observations.

TABLE I
ORDER OF COVERT-OVERT CONDITIONS

SUBJECTS		Type of Observation	
		Days 1 & 2	Days 3 & 4
PHASE I	Set 1: 2a, 3b, 4a, 1a, 5b	OVERT	COVERT
	Set 2: 4b, 2b, 5a, 3a, 1b	COVERT	OVERT
PHASE II	Set 1: 2a, 3b, 4a, 1a, 5b	COVERT	OVERT
	Set 2: 4b, 2b, 5a, 3a, 1b	OVERT	COVERT

Test Setting

The clinician-client interactions observed in this study took place in 5 by 7 foot clinic rooms located in the Speech and Hearing Sciences Center, Neuberger Hall, Portland

State University. Each clinic room was equipped with a table and chairs. Observation rooms, adjacent to the clinic rooms, were equipped with two-way mirrors and audio connectors which allowed the investigator to observe and record clinician-client interactions (see Figure 1) without clinician awareness. Access to the observation and clinic rooms was afforded through separate entrance-ways.

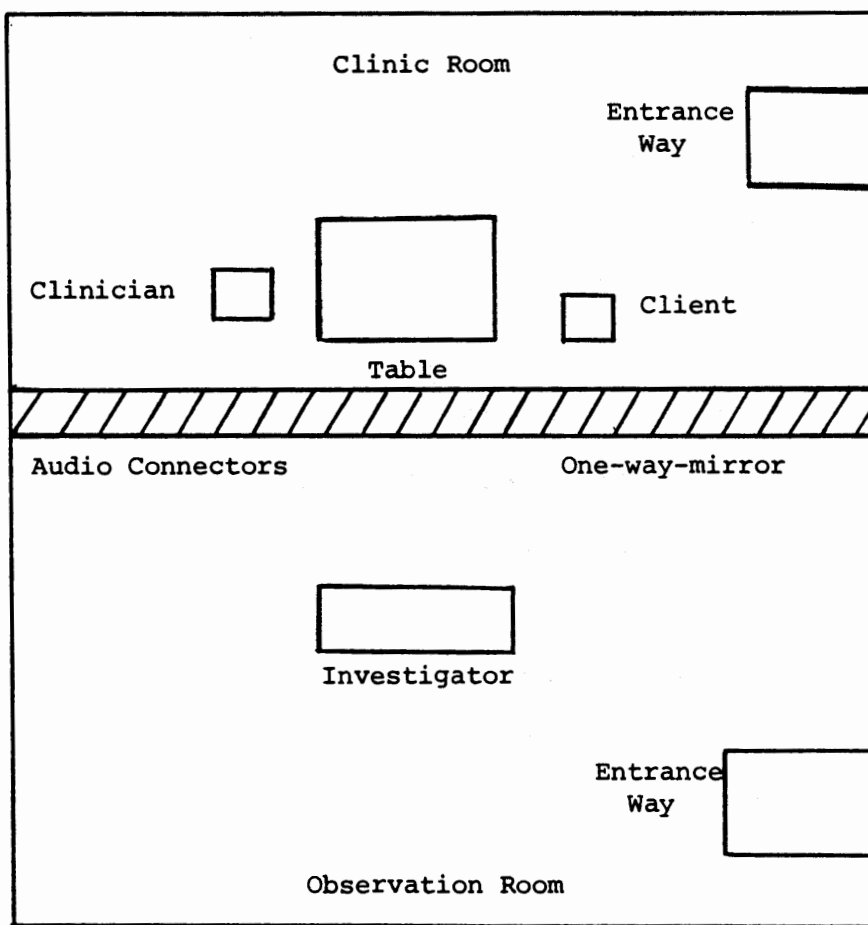


Figure 1. Schematic diagram of a typical observation clinic room setting, Portland State University.

Behavior Recording

The behaviors observed were numerically coded in accordance with instructions by Boone and Prescott (1972), with the following additions and clarifications as set forth by Carnese (1975), Golper (1976), and Hanlan (1980).

Verbal behaviors were recorded in "sentence units" or their equivalents; thus, each clinician or client statement was denoted by one numerical code. Hence, if the clinician said, "Good going!, Super!, Nice job!" in response to a client utterance it was rated as three separate, consecutive, positive reinforcements by the clinician, numerically coded as 3 (Good evaluation by the clinician). Clinician repetition of a client's response and clinician use of the client's name were recorded under the number category of 1 (Explain, Describe). Instances of direct clinician control, in which the clinician brings the client's attention back to the task and/or inhibits client non-task behavior, were recorded under the number 1 (Explain, Describe) category. All clinician requests for an evaluation, i.e., the clinician asks, "Was that correct?" were recorded as a number 2 (Model, Instruction). Single stimulus units emitted by the clinician to elicit a multiple response, i.e., requests for naming of sequence pictures, or enumerating objects were designated as a single number 2 (Model, Instruction) followed by a single number 6 or 7 (Correct or Incorrect Response). All extraneous clinician verbalizations, e.g., "Okay," "Uh," "Alright,"

were recorded under the number 5 (Social, Neutral) category since those utterances were not considered to be reinforcing or necessary to the remediation process (Carnese, 1975). Any instance of client inattention to the clinical task was recorded as a number 8 (Inappropriate, Social). Spontaneous and clinician elicited evaluations by the client were coded number 9 or 10 (Good or Bad Self-Evaluation).

The investigator manually recorded the observed behaviors, as described above, using a vertical numerical coding system (see Appendix D).

Mode of Recording

The investigator observed randomly selected, five-minute segments of each clinician-client dyad during the mid-twenty minutes of the session using overt and covert observations for Phases I and II of this investigation. Following each observation the data recorded on the tracking sheet was transcribed onto a Session Scoring Form (see Appendix E) by the investigator and both pieces of data were marked with the subject number, condition of the observation (overt/covert), dated, and placed in the file cabinet of the clinical supervisor.

Covert Observations

Recording methods for the covert observations follow those described under the subheading: Mode of Recording. These observations were made and analyses performed without the clinicians' or the clients' knowledge. Precautions were

taken to insure covert recording. The investigator entered the observation room by way of a separate entrance after the clinical session had commenced.

Overt Observations

Recording methods for the overt observations are described under the subheading: Mode of Recording. The investigator informed the clinician, just prior to the commencement of the clinical session, that they would be observed by the investigator that day.

Data Analysis

Forty discrete observational analyses, two analyses per clinician or one analysis per clinician-client dyad for the live-overt and live-covert observation conditions in Phases I and II were recorded. The number of social/neutral behaviors emitted by the clinicians were counted for each analysis, and the percentage of the total clinician interactions they constituted were computed. In order to minimize client effects on the number of social/neutral behaviors emitted by clinicians, the number and percentage results obtained on the two analyses per clinician under each observational condition in each phase were averaged. Thus, the data obtained for clinician number one, under the overt observation condition in Phase I for clinician-client dyad 1a and clinician-client dyad 1b, were averaged and resulted in one set of data for clinician number one for this particular condition and phase.

This same procedure was followed for all five clinicians under all observation conditions and phases. The averaged number of social/neutral behaviors emitted by each clinician within each phase (overt and covert combined) and the averaged number emitted by each clinician across phases (Phases I and II combined) were also calculated. The percentage of social/neutral behaviors emitted by the clinicians in relation to total clinician interactions for each analyses was averaged in the same manner. These computations resulted in six sets of averaged raw data (number data) and six sets of averaged raw data as a percentage of total acts (percent of total interactions) for statistical and descriptive comparison.

Six statistical comparisons were made between the observational conditions and phases for the averaged raw data and the averaged raw data as a percentage of total acts for the five subjects combined. A 2-tailed t -test for dependent means was used to make three comparisons and a one-tailed t -test was utilized to make another three comparisons for both sets of data as shown in Table II.

TABLE II

THE SIX COMPARISONS MADE BETWEEN
THE PHASES AND OBSERVATION
CONDITIONS

Comparison	Abbreviation
Phase I, overt and Phase I, covert.....	I-O and I-C**
Phase II, overt and Phase II, covert.....	II-O and II-C**
Phase I, overt and Phase II, covert.....	I-O and II-C*
Phase I, covert and Phase II, covert.....	I-O and II-C*
Phase I and II, overt and Phase I and II, covert.....	I, II-O and I, II-C**
Phase I, overt and covert and Phase II, overt and covert...	I-O, C and II-O, C*

* 1-tailed t-test utilized to make comparisons of the data

** 2-tailed t-test used to make comparisons of the data

CHAPTER IV

RESULTS AND DISCUSSION

Results

The question addressed in this research was: What effects do overt and covert observation of live clinical sessions have on the number of social/neutral verbal behaviors emitted by untrained speech-language clinicians? The clinical interactions of five novice clinicians and their respective clients enrolled in Articulation and Language Clinic at Portland State University were recorded using the Boone-Prescott Interactional Analysis system (Boone and Prescott, 1972).

A 1-tailed t-test was used to make three comparisons and a 2-tailed t-test was used to make three comparisons of the averaged raw data and the averaged raw data as a percentage of total acts as shown in Table III. There were a greater number of social/neutral behaviors emitted in Phase I overt and covert conditions combined than in Phase II, overt and covert conditions combined. The t value obtained for this comparison (I-O, C compared to II-O, C) was significant at the .05 level of confidence for the averaged raw data and the averaged raw data as a percentage of total acts (see Table III).

The t values obtained for the remaining five

TABLE III

ONE-TAILED AND TWO-TAILED t -TEST FOR DEPENDENT MEANS

SIX COMPARISONS OF THE AVERAGED RAW DATA SIX COMPARISONS OF THE AVERAGED RAW DATA AS A PERCENTAGE OF TOTAL ACTS

Comparisons	Mean	S.D.	df	t	Mean	S.D.	df	t
Phase I, overt vs.	9.66	7.55	4		.17	.23	4	
Phase I, covert	13.00	8.07	4	1.18**	.14	.31	4	.32**
Phase II, overt vs.	4.00	2.69	4		.06	.12	4	
Phase II, covert	3.80	1.75	4	.21**	.05	.12	4	.28**
Phase I, overt vs.	9.33	7.78	4		.06	.13	4	
Phase II, overt	7.33	3.20	4	1.21*	.17	.20	4	1.09*
Phase I, covert vs.	13.00	8.07	4		.05	.12	4	
Phase II, covert	7.33	3.20	4	2.47*	.14	.23	4	1.69*
Phase I, II, overt vs.	17.16	12.70	4		.21	.19	4	
Phase I, II, covert	19.66	11.63	4	.67**	.16	.19	4	.20**
Phase I, overt/covert vs.	24.80	14.54	4		.23	.33	4	
Phase II, overt/covert	16.20	8.13	4	2.79*	.15	.24	4	2.66*

* 1-tailed t -test, critical value of $t = 2.571$ at the .05 level of confidence.** 2-tailed t -test, critical value of $t = 2.776$ at the .05 level of confidence.

comparisons displayed in Table III were not significant at the .05 level of confidence. The t value obtained for comparison of the averaged raw data between Phase I, covert and Phase II, covert approached significance and may indicate a trend toward fewer covert social/neutral behaviors in Phase II than Phase I, however, the t obtained for the same comparison utilizing the averaged raw data as a percentage of total acts does not support such a trend.

Comparison of the averaged raw data obtained for Phase I, overt observation condition to the averaged raw data obtained for Phase I, covert observation condition for each subject (see Table IV) revealed that four of the five subjects (subjects number one, three, four, and five) emitted a slightly higher number of social/neutral behaviors under the covert observation condition in Phase I than under the overt observation condition for Phase I. Subject number two emitted an equal number of social/neutral behaviors under both observational conditions in Phase I. Inspection of the averaged raw data as a percentage of total acts (Table IV) indicates that four of the five subjects (subjects numbers one, two, four, and five) emitted a higher percentage of social/neutral behaviors under the covert observation condition than under the overt condition in Phase I. The remaining subject (subject number three) emitted a higher percentage of social/neutral behaviors under the overt observation condition than under the covert condition in Phase I.

TABLE IV
 COMPARISON OF PHASE I, OVERT TO PHASE I, COVERT
 OBSERVATION CONDITION
 (I-O and I-C)

Subject	Averaged Raw Data		Averaged Raw Data As Percentage of Total Acts	
	I-O	I-C	I-O	I-C
1	2	3	.04	.06
2	6	6	.07	.16
3	12	16	.30	.22
4	3	12	.10	.21
5	2	4	.05	.10

Visual inspection of the averaged raw data obtained for Phase II, overt observation condition and Phase II, covert observation condition (Table V) revealed the following information. Two of the five subjects (subjects numbers four and five) emitted a slightly higher number of social/neutral behaviors in the covert condition than in the overt condition in Phase II. Conversely, two of the five subjects (subject numbers one and three) emitted more social/neutral behaviors under the overt condition than under the covert condition in Phase II. Subject number two emitted an equal number under both observational conditions. Inspection of the averaged raw data as a percentage of total acts displayed in Table V indicates that one of the five subjects (subject number four) emitted a higher percentage of social/neutral behaviors under

the covert condition than under the overt condition in Phase II. Four of the five subjects (subjects numbers one, two, three, and five) emitted a higher percentage of social/neutral behaviors under the overt condition than under the covert condition in Phase II.

TABLE V

COMPARISON OF PHASE II, OVERT TO PHASE II, COVERT
OBSERVATION CONDITION
(II-O and II-C)

Subject	Averaged Raw Data		Averaged Raw Data As Percentage of Total Acts	
	II-O	II-C	II-O	II-C
1	2	1	.06	.02
2	4	4	.10	.08
3	8	5	.11	.08
4	4	5	.05	.10
5	2	3	.07	.05

The averaged raw data and the averaged raw data as a percentage of total acts for each subject under the overt observation condition in Phase I and the overt observation condition in Phase II is displayed in Table VI. Comparison of the averaged raw data reveals that a higher number of social/neutral behaviors were emitted in the overt observation condition in Phase I than for the same condition in Phase II by three of the five subjects (subjects numbers two, three, and five). Subject number one emitted an equal number of social/

neutral behaviors in each phase, and subject number four emitted more social/neutral behaviors in Phase I, overt condition. Comparison of the averaged raw data as a percentage of total acts showed that three of the five subjects (subject number one, two, and five) emitted a higher percentage of social/neutral behaviors during Phase II, overt condition than during Phase I, overt condition and that two of the five (subjects numbers three and four) emitted a higher percentage of social/neutral behaviors during Phase I, overt condition than during Phase II, overt condition.

TABLE VI

COMPARISON OF PHASE I, OVERT TO PHASE II, OVERT
OBSERVATION CONDITION
(I-O and II-O)

Subject	Averaged Raw Data		Averaged Raw Data As Percentage of Total Acts	
	I-O	II-O	I-O	II-O
1	2	2	.04	.06
2	6	4	.07	.10
3	12	8	.30	.11
4	2	4	.10	.05
5	4	2	.05	.07

The averaged raw data for each subject obtained under the covert observation condition in Phase I and the covert condition in Phase II was inspected with the following results

(Table VII). There was a slightly higher number of social/neutral behaviors emitted by all five subjects under the covert condition in Phase I than for the same observation condition in Phase II. Inspection of the averaged raw data as a percentage of total acts displayed in Table VII indicates that all five subjects emitted a higher percentage of social/neutral behaviors in Phase I, covert condition than in Phase II, covert observation condition.

TABLE VII
COMPARISON OF PHASE I, COVERT TO PHASE II, COVERT
OBSERVATION CONDITION
(I-C and II-C)

Subject	Averaged Raw Data		Averaged Raw Data As Percentage of Total Acts	
	I-C	II-C	I-C	II-C
1	3	1	.06	.02
2	6	4	.16	.08
3	16	5	.22	.08
4	12	5	.21	.10
5	4	3	.10	.05

The averaged raw data and the averaged raw data as a percentage of total acts obtained under the overt observation condition for both Phases I and II combined and the data obtained under the covert observation condition for both phases combined are shown in Table VIII. Inspection of the averaged raw data revealed the incidence of social/neutral behaviors

was higher in the covert observation condition than in the overt condition, both phases combined, for three of the five subjects (subjects numbers three, four, and five). The remaining two subjects (subjects numbers one and two) emitted an equal number of social/neutral behaviors under the overt observation condition across the two phases. Inspection of the averaged raw data as a percentage of total acts shown in Table VIII indicates that three of the five subjects (subject numbers two, four, and five) emitted a higher percentage of social/neutral behaviors during the covert observation condition for both phases combined, than during the overt condition, both phases combined. Two of the five subjects (subjects numbers one and three) emitted a higher percentage of social/neutral behaviors during the overt condition, both phases combined, than during the covert condition, both phases combined.

TABLE VIII

COMPARISON OF PHASE I, II OVERT TO PHASE I, II, COVERT
OBSERVATION CONDITION
(I, II-O and I, II-C)

Subject	Averaged Raw Data		Averaged Raw Data As Percentage of Total Acts	
	I, II-O	I, II-C	I, II-O	I, II-C
1	2	2	.05	.04
2	5	5	.09	.12
3	10	11	.21	.15
4	4	8	.08	.16
5	3	4	.06	.08

Visual inspection of the combined overt and covert averaged raw data and averaged raw data as a percentage of total acts revealed that all subjects emitted both a greater number and a greater percentage of social/neutral behaviors in Phase I than in Phase II (see Table IX).

TABLE IX

COMPARISON OF PHASE I, OVERT AND COVERT
TO PHASE II, OVERT AND COVERT
OBSERVATION CONDITIONS
(I-O, C and II-O, C)

Subject	Averaged Raw Data		Averaged Raw Data As Percentage of Total Acts	
	I-O, C	II-O, C	I-O, C	II-O, C
1	3	2	.05	.08
2	6	4	.12	.09
3	14	7	.26	.10
4	7	5	.16	.08
5	4	3	.08	.06

Discussion

The results of this investigation indicate that there were a significantly greater number and greater percentage in relation to total acts of social/neutral behaviors emitted in Phase I, overt and covert observation conditions combined, than in Phase II, overt and covert conditions combined. This indicates that the frequency of social/neutral behaviors emitted by the untrained clinicians decreased over time in

number, and in relation (percentage) to total clinician interactions. Since experienced clinicians emit fewer social/neutral behaviors than untrained clinicians (Grandstaff, 1974; McMahon, 1980), it appears some aspects of clinical training served to affect a decrease in the frequency of social/neutral behaviors emitted by the clinicians and thus, promoted clinical growth. At the time of the Phase I observations all clinicians were completing their third or fourth hour of supervised clinical practicum and were completing their ninth or tenth hour at the time of the Phase II observations. This study suggests that increased clinical practice may have contributed to or accounted for the decrease in social/neutral behaviors. Further study is needed to corroborate these findings. It is possible that the clinicians used fewer social/neutral behaviors as they became more comfortable in the clinical setting and established rapport with their respective clients. Other aspects of training, such as the amount and type of supervisory feedback and seminar discussions, may have been influential in the decrease of social/neutral behaviors by untrained clinicians over time.

Results of this investigation do not indicate that the observation conditions (overt and/or covert) affected the frequency of social/neutral behaviors emitted by the untrained clinicians.

Inspection of the averaged raw data and the averaged raw data as a percentage of total acts for the three comparisons between Phase I and Phase II revealed that a greater

number of clinicians emitted more social/neutral behaviors in Phase I than in Phase II for all three comparisons (see Table X). The t value obtained for one of the three comparisons was significant at the .05 level of confidence for the averaged raw data and for the averaged raw data as a percentage of total acts. These data support the conclusion that some aspect or aspects of clinical training served to affect a decrease in the number and percentage of social/neutral behaviors emitted over time and thus, tended to promote clinical growth. This conclusion also supports the findings of Stech (1969), Olsen (1972), Schubert, Miner, and Prather (1972) and Grandstaff (1974) which indicate that some aspect or aspects of clinical training does result in higher levels of professional, clinical behavior on the part of the student clinician. Collectively, these studies confirm the important role supervised clinical training plays in the attainment of clinical competence. The importance of supervised clinical training has been documented in the literature since the 1960's (Kaplan and Dreyer, 1974, and Oratio, 1977). There is however, a paucity of information in the literature as to which aspects of clinical training promote clinical competence (Oratio, 1977).

Inspection of the averaged raw data and the averaged raw data as a percentage of total acts for the three comparisons between the overt and covert observation conditions revealed that a greater number of clinicians emitted more social/neutral behaviors under the covert observation condition

than under the overt condition for two of the three comparisons made (see Table XI). The averaged raw data for the remaining comparison (Phase II, overt and Phase II, covert observation condition) indicates that two subjects emitted more social/neutral behaviors under the covert condition, two emitted more social/neutral behaviors under the overt condition, and one emitted an equal number under both conditions (Table XI). The averaged raw data as a percentage of total acts indicates that two subjects emitted more social/neutral behaviors under the covert condition and three subjects emitted more social/neutral behaviors under the overt condition in relation to total clinician interactions (Table XI). The foregoing information suggests that the incidence of social/neutral behaviors was slightly higher under the covert observation condition; however, more data is needed to substantiate this hypothesis. Statistical and descriptive analysis of the data do not indicate the presence of a relationship between the occurrence of social/neutral behaviors and overt and covert observation conditions in this study.

Inspection of the data obtained for each clinician-client dyad (prior to averaging to minimize client effects) revealed that clinician number four emitted more social/neutral behaviors, in number and in relation to total clinician interactions, with client a in each observation condition in each phase than with client b. Client a was a five year, six month old, male with a moderate articulation delay and had not attended Portland State University Clinic prior

to this session. Client b was a four year, two month old, female with a moderate language and mild articulation delay and had not attended the Portland State University Clinic prior to this session. This writer did not have further information pertaining to these two clients and this clinician. It is not possible to speculate as to the cause for the occurrence of more social/neutral behaviors with client a than with client b across observation conditions and phases on the basis of the available information. Inspection of the remaining clinicians (numbers one, two, three, and five) did not reveal any relationship between client effects and the frequency with which social/neutral behaviors were emitted by the clinicians. Clinician number three emitted more social/neutral behaviors under each observation condition and phase than the other four subjects but did not evidence any patterns of relationship between client a or b and the emission of social/neutral behaviors.

TABLE X
 SUBJECT TALLIES FOR THE OCCURRENCE
 OF SOCIAL/NEUTRAL BEHAVIORS
 IN THREE COMPARISONS OF
 PHASE I AND PHASE II DATA

<u>Subject Tallies</u>						
Comparisons	Averaged Raw Data			Averaged Raw Data As Per-centage of Total Acts		
	I>II	I<II	I=II	I>II	I<II	I=II
I-O vs. II-O	3	1	1	3	2	
I-C vs. II-C	5			5		
I-O, C vs. II-O, C	5			4	1	

TABLE XI
 SUBJECT TALLIES FOR THE OCCURRENCE OF
 SOCIAL/NEUTRAL BEHAVIORS IN THREE COMPARISONS OF
 OVERT AND COVERT OBSERVATION CONDITIONS

<u>Subject Tallies</u>						
Comparisons	Averaged Raw Data			Averaged Raw Data As Per-centage of Total Acts		
	O>C	O<C	O=C	O>C	O<C	O=C
I-O vs. I-C	2	3			4	1
II-O vs. II-C	2	2	1	3	2	
I, II-O vs. I, II-C		3	2	2	3	

CHAPTER V

SUMMARY AND IMPLICATIONS

Summary

This study examined the effects overt and covert observation of live clinical sessions have on the number of social/neutral verbal behaviors emitted by untrained speech clinicians and their respective clients enrolled Summer Term, 1980, in the Articulation and Language Clinic at Portland State University, Speech and Hearing Sciences. The Boone-Prescott Interactional Analysis System (Boone and Prescott, 1972), a numerically coded system, was used to record clinician-client interactions. Data were obtained for a randomly selected five minute period from each of forty clinical sessions.

Results of this research do not indicate the presence of a relationship between overt and covert observation of live clinical sessions and the frequency of social/neutral behaviors emitted by untrained clinicians.

Results do indicate, however, that the frequency of social/neutral behaviors emitted by untrained clinicians decreased over time, i.e., as clinical training time increased. It appears then that some aspect or aspects of clinical training does affect the frequency of social/neutral behaviors

emitted by untrained clinicians leading to clinical growth.

Research Implications

Several implications for further study are indicated by this research. One would be to replicate the present research project on a larger population. This may give some further indication as to whether or not a relationship between overt and covert observation of live clinical sessions and the occurrence of social/neutral behaviors does exist.

A replication of this study on a larger population using a different interactional analysis system may be of interest since it may provide data which would suggest a different interactional analysis system may be more or less accurate than the Boone-Prescott Interactional Analysis System in the recording of social/neutral behaviors.

It would be interesting to study the number of social/neutral behaviors emitted by clinicians as their level of training increased within a single clinical setting, over time, and also across clinical settings, over time.

Further, it would be useful to compare the number of social/neutral behaviors emitted by experienced clinicians over time in one clinic setting to the emittance of social/neutral behaviors by untrained clinicians over time in one clinic setting. This might differentiate the clinical training component from the normal progression of clinical interactions over time.

It would be of value to study some other aspects of

clinical training which may account for the change in the occurrence of social/neutral behaviors over time, such as supervisory feedback or seminar discussions.

Clinical Implications

Results of this research indicate that some aspect or aspects of clinical training led to a decrease in the frequency of social/neutral behaviors emitted by untrained clinicians over time. The present study does not indicate a relationship between overt and covert observation of live clinical sessions and the frequency of social/neutral behaviors emitted by untrained clinicians. Therefore, it is not possible to say whether or not the observation condition has any effects on clinical growth on the basis of this study. This study does not indicate that one method of observation is more or less effective than the other. It might be possible to assume that since observation method did not affect the frequency of occurrence of social /neutral behaviors that it would not affect the frequency of occurrence of other clinical behaviors. On the basis of the information presently available in the literature it appears that the observational methodologies currently used by supervisors reflect their own philosophical views (Goldhammer, 1969). Supervisory observations should take into account the individual needs of the clinician to be observed as suggested by Ward and Webster (1965), Van Riper (1965), and McMahon (1980). Results do support the important role of supervised clinical experience

in the attainment of clinical competence. It appears the supervising clinician can measure change in clinical behavior over the course of the clinical training period utilizing an interactional analysis system such as the Boone-Prescott Analysis System (Boone and Prescott, 1972).

BIBLIOGRAPHY

- AMERICAN SPEECH AND HEARING ASSOCIATION. Minimum requirements for ETB Accreditation. ASHA, 1976, 18, 110-113.
- AMERICAN SPEECH AND HEARING ASSOCIATION. Requirements for the Certificate of Clinical Competence. ASHA, 1978, 20(4), 334-339.
- ANASTASI, A., Fields of Applied Psychology. New York: McGraw-Hill, 1964.
- ANDERSON, J., Supervision of the clinical process in speech pathology: Issues and practices. Short course presented at the American Speech and Hearing Association Convention, Las Vegas, 1974.
- BOONE, D.R. and PRESCOTT, T., Content and sequence analysis of speech and hearing therapy. ASHA, 1972, 14, 58-62.
- BOONE, D.R. and STECH, E.L. The Development of Clinical Skills in Speech Pathology by Audiotape and Videotape Self-Confrontation. Final Report. Project No. 1881, Grant No. OEG 9-071318-2814, U.S. Department of Health, Education and Welfare, Division of Research, Bureau of Education for the Handicapped, Office of Education, 1970.
- BROOKS, S.J. and HANNAH, E.P., A tool for clinical supervision. Journal of Speech and Hearing Disorders, 1966, 31, 383-387.
- BROPHY, J.E., Using Observation to Improve Your Teaching. Occasional Paper, No. 21. Published by The Institute for Research on Teaching, East Lansing, Michigan, 1979.
- BROWN, E.L., A universities approach to improving supervision. ASHA, 1967, 9, 476-479.
- CARNESE, T.M., A Comparison of the Clinician-Client Interactions in Urban Language Clinic and Stuttering Clinic. M.S. Thesis, Portland State University, Portland, Oregon, 1975.
- CONOVER, H., Conover Analysis System. Paper presented at the American Speech and Hearing Association Convention, Las Vegas, 1974.

- CULATTA, R., COLUCCI, S. and WIGGINS, E., Clinical supervisors and trainees: Two views of a process. ASHA, 1975, 17 (3), 152-157.
- CULATTA, R. and HELMICK, J.W., Clinical Supervision: the state of the art. Part 1. ASHA, 1980, 22, 985-993.
- CULATTA, R. and SELTZER, H., Content and sequence analysis of the supervisory session. ASHA, 1976, 18, 8-12.
- CULATTA, R. and SELTZER, H., Content and sequence analysis of the supervisory session: A report of clinical use. ASHA, 1977, 19, 523-526.
- DARLEY, F., Clinical training for full-time clinical service: a neglected obligation. ASHA, 1969, 11, 143-148.
- EYE, G.G., and NETZER, L.A., Supervision of Instruction: A Phase of Administration. New York: Harper & Row, 1965.
- GOLDHAMMER, R., Clinical Supervision. New York: Holt, Rinehart, and Winston, Inc., 1969.
- GOLPER, L.A., The Efficacy of Teaching Interaction Analysis to Students in Speech Pathology. M.S. substantial paper, Portland State University, Portland, Oregon, 1976.
- GRANDSTAFF, H.L., A Comparison of Clinical Behaviors of Untrained, Moderately Trained, and Trained Speech Clinicians During Articulation Therapy. Ph.D. dissertation, University of Cincinnati, Cincinnati, Ohio, 1974.
- HALFOND, M., Clinical supervision: a stepchild in training. ASHA, 1964, 6, 441-444.
- HALLER, R., Supervisor's criteria for evaluation of student's performance in clinical observation. ASHA, 1967, 9, 479-481.
- HANLAN, J.W., Comparison of Viedotape Observation to Direct Observation. M.S. thesis, Portland State University, Portland, Oregon, 1980.
- JOHNSON, T.S., The Development of a Multi-dimensional Scoring System for Observing the Clinical Process in Speech Pathology. Ph.D. dissertation, University of Kansas, Lawrence, Kansas, 1969.
- KAPLAN, N.R. and DREYER, D.E., The effect of self-awareness training on student speech pathologist-client relationship. Journal of Communicative Disorders, 1974, 329-342.

- KLEVANS, D.F. and VOLZ, G.B., Development of a clinical evaluation procedure. ASHA, 1974, 16, 489-491.
- KUNZE, L.H., Program for training in behavioral observations. ASHA, 1967, 9, 473-467.
- McMAHON, J., Personal communication. Portland State University, 1980.
- OLSEN, B.D., Comparisons of Sequential Interaction Patterns in Therapy of Experienced and Inexperienced Clinicians in the Parameters of Articulation, Delayed Language, Prosody and Voice Disorders. Ph.D. dissertation, University of Denver, Denver, Colorado, 1972.
- ORATIO, A.R., Supervision in Speech Pathology: A Handbook for Supervisors and Clinicians. Baltimore: University Park Press, 1977.
- PAYNE, O.D. and KOLLER, E.E., Teaching and Supervising Student Clinicians Using Closed Circuit Television. Paper presented at the American Speech and Hearing Association Convention, Las Vegas, 1974.
- PRATHER, E.M., An approach to clinical supervision. 1967, ASHA, 9, 472-473.
- PRESCOTT, T.E., The Development of a Methodology for Describing Speech Therapy. Ph.D. dissertation, University of Denver, Denver, Colorado, 1970.
- SAMPH, T., Observer effects on teacher verbal classroom behavior. Journal of Educational Psychology, 1976, 68 (6), 736-741.
- SCHUBERT, G.W. and LAIRD, B.A., Length of Time Necessary to Obtain a Representative Sample of Clinician-Client Interaction. Paper presented at the American Speech and Hearing Association Convention, Las Vegas, 1974.
- SCHUBERT, G.W., MINER, A.L., and PRATHER, E.A., A comparison of student clinicians' behaviors as measured by the analysis of behaviors of clinicians (ABC) system. Paper presented at the American Speech and Hearing Association Convention, 1972.
- SIMON, A., and BOYER, E., Mirrors for Behavior: An Anthology of Observation Instruments. Philadelphia Research for Better Schools, Inc., 1967.

- STECH, E.L., An Empirical Study of Video-tape Self-Confrontation, Self-Evaluation and Behavior Change in Speech Therapist Trainees. Ph.D. dissertation, University of Denver, Denver, Colorado, 1969.
- VAN RIPER, C., Supervision of clinical practice. ASHA, 1965, 7, 75-77.
- VILLARREAL, J., Seminar on Guidelines for Supervision of Clinical Practicum. Washington, D.C., 1964.
- WARD, L. and WEBSTER, E., The training of clinical personnel: issues in conceptualization. ASHA, 1965, 7, 38-40.

APPENDIX A

BOONE-PRESCOTT CONTENT AND SEQUENCE ANALYSIS SYSTEM

<u>NUMBER</u>	<u>TITLE</u>	<u>DESCRIPTION</u>
1	Explain, Describe	Clinician describes or explains the specific goals or procedures of the session.
2	Model, Instruction	Clinician specifies client behavior by direct modeling or by a specific request.
3	Good Evaluative	Clinician evaluates client response and indicates approval verbally or nonverbally.
4	Bad Evaluative	Clinician evaluates client response and indicates disapproval verbally or nonverbally.
5	Neutral, Social	Clinician engages in behavior that is not management goal oriented.
6	Correct Response	Client makes a response which is correct in terms of the stated management goals, or the clinician stimulus.
7	Incorrect Response	Client makes a response that is incorrect in terms of the stated management goals, or clinician stimulus.
8	Inappropriate and Social (irrelevant behavior)	Client makes a response or engages in social conversation that is not appropriate to the management goals.
9	Good Self-Evaluative	Client indicates awareness of his own correct response.
10	Bad Self-Evaluative	Client indicates awareness of his own incorrect response.

APPENDIX B

INFORMED CONSENT

I hereby agree (to participate/let _____ participate) as a subject in the research project conducted by Carol L.K. Middleton, Graduate Student, Speech and Hearing Sciences, Portland State University.

I understand there is no possible risk to me associated with this study and it will not interfere with my regular duties as a speech/language clinic participant.

It has been explained to me that the purpose of this study is to ascertain information which may lead to improved training methods for future clinics.

I may not receive any direct benefit from participation in this study, but my participation may help to increase knowledge which may benefit others in the future.

Carol Middleton has offered to answer any question I may have about the study and what is required of me in the study.

I understand I am free to withdraw from participation in this study at any time without jeopardizing my grade or relationship with Portland State University and the Department of Speech Communication, Speech and Hearing Sciences Program.

I have read and understand the foregoing information.

DATE: _____ SIGNATURE: _____

If you experience problems that are the result of your participation in this study, please contact Richard Streeter, Office of Graduate Studies and Research, Room 105, Neuberger Hall, Portland State University, 229-3423.

APPENDIX C

INFORMED CONSENT

I hereby agree to participate as a subject in the research project conducted by Carol L.K. Middleton, Graduate Student, Speech and Hearing Sciences, Portland State University.

I understand there is no possible risk to me associated with this study and it will not interfere with my regular duties as a speech/language clinician.

It has been explained to me that the purpose of this study is to ascertain information which may lead to improved training methods for future clinics.

I may not receive any direct benefit from participation in this study, but my participation may help to increase knowledge which may benefit others in the future.

Carol Middleton has offered to answer any questions I may have about the study and what is required of me in the study.

I understand I am free to withdraw from participation in this study at any time without jeopardizing my grade or relationship with Portland State University and the Department of Speech Communication, Speech and Hearing Sciences Program.

I have read and understand the foregoing information.

DATE: _____ SIGNATURE: _____

APPENDIX D

SAMPLE TRACKING SHEET

Subject _____ Session _____

2
6
3
2
6
3
2
6
2
6
2
7
4
1
2
6
3
9
2
7
10
8
5
1
2
6
3

APPENDIX E

TEN-CATEGORY SPEECH AND HEARING MANAGEMENT
SESSION SCORING FORM

Clinician:

Client:

Date:

<u>Category Counts</u>			<u>Category Counts</u>		
Category	# of Events	% of Total	Category	# of Events	% of Total
1	_____	_____	6	_____	_____
2	_____	_____	7	_____	_____
3	_____	_____	8	_____	_____
4	_____	_____	9	_____	_____
5	_____	_____	10	_____	_____
Clinician Total	_____	_____	Client Total	_____	_____

<u>Sequence Counts</u>		<u>Ratio Scoring</u>	
Sequence	# of Events		
6/3	_____	Correct Response	$\frac{6}{6,7} =$ _____
7/4	_____	Incorr. Response	$\frac{7}{6,7} =$ _____
8/1,2	_____	Good Eval. Ratio	$\frac{6/5}{6} =$ _____
Clinician/ Client Total	_____	Bad Eval. Ratio	$\frac{7/4}{7} =$ _____
Responses per minute	_____	Inappro. Response	$\frac{8}{6,7,8} =$ _____
		Direct Control	$\frac{8/1,2}{8} =$ _____
		Socialization	$\frac{5+8}{\text{Total}} =$ _____

MANAGEMENT EVALUATION

	No	Yes
A Good Session	1--2--3--4--5--6--7--8--9	
Therapist Effective	1--2--3--4--5--6--7--8--9	
Client Effective Progress	1--2--3--4--5--6--7--8--9	
Client Effectiveness Measures	_____ = _____	

Comments: