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Development of a Psychometric Instrument for the Measurement of Communication Styles

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DEVELOPMENT OF A PSYCHOMETRIC INSTRUMENT FOR THE MEASUREMENT OF COMMUNICATION STYLES

Michael G. Holler, B.S.

An Abstract Presented to the Faculty of the Graduate School
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Abstract

In an investigation involving 30 subjects, a dichotomous communication-style construct was examined along three dimensions, with the intent to develop a psychometric instrument to measure the placement of individuals on a communication styles continuum . The hypothesized styles of communication were inferential and direct. The construct draws together the verbal, nonverbal, and paralinguistic components of communication into one configuration with some predictability. A single-group research design was used to produce a condition in which reception of messages was observable and measureable along a scale, which ranged from extremely inferential to extremely direct. Three converging measurement methods were derived from the observations of the researcher: a behavioral test, a self-reported score, and a psychometric instrument designed to measure traits and/or characteristics which would characterize the direct end of this continuum. Hypnotic suggestibility was originally considered to be the main component of the ability to receive messages inferentially, but had failed to hold up in previous research (See Hoerchler & Holler, 1987). The previous results indicated that the Direct-Inferential dichotomy does exist. The study also indicated that suggestibility is not the primary component of communication style. This study continued the research process through the development of a 130-item psychometric instrument intended to replace the previously successful, but cumbersome behavioral instrument. After item analysis, 44 of the original items were retained. The final version of the psychometric instrument correlated significantly with

the behavioral instrument, while the third measure, the self-report, failed to correlate significantly with the other measures.

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The Reverend William T. Hancock, D.Min.

DEDICATION

This work is dedicated to my wife Susan, who still loves me, even through the endless hours I put in on this project, my mother and father who encourage me no matter what I do, and to my sister, Connie, whom I really did put down the sewer.

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CHAPTER 1

Introduction

Definiton of communication

Human communication is a complex integration of many variable components. Verbal cues, nonverbal cues, perception, discrimination, generalization, attenuation, vocal tone, inflection, and emotion are some, but by no means all, of these components. Their functional and dysfunctional utilization fluctuates along a continuum, spanning an infinite number of permutations and combinations of these ingredients, to become all the forms of what we call communicating. Sometimes the message gets through. All too often it does not. Consequently, we find in almost any advanced text on counseling and psychotherapy a section on communication. Usually the author will describe different forms of communication and their functions. These descriptions typically include a section on nonverbal (body) language, as well as one on verbal communication, and, possibly, some mention of paralinguistics (optional vocal effects such as tone of voice or extra sounds that accompany the spoken message which may contain meaning). The subject is most often covered in the form of client/therapist application, but there appears to be little descriptive or generic information that can link the verbal and nonverbal communication into a single model that could lend itself to theory development or predictability in a behavioral sense. If there were such a model, one could easily see the ramifications for psychotherapy and many other fields.

Direct/Inferential Model

One of the few approaches that attempt to devise a comprehensive model of communication styles is presented here. The model postulates two opposing communication styles: Direct and Inferential . (The concept was formulated by Kappas (1975) using the terms, literal and inferential. However, in this work the term "literal" has been replaced with the term, "direct," since it seems to provide a more accurate description of the approach of the "sending" or speaking half of the model.) Direct communication uses mostly verbal cues, and tends to approach the center of a message in a straight-forward manner, as efficiently as possible, using a minimum of words. Direct communicators express an idea by saying exactly what they mean, no more, no less. However, direct communicators also have a tendency to omit or ignore the extra-verbal (or non-verbal) cues, and their influence on the reception of the message, such as tone of voice and body language (Kappas, 1975). Consequently, direct communicators are often perceived by inferentials as rude, interrupting, and blunt.

Inferential communication, on the other hand, tends not to approach the center of a message at all. Instead, the inferential communicators tend to use a combination of verbal and nonverbal cues to imply or infer the true meaning of the message, such that the listener is required to interpret a set of "hints" in order to receive the message. Inferentials are frequently viewed by their direct counterparts as vague, wordy, and frustrating because they won't get to the point.

Relationship to Suggestibility

One of the basic tenets in Kappas' (1975) concept of inferential communication is that both the sender and the receiver must be suggestible in a hypnotic sense. Subjects, then, would be inferential to the extent that they are suggestible in that context. This characteristic should vary in degrees along a linear scale, according to Kappas' (1975) construct.

Overview of Thesis Contents

The Literature Review herein explores the information available to date regarding the status of communication as a whole as viewed by the field of psychology. The material, although somewhat scattered, appeared to draw together in a kind of spiral approach to the utilization of the Direct/Inferential Model as a sort of gestalt infrastructure upon which to organize an instrument to measure communication styles.

The purpose of this study was to follow up on the previous work done by Hoerchler and Holler (1987), in which a behavioral instrument was developed which established some preliminary validity to the construct of the Direct/Inferential construct. Thus the goal of this project in continuing the previous work was to develop a psychometric instrument, with the intent of laying the groundwork for further studies which could continue to focus and fine tune the construct of the Direct/Inferential Model into a workable and reliable format for psychotherapeutic diagnosis and intervention.

The method of developing the psychometric instrument was an empirical one, with a theoretical focus built into each item. The intent was to make each item as narrow as possible, in order to make a controlled attempt to

understand why each item survived item analysis and, as much as possible, to understand what aspect of the communication style each item measured.

The result was a 44 item psychometric instrument designed to focus upon and measure directness in individuals. The psychometric instrument correlated significantly with the behavioral instrument. The goal at the outset for designing the psychometric instrument was to replace the behavioral one. Thus, the significant correlation in the procedure gives some preliminary justification for doing so. The next step would be to further test and/or refine the psychometric instrument on random gorups to determine the extent of generalizability of both the construct and the instrument.

CHAPTER 2

Literature Review

This chapter will examine and collate the available information on previous approaches to the conceptualization of a cohesive model of communication , its formation and influences on utilization of communication ranging from imparting messages to defense of the ego and/or the self.

Theoretical Orientation on Communication

The Behavioral Outlook

Rosenthal (1966) has contributed much to these concepts in his research on experimenter expectancy. Citing the "Clever Hans" phenomenon as an example, he researched the ways in which experimenters influence their subjects to give responses that are favorable to the research hypothesis (see Rosenthal. 1967). Even though his investigations focused specifically on the experimenter/subject relationship, he mentions the importance of his findings in interpersonal communications: "These findings do not solve our problem of finding the key to the communication of expectancies, but there is a lesson here for future studies of interpersonal communication" (p. 298).

Although all of us learn to communicate, we do so in different ways which may vary as a function of our environment. There has been quite a bit of research done on many levels of nonverbal communication, as well as on verbal styles and paralinguistic augmentation of verbal styles. Many names have been given to the components of communication. Bittner (1975) refers to "bypass statements" as a concept of statements that don't quite say what the speaker really means, but hint at that meaning (see Bittner. p. 60).

Reusch (1957) speaks of metacommunication, which he defines as "the ability of a speaker to instruct others about the way his statements ought to be interpreted and the listener's proficiency in understanding these instructions" (p.179).

There are two aspects of any communication style, speaking and listening. Egan (1986) covers some of the aspects of listening when he writes that, "The art of listening has three parts: (1) listening to and understanding nonverbal behavior; (2) listening to and understanding verbal messages; and (3) listening to and understanding the person" (p. 79).

Eysenck (1965) presents a version of the introversion/ extroversion dimension that is relevant here as well. In this presentation he claims that the construct of this continuum of classification of temperament carries all the way back to Galen, significantly predating Jung. He maintains that, "Extraversion/introversion is a dimension ranging from one extreme to the other, and passing through a middle area where people are neither the one nor the other; and empirical data suggest that most people fall into this middle area"(p. 59). The previous research on the direct/inferential dichotomy, (see Hoerchler & Holler, 1987), would indicate a similar, but slightly skewed (in the inferential direction) pattern. As Eysenck (1965) describes the two types

> The typical extravert is sociable, likes parties, has many friends, needs to have people to talk to, and does not like reading or studying by himself. He craves excitement, takes chances, often sticks his neck out, acts on the spur of the moment, and is generally an impulsive individual.... He prefers to keep moving and doing things, tends to be aggressive, and loses his temper quickly. All together his feelings are not kept under tight control, and he is not always a reliable person. The typical introvert, on the other hand, is a quiet, retiring sort of person, introspective, fond of books rather than people; he is reserved and distant, except with intimate

> friends. He tends to plan ahead, looks before he leaps and distrusts the impulse of the moment. He does not like excitement, takes matters of everyday life with proper seriousness, and likes a well ordered mode of life. He keeps his feelings under close control, seldom behaves in an aggressive manner, and does not lose his temper easily. (pp. 59 & 60)

As to the matter of causality, Eysenck finds himself in the center of the usual controversy between heredity and environment. To address this issue he states, "It is unknown whether this pattern of reaction is inherited, or whether it is due to a process of early conditioning; probably both factors are involved in most cases" (Eysenck, 1965, p. 68). While the lack of causality is not necessarily a revelant issue in this investigation, some of the factors that determine the function(s) that communication is to serve in the individual's personality could very well be. For example Eysenck mentions the influence of excitation and inhibition in the central nervous system as some of the determining factors in the observable behavioral aspects of these traits. According to Eysenck

> ...what we are saying essentially is that inhibitory potentials are likely to be greater in extraverted people, excitatory potentials in introverted people....extraverted people would accumulate more inhibition, and consequently show greater reminiscence.
>
> Of particular importance, however, for our argument, are differences between extraverts and introverts in conditioning. Pavlov was the first to show how strongly inhibitory effects can retard and upset conditioning schedules, and we would expect, therefore, that extraverted people, having strong inhibitory potentials, would condition less well and extinguish much more quickly than introverts. (pp.70-74)

In a similar manner to the issue of conditioning, Kappas (1975) links the trait of suggestibility into the picture of communication. For the inferential style of communicating, the desires and feelings of the communicator are suggested, or hinted at, and often go unspoken. Consequently, as was

previously mentioned, Kappas' construct of inferential communication is based on the notion that how well the listener fares is a function of the extent of his or her suggestibility. Kappas' (1975) theory states that everyone is born direct and that either the style of communication is conditioned into a state of inferentiality or remains unconditioned in a state of directness. As Kappas describes the process,

> From the time they are born until they are two or three years of age, all children are basically physically suggestible – they reach out for and touch everything in order to gratify their physical and mental curiosity. By the age of two or three a child will have learned verbal communication, and he will learn about his world through words instead of through physical grasping. From this time onward the child's primary caretaker (usually his mother) is responsible for setting his pattern of suggestibility. (p. 20)

Consequently, we may conclude that the direct communicator would probably be extroverted, at least to some degree. This could also explain why the extrovert would remain direct and not acquire the ability to be inferential, for, as Eysenck (1965) posits

> Any activity the extravert indulges in sets up inhibition; this inhibition gradually builds up until it enforces a cessation of the activity... ultimately the activity must come to a stop altogether, and if the person has any freedom of choice at all, he will then turn to something else. The introvert, on the other hand, having much less inhibition in the course of his work, is able to continue for a very much longer period. (p.81)

Since the effort required to learn to become inferential is significant, the likelihood of the extrovert becoming inferential is less than that of the introvert. This involves the assumption that there may be an inherent predisposition to extroversion or introversion which combines with environmental factors to produce the final form of communication style.

Additionally, Eysenck (1965) makes the observation that the extrovert shows a tendency toward " 'stimulus hunger,' i.e. a desire for strong sensory stimulation – a desire which would be very much less marked in the introvert" (p.84). For example, he points out that, "Studies involving aesthetic preferences have indeed shown that extraverts do have strong preferences for highly colored pictures, as opposed to introverts, who prefer the more old fashioned, less highly coloured type of picture." (p. 85).

He also suggests that extroverts are more prone to indulge in extensive sexual activity. Kappas (1975) also links the direct communicator to a similar pattern of sexuality. He divides sexuality into two distinct types – physical and emotional – bearing in mind that they exist as a dichotomy that lies along a continuum. Kappas says that

> Physically sexual persons project their sexual responses outwardly. They dwell on sex and desire and need physical sex often...Emotional sexuals, on the other hand, feel their sexual responses inwardly....projecting emotions such as fear or embarassment, to defend or repress physical feelings. (pp. 72-73)

He also asserts that, "The physical speaks and understands literally [directly]; the emotional speaks and understands inferentially" (p. 19).

At this point one can begin to see possibilities of the developmental determination of communication style with regard to this model.

The Developmental Outlook

Piaget mentions the early formation of communication in his theories. According to Opper and Ginsburg (1988)

> The sensorimotor child represents things by acting like them. The older child, on the other hand, performs such imitations internally, and these abbreviated body movements constitute the mental symbol. Eventually the child becomes so proficient at internal imitation that the movements are extremely abbreviated and, therefore, almost impossible to detect. (p. 73)

Elaborating on this construct, Opper and Ginsburg (1988) explain in the following manner:

> The semiotic or representational function involves signifiers – mental events, words, or things which stand for something else – and the signified....Signifiers signify or represent something to the individual. One type of signifier is the symbol,which may be personal and idiosyncratic, and resembles the thing it stands for....one person's symbol may not transfer to another person any information at all about the action or object that is represented. Abbreviated movements...seem to be the developmental forerunners of symbolism. Symbols may be mental or concrete. Concrete symbols...may involve using one object (e.g., a handkerchief) to stand for another (e.g., a blanket)....One type of symbol is the visual image; others include auditory images. The symbol involves a predominance of accommodation. This is so because the symbol consists of internal imitation, and imitation involves modifying one's behavior to fit that of a model, or in broader terms, to meet the demands imposed by the social or physical environment. (pp. 74-75)

So body language is utilized as a medium through which the child learns verbal communication. Consequently, it would seem plausible that the extent to which the individual relinquishes, embellishes, or relies upon this aspect of communication is directly related to the amount of reinforcement (or lack thereof) that is forthcoming from the environment. This reinforcement would most likely, and to the greater extent, come from the influence of the parents or those "in loco parentis." Thus the child may be punished for unacceptable communicative behavior in such a manner as to shape the communication style into one that would fit into the familial pattern as acceptable behavior. And this could all occur without the conscious knowledge of the parties involved.

The child moves along in this developmental pattern, incorporating the aspects of the process to the point of the evolution of speech. Piaget, as

explained by Opper and Ginsburg (1988), says that much of children' speech is merely egocentric practice, but that

> The remainder of the children's speech is communicative or "socialized." In this case the child takes into consideration the point of view of the listener and attempts to transmit information to him....There seems to be a decline in egocentrism and an increase in communication as the child gets older. (p.85)

For the most part this would be true, with the stipulation that it happens to varying degrees. The many variables involved in the transmission and reception of messages in communication can serve to set up many levels of success or failure of the system. If one considers Eysenck's (1965) theory of conditionability, then the child will socialize speech to the extent of the combination of environmental influences and the level of the child's conditionability. In other words, it is possible that the individual that has a predisposition for extroversion may be less sensitive to others' perceptions and therefore learn to utilize a direct approach. In this condition the path of least resistance might lead to the development of the most familiar style of communication into a defensive position in response to some perceived impingement. Thus, each individual would inject his or her own level of ability and reactions into the picture. For, ideally, as Opper and Ginsburg (1988) tell us, "With development these egocentric manifestations decrease and speech becomes more communicative. The speaker becomes more aware of the views of others and adapts his speech accordingly"(pg. 89) They also mention, however, that Piaget's results demonstrated that, generally, the listeners think they have understood the speaker, when in actuality, they have not. According to Opper and Ginsburg (1988), Piaget believed that this was due to several factors: (a) The listener's active

constructive process of perception interferes with reception. The listener injects his or her own patterns of thought, which may not result in an accurate alignment with the message imparted. (b) The listener distorts the speaker's utterances, thinking that he or she has understood what was said, even if the message was very obscure. This results in a failure to ask questions to clarify whether or not the message has been accurately received. (c) The actual spoken words result in a process of free association such that, "the listener assimilates the remarks into his own schemes, which often bear little relation to to what the speaker is actually trying to communicate"(Opper & Ginsburg, 1988, p.89).

Stern (1985) traces the sources of communication back to infancy, asking the question, "What...is the evidence for the appearance of intersubjective relatedness at seven to nine months?"(p.128). His answer is "'...a deliberately sought sharing of experiences about events and things.'" Stern (1985) notes that . since infants this young are still preverbal.

> The subjective experiences that they can share must be of a kind that do not require translation into language. Three mental states that are of great relevance to the interpersonal world and yet do not require language come to mind. These are sharing joint attention, sharing intentions, and sharing affective states. (p. 128)

Stern (1985) cites research that shows that infants as young as nine months are able to follow their mother's focus and to share that focus. Conversely the infant must get attention somehow in order to get needs met. He maintains that one can reasonably assume that the infant's mobility in exploration is a crucial part of the process of discovering the alternative perspectives required to be able to conceive of joint attention--that the infant's wanderings present him or her with altering viewpoints in "serially

different perspectives." Thus one could infer that, by the ninth month, an infant is able to realize that the infant and its mother can have particular attentional foci, that these foci may or may not be similar, and that if they aren't similar, they can be brought into alignment and shared.

This, then, might be the beginning potential of inferentiality. Stern (1985) also states that from this time onward, the infant has an intent to communicate, which is different from the intent to simply influence another person. Stern (1985) cites Bates (1979) as providing a working definition of intentional communication that we can use:

> Intentional communication is signaling behavior in which the sender is aware, a priori, of the effect that the signal will have on his listener, and he persists in the behavior until the effect is obtained or failure is clearly indicated. The behavioral evidence that permits us to infer the presence of communicative intentions includes (a) alternations in eye gaze contact between the goal and the intended listeners, (b) augmentations, additions and substitution of signals until the goal has been obtained, and (c) changes in the form of the signal towards abbreviated and/or exaggerated patterns that are appropriate only for achieving a communicative goal. (p.130-131)

Stern (1985) supplies as evidence of this early speculative communication the sharing of affective states in the, "beginning of jokes and teasing on the infant's part..."(p. 131). He reasons that , "You can't tease other people unless you can correctly guess what is 'in their minds' and make them suffer or laugh because of your knowing" (p. 131). He also believes that , "early in life affects are both the primary medium and the primary subject of communication" (p. 133).

This, however, introduces the element of speculation on the part of the receiver, such that some parts of early communication involve attempts at

mind reading. Mahler, Pine, and Bergman (1975) place the possible mitigation of the directness of the child in the latent potential for inferentiality which results from the rapprochement phase of development in which the child attempts to continue the separation and individuation from his or her mother and yet still maintain connections. According to St.Clair (1986), "The toddler is aware of his or her need for mother's love. At the same time, the child desires expanded autonomy but protects this autonomy by negativism toward mother" (p. 113) Consequently an unspoken understanding is communicated so that the child may feel simultaneously dependent and independent. In the view of Mahler et al. (1975), the main task of communication is left to the mimetic, the motor, and the gestural spheres since the child is still preverbal and has not yet learned the modulation, inhibition, stylization, and defensive distortion of bodily expression. The child replaces these abilities with affectomotor (gestural) behavior of the entire body and the back and forth movement of the approach and appeal behaviors, as well as the the infant/mother distancing behaviors. These conclusions were inferred from their frequency, amplitude, timing, and intensity in place of the phenomena that would be encountered in verbal communication as the child grows older.

Mahler et al. (1975) see the development of language, both verbal and symbolic action, as an important step in the individuation process:

> The growing individuation that seemed to make possible this ability to function at a greater distance, and without mother's physical presence, are as follows: (1) The development of language in terms of naming objects and expressing desires with specific words. The ability to name objects...provided the toddler with a greater sense of ability to to control his environment.... (2) the internalization process... and

(3) progress in the ability to express wishes and fantasies through symbolic play, as well as the use of play for mastery. (p.101)

The Psychoanalytic Outlook

Guntrip (1969) speaks of the development of the self relative to others as one of the determining factors of communication and relating when he mentions, "The phenomenon of preserving a central core of the psychic self..."(p. 236). He goes on to say that, from his empirical standpoint, he believes that there is a universal phenomenon, resulting from impingement of the environment, and which he calls "the 'schizoid citadel' or the 'repressed ego', i.e. withdrawnness or 'a further hiding of the secret self'", that is a defense involving the reserving or holding back of an isolated core of the self. This phenomenon is one of primitive fear, in his words, "such as we would envisage in an infant who is not adequately protected and ego supported by his mother and thus exposed to a fear of annihilation because of his own extreme weakness....one of the primitive 'unthinkable anxieties"(Guntrip, 1969, p. 237). His justification for stating that this is universal is that no one, no matter how mature at some levels, can have had such perfect parenting as to have escaped some amount of primitive fear resulting in ego splitting and the resulting development of "a basically defensively structured personality"p.23).

If this is so, it is easy to see that there is a necessity for an inferential style of communication from the point of view of the person whose developmental history involved a level of impingement that was too intense to be resisted for whatever reason. One might even speculate that a person whose self was invaded might wish not to communicate at all in an effort to curb the impingement. This would be the extreme inferential position, which is, put

simply, avoiding the risk of further impingement by becoming very sensitive to it's presence and, going even further, trying to anticipate its possibility by a communication style that would, in effect, test the waters before taking any risk of showing any of the self. Another method of avoiding impingement would be the ultimate defense of a powerful offense. Thus the extreme direct communicator would split off the part of the personality that would allow him or her to sense any subtle cues to the receiver's intended message. This loss would then cause the extreme direct to miss many signals and often entire messages. In effect the inferential defense could be metaphorically described as one of hiding and watching and the direct as one of wearing a suit of armor which would simultaneously render him or her "safe" but almost totally insensitive. And although this would probably happen unintentionally and unconsciously, it nevertheless would result in a defense system that would be the complete opposite of the inferential and yet it would serve basically the same purpose – that of avoiding impingement. And it would occur, as previously mentioned, to varying degrees such that a method of communication might be developed that would at least moderate or control the amount of risk involved. According to Guntrip (1965)

> I do not see how a core of the self that is an absolute isolate and incommunicado can be a self at all. A self can only experience itself in the act of experiencing something else. If it it is totally empty of experience it cannot be a self....
> The fear of being found, infinitely exploited, or eaten up. must derive from our being not strong enough to retain our full and proper individuality <u>in a relationship,</u> and not strong enough to choose for ourselves which relationships with actual; other persons we will accept, or decide when we wish to withdraw into our <u>privacy,</u> a privacy which would consist not in being an isolate and incommunicado, but in the ability to be alone outwardly because one is fundamentally ego-related inwardly. (p.238-239)

The problem of Guntrip's "Schizoid Citadel" concept is that it could serve to explain almost anything and, therefore, nothing in particular. We must, however, take into consideration that all organisms do have choices to make and that no matter how predictable behavior can be, there is always an exception to the rule. Thus the person would, in any given environment, respond in an idiosyncratic manner that would consist of factors such as introversion/extroversion, paths of least resistance and any genetic factors even if they might be latent. While it is easy to argue abstractly and on an intuitive level that extreme communication styles could be defensive, we must be ready to supply a functional explanation of how they would be formed. Klein (1987) has supplied just such an explanation.

> Avoidance of Frustrating Events According to Hull (1943) the absence of reward, or nonreward, acts to inhibit behavior. Hull proposed two types of inhibition of a specific behavior produced by nonreward: (1) *Reactive inhibition*(I_R) is the temporary inhibition produced when the behavior does not produce reward and the animal becomes fatigued. (2) *Conditioned inhibition*($_SI_R$) represents the process of permanent behavioral inhibition produced when the environmental events are associated with the inhibitory nonreward state. These cues subsequently will reduce the likelihood that a particular behavior will occur....that drive, incentive motivation, and habit strength facilitate the occurence of a specific response and that inhibition (both reactive and conditioned) reduces the tendency to respond. (p. 22)

If one considers the possibility that communication style is influenced by familial paterns, it is easy to visualize a situation in which an inhibitory state would be set up due to the frustration that would occur when an individual attempts to communicate in a manner that was not acceptable to the parental figures in the environment. Thus, the individual would

seek to avoid the frustrating event, for example, of being punished for being rude when he or she is merely communicating directly. By the same token, he or she might respond inappropriately and, therefore, remain in a state of non-reward because he or she did not properly understand an inferential command. In either of these situations the incidences of Reactive Inhibition would build until a state of Conditioned Inhibition would take over and eliminate any attempts at the old behavior. For as Klein (1987) points out

> The Hullian view asserts that nonreward inhibits habitual behavior, thereby allowing the strengthening of other behaviors. However, this view does not completely describe the influence which nonreward has on instrumental behavior. Abram Amsel's frustration theory (1958) asserts that frustration both motivates avoidance behavior and suppresses appetitive behavior.
>
> Amsel proposed that the frustration state differs from the appetitive-drive state. Nonreward presented in a situation in which reward previously occurred produces an innate (unconditioned) frustration response (R_F). This frustration response has motivational properties: the stimulus afteraffects (S_F) energize escape behavior. The cues presented during the frustration response (R_F) become conditioned to produce an anticipatory frustration response (r_F). The anticipatory frustration response also produces internal stimuli (s_F); these stimuli (s_F) motivate an animal or human to avoid a potentially frustrating situation. (p. 22)

Amsel's position then is one that is more genetic in nature. That is there is an unconditioned response to a frustrating situation wherein there previously was reward. For example, when a child is very small there is a lot of attention paid to him or her. As he or she grows, however, much of that attention ceases. Consequently, there arises a frustration state wherein the child must develop a way, in our case a manner of communicating, to fulfill the needs that were previously automatically and/or constantly fulfilled. Each time the child enters the scenario,

frustration occurs. Eventually an anticipatory state occurs that produces anxiety. There is no escape from the situation since the child must communicate and live within the family. The anticipation of this anxiety then shapes the child's thinking into new venues. The child ,whose direct parents grew fatigued at having to always guess at the child's needs and gave up on the guessing process, now has to be direct or at least express wants and needs directly in order to be heard. Or the child, whose inferential parents put up with very direct demands, now must learn to be subtle or be avoided and/or punished. In these and many more ways the shaping of communication styles develops in directions chosen by each individual from a selection of myriads of options in order to "tune in" to the family's style of communicating in order to avoid the pain that would ensue if the child were not to adapt. Regarding the avoidance of these potentially painful events Klein (1987) gives us this information.

> Avoidance of Painful Events In 1956, O.H. Mowrer proposed a Hull based view of avoidance learning. According to Mowrer, avoidance behavior is developed in two stages. In the first stage, a person becomes afraid of a particular object by associating it with an aversive event.... During the second phase, fear motivates instrumental behavior, and the instrumental activity which reduces fear becomes habitual....recent research...shows that the major problem with Mowrer's theory is that avoidance behavior not only is motivated by fear, but also occurs to prevent adversity and is reinforced by the successful prevention of the UCS. Michael D' Amato (1970) ...restructured Mowrer's view into an acquired-motive approach....It should be noted that other psychologists believe that cognitive processes are also involved in avoidance behavior (my emphasis)....According to D'Amato, an aversive event...elicits an unconditioned pain response (R_p); the unconditioned stimulus of (pain) (S_p) motivates escape behavior. Through classical conditioning, the environmental cues present during (pain) acquire the ability to produce an anticipatory pain response (r_p) whose stimulus aftereffects (s_p) also motivate escape behavior. (p.22-23)

This model would appear to support Guntrip's psychoanalytic model in a classical manner. And as Klein(1987) notes there are many psychologists who would add a cognitive element. One can also see that this is consistent with the previously mentioned view presented by Eysenck (1965) that inhibition builds and forces a cessation of of activity and that "we would expect, therefore, that extraverted people, having strong inhibitory potentials, would condition less well and extinguish much more quickly than introverts" (pp.70-74). If this is so, it is a simple matter to envisage that the direct person either extinguishes the process of learning to read nonverbal and extraverbal cues, or never learns them in the first place, because they are too painful. Thus, this aspect of the communication style would serve the direct as a defense, essentially filtering out the painful stimuli in a kind of selective denial. The inferential, on the other hand, would enter the same process, encounter the same pain, only instead of filtering to defend against the aversive events, the inferential would learn to withdraw to a position of relative or perceived safety or distance and from there to learn to anticipate the painful stimulus and attempt to avoid it. Thus both positions would guard the self from pain ful stimuli and both positions could be seen as opposite ends of a response continuum with many options and variations from which to choose.

Guntrip's view of the defense of the self is consistent with Stolorow's (1987) definition of self as, " a psychological structure (an organization of experience)...through which self experience acquires cohesion and continuity, and by virtue of which self-experience assumes its characteristic shape and enduring organization"p.18). It is also consistent

with his notion of intersubjective fields which he defines as "...a system of differently organized, interacting subjective worlds"(p.132).

In the preservation of the threatened self, then, the extremes of inferentiality and directness could be considered defensive. Therefore, if we view the direct/inferential dichotomy as a continuum, the most healthy position would be located somewhere around the center. Indeed, if this is so we would expect to find a fairly normal distribution along this continuum, which is what the previous research in this area (see Hoerchler and Holler1987) did find. Even so, for a person to be able to take a position in the center, he or she would have to be secure enough in his or her ego to withstand impingement. Indeed, as Guntrip posits

> Owing to the extreme dependence and weakness of the human infant at birth, and the extreme difficulty of providing enough security in practice, fear is bound to arise as the earliest disrupting factor, and remains always the deepest problem; fear not of a hypothetical death instinct or destructive instinct working within, but fear of traumatic factors coming from without.(p.239)

And as Guntrip (1965) describes the beginning of our ability to relate

> The mother must first enable her baby to have a sense of the reliability of his own secure existence, by being the kind of person with whom the baby can share in her secure 'being'. Only then can the baby go on to develop a full capacity to express his own reality by spontaneous unforced self-expressive actitvity, because he has a self to express, an ego to be active with. (p.259)

Guntrip (1965) also speaks of male and female elements of relating. The female element is "being" and the male element is "doing." One might consider the inferential approach as a female element and the direct as male. Regarding this he says that there are two things that must remain inviolate if an individual is to have a strong sense of self in his or her

personality: (a) a central core sense of individual "me-ness" sufficient to relate to the outer world, receive communication from it, and to be able to withdraw from it without worrying about ego loss; (b) some even deeper core sense of secure feeling of "at-oneness" from which one can feel like he or she belongs without danger of being engulfed. He also claims that, "There needs to be an ability to defend against 'male element' impingement at a conscious level without losing 'female element' relationship in depth" (Guntrip, 1965, p.270).

Kohut (1971) carries this a little farther, citing communicational dysfunctions as indicative of a disorder of the self. In his view the workings of the defensive self show themselves in the communications that occur in therapeutic regressions to an extent and with a clarity that is not achieved during the actual day to day use. This, he maintains, shows itself in the gaps of logic and fantasy experiences of disconnections of mental and somatic elements that are usually covered by the grandiose self and the false sense of living up to what Kohut (1971) calls the "idealized parent imago." In these cases "the communicative capacity becomes severely disturbed and self-observation is either diminished or grossly distorted" (p.7). Thus a person with an extremely weak sense of self might find himself or herself in adopting a position in which he or she does not commit consistently to any communication style at all. This person would then merely mirror any one he or she were with by assuming the opposite style of communication resulting in a fifty-fifty dispersion of direct and inferential behavior. This could represent an indecisive self which has little cohesion or continuity.

The Person-Centered Outlook

Rogers (1961) presents the concept of congruence as an important component of functional communication. In his description of process he mentions that, for a person in the first stage of process, experience is remote and fixed and there is "an unwillingness to communicate self" (p.132). Consequently, communication tends to be about externals, with feelings and personal meanings unrecognized or not owned. This person maintains rigid personal constructs and considers close and communicative relationships as threatening. This results in "much blockage of internal communication" (p. 132). Thus the first stage person reacts to present situations as if they were past ones, maintaining a global outlook that exists in "black and white terms" (p. 133). By communicating not about herself or himself, but for the most part about externals he or she creates the blockage of internal communication between self and experience. This fairly well describes the conditions necessary for the extreme direct communicator to use the communicative style as a defense. Rogers (1961) says that

> When we are living behind a facade, when we are trying to act in ways that are not in accord with our feelings, then we dare not listen freely to another. We must always keep our guard up, lest he pierce the pretense of our facade. (p. 324)

Congruence, which Rogers (1961) defines as "an accurate matching of experiencing, awareness, and communication," (p. 339), becomes a necessary factor to the elimination of the use of the communication style as a defense, be it extremely direct or extremely inferential. In most cases of communicative defensiveness the people are unaware of what they are doing. Rogers (1961) gives an excellent example of this type of incongruence.

> Take the man who becomes angrily involved in a group discussion. His face flushes, his tone communicates anger, he shakes his finger at his opponent. Yet when a friend says, "Well, let's not get angry about this," he replies, with evident sincerity and surprise, "I'm not angry! I don't have any feeling about this at all! I was just pointing out the logical facts." The other men in the group break out in laughter at this statement. (p. 339-340)

If the man were truly aware of his feelings, he would probably be able to stop himself. However, as was previously mentioned by Kohut (1971), the degree of congruence cannot be accurately evaluated by the person due to the failure of self observation. One can reasonably infer that at some point this person has split off some part of the personality or self and in that part lay the key to the process that would assure congruence. Regarding this point Rogers (1961) states the following:

> The incongruence is between awareness and communication. Thus it might be be noted that when there is an incongruence between experience and and awareness, it is usually spoken of as defensiveness, or a denial to awareness. When the incongruence is between awareness and communication it is usually thought of as falseness or deceit. (p. 341)

The Transactional Analysis Outlook

In regard to problems in communication, Transactional Analysis presents a well structured break-down of the communicative process. Transactional Analysis views the communicative process as one of tradeoffs or transactions. A Transaction is defined and described by Woolams and Brown (1978) as,

> an exchange of strokes (units of attention which provide stimulation) between two persons, consisting of a stimulus and a response between specific ego states. Transactions can be simple, involving only two ego states, or complex, involving three or four ego states (see Appendix A for explanation of ego states). A conversation is a series of transactions linked together. (p. 65)

Woolams and Brown (1978) further state that there are three kinds of transactions, each with its own corresponding rule of communication. These are complimentary, crossed, and ulterior transactions.

In a complimentary or parallel transaction the stimulus/ response vectors parallel each other in reciprocal directions such that only two ego states are involved – one from each individual (see Appendix B). There are two criteria that must be met: (a) The response must come from the same ego state to which the stimulus was directed, and (b) the response must be directed back to the originating ego state. The corresponding first rule of communication is, "So long as the the transactions remain complimentary, communication may continue indefinitely" (Woolams & Brown, 1978, p. 65).

Crossed transactions occur when communication lines cross and do not meet the criteria mentioned above (see Appendix C). The corresponding second rule of communication is, "Whenever the transaction is crossed, a breakdown (sometimes only a brief, temporary one) in communication results and something different [unexpected] is likely to follow" (Woolams & Brown, 1978, p. 66).

Ulterior transactions have social messages, which are more likely to be acceptable, as well as inferred or secret messages. Ulterior transactions are either angular or duplex (see Appendix D). The corresponding third rule of communication is, "The outcome of the transactions will be determined on the psychological level rather than on the social level" (Woolams & Brown, 1978, p. 70). Regarding these ulterior transactions Woolams & Brown (1978) state the following:

> Ulterior transactions are not inherently dishonest, but at times the psychological message is used to invite people into games and their ensuing payoffs. The psychological message is

> usually nonverbal and is communicated via facial expressions, gestures, postures, and changes in voice tone, and/or tempo. It may also be communicated via syntax, word selection, slips of the tongue, etc. (p. 71)

Since the psychological messages are frequently conveyed on several levels, the respondent may feel confused as to which message to respond to and in what manner. This is further complicated by the fact that, if the respondent chooses to respond only to the social message, a crossed transaction results.

Beyond these complications in the communicative options there are three other special kinds or transactions mentioned by Woolams and Brown (1978). The carom is so named because it results when an individual's intent is to bounce a message off of a second person to be received by a third who is actually the target of the message (see Appendix E). Gallows transactions involve some indication of humor in an inappropriate manner, such as the discount of the self or another. And the last of these is the bull's eye, which is a statement issued from the adult ego state of the transmitter and which reaches all three of the receiver's ego states at once (see Appendix F).

Statement of Problem

In previous work in this area the direct/inferential dimension was shown to exist as an observable phenomenon (see Hoerchler & Holler, 1987). As is evident from the diverse theories which have bearings in this area the direct/inferential variable can have applications in the areas of diagnosis, symptomatology, measurements and that most elusive of elements of psycho- therapy, concrete action to be taken in achieving cure. The implications for applications in the realm of interpersonal communications could be tremendously helpful in areas such as education, psychotherapy, business, interpersonal relationships and the communications field as a whole. While not all of this material is new, I was (as previously stated) unable to find any information on some format that would draw this into a single, functional, and concrete model that would have real world application, especially in the area of solving problems in communication.

Consequently, the goal in this work, is to lay the foundation for the development of a reliable psychometric instrument with which to assess individuals' locations on a continuum spanning the area between the two styles of communication.

In the previous work such a test was devised, but it was a behavioral measure and, therefore, too time consuming and "bulky" to have practical application. In this study a psychometric instrument was devised, consisting of questions in areas indicated by the relevant research. Some of the areas covered by the questions were introversion/extroversion, paralanguage, suggestibility, sexuality, body language, facial expressions, eye contact,

degree of attention paid, personal space, congruence, caution, sexuality, awareness of experience and general attunement to environmental cues.

The preliminary product of this construction was then applied to subjects along with the behavioral instrument in an effort to find the questions that correlate well with the communication style trait. The remaining questions were eliminated, thus allowing the resulting psychometric instrument to replace the behavioral one, thereby streamlining the assessment process considerably.

Kappas' (1975) theory would indicate that questions on suggestibility should correlate well, and covary directly with inferentiality and inversely be related to directness. This theory was not upheld in the previous research, however. According to Eysenck's (1965) theory, extroversion should correlate well with directness and introversion with inferentiality. One might expect Rogerian(1961) "incongruity" to correlate with extreme directness and Guntrip's (1969) Schizoid trait to correlate well with extreme inferentiality. Consequently, items designed to measure each of these factors will be included on the test instrument.

CHAPTER 3

Method

Subjects

The subjects were 30 members of a church, 19 females and 11 males, who volunteered for the study in return for the right to participate in a workshop on commmunication to be given at a future date. They were told that they would be participating in a study of "perception." Deception by commission was decided upon after much consideration regarding the need to avoid demand characteristics, and was perceived to be harmless. The subjects were debriefed as soon as possible after the completion of the experiment. Although it was a convenience sample, this sample was selected because of the wide cross-section of types of people in the population. There were at least three races,White, Middle Eastern, and Black, varying political views, from liberal to conservative a range of age from early 20s to the 80s, both sexes and a variety of socioeconomic backgrounds, from fairly poor , to upper middle class.

Apparatus and Materials

Three converging methods of testing the clinical subjects were used. A 130 question psychometric test was administered after the behavioral test (see Appendix G). The subjects were also given a behavioral test similar to one used in an experiment done by Zajonc and Sales (1965), which consisted of viewing 12 slides that contained only random horizontal lines, presented for 1/100 second each. This test was chosen in keeping with the principle that arousal enhances whatever response tendency is dominant. It also assumes that either direct

communicating or inferential communicating is dominant by adulthood, and that the test situation would evoke some degree of arousal. One of the commands "implied" that the subjects write down what they saw. One of the measures taken was be the amount of material that they "saw" after receiving suggestions to do so. (The command that implied that they write was, "Please go with your first impression, and do not go back and change anything," , which further implied that they see.) The self-report or "images" measure (ISR) was three blank pages that were given to each subject prior to the behavioral test upon which they could write. There were on each page four numbers--1-4, 5-8, and 9-12 respectively. During this time the test was videotaped for later scoring.

The apparatus used was video equipment consisting of a camera for videotaping subjects' behaviors, a VCR for playing instructions and presenting test stimuli, and a television set for viewing instructions, tests, and results. The other material used was a 130-question psychometric test designed by the researcher to determine communication styles. There was also a "self-report" measure employed to attempt to assess the strength of one of the commands.

Here are two examples of test questions (see Appendix G):

29) I sometimes have trouble distinguishing reality from fantasy.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

30) I desire sex more often when I am under stress.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

The test was developed by accumulating 130 questions in the areas of verbal cues, nonverbal cues, perception, discrimination, generalization, attenuation, vocal tone, inflection, and emotion. The researcher used the knowledge gained from Kappas' (1975) construct of the direct/inferential continuum to start the process. Kappas' primary assertion was that suggestibility was the main driving force in the communication style. This, however did not hold up in the previous research. Consequently, it was decided that a kind of "shotgun" approach of educated empiricism would be utilized and the results analyzed to develop the test.

Procedure

Subjects were individually tested in one location at the church with which they were familiar. They were told that they were to be tested on perception.

Upon arriving, the subjects were greeted and an introductory statement was read to them explaining the research and their rights. They were then led into the test room, asked to sit down, and given a pencil and a clipboard with a packet of three pages, each having been marked with four numbers: 1,2,3,4 – 5,6,78, – 9,10,11,12. Next the researcher turned on the camera, returned to the subject, and, holding up some other papers, the researcher began to pat his pockets. If the subject responded by offering his or her pencil within six seconds, he or she had "heard" the first command. During the administration of the test on "perception" there were six more commands given. The commands ranged from extremely inferential to extremely direct, and were, with the exception of the first, buried in the instructions (see complete Commands Script, Appendix I). The second command occurred when the actor said,

"You should have a packet like this in front of you," and began to page through the packet, inferring that the subject should do the same. The third command was the one that implied that they write something, "Please go with your first impression and do not go back and change any thing." The next command was,"There are two more pages in your packet," inferring that they turn to the next page. The fifth command was, "You might want to turn to the next page." The sixth was, "The closer you get to the screen, the easier the images are to see." The last, and most direct, command was, "Put your pencil down now!" Upon completion of the viewing test, the psychometric instrument was administered.

The subjects were allowed 6 sec. to respond to each command in the behavioral test. Although several of the subjects responded to the command after the 6 sec. limit, they were not counted as having responded. The exception to this was the command that they move closer to the screen. In the previous research it was noted the the latent response to the command was often not triggered until the slides were presented. In this research, therefore, the measuring interval was 6 sec. from the presentation of the section of video containing the slides. The first reponse was counted if the subject offered his or her pencil to the researcher. The second required that they leaf through their packet. The third was whether or not they wrote anything. The fourth and fifth involved turning to the next page. The sixth command was considered a response if the subject moved closer to the television set. And the last required setting the pencil down. The number of commands that each subject respond to were noted as a score. In order to maintain uniformity of scoring criteria and not to confound the results by having long awkward

silences the six second limit was agreed upon in consultation as a length of time that did not feel uncomfortable in the context of normal conversation. The video tape was then scored by the researcher.

The data in the Commands test and the Images Self-Report test (ISR) were in the form of frequency counts. The psychometric test was scored by dividing the total score by the highest number of possible points, (650 in the original version and 220 in the final version) yielding a percentage level on the direct/inferential scale. The highest possible direct score was 100%.

CHAPTER 4

Results

An item analysis was done on the psychometric instrument to determine how much each item contributed to the total scores. Each item with an item-total correlation of .20 or higher was then retained in the final version (see Appendix H for final version of the psychometric instrument) (Nunnally, 1978). In computing subsequent correlations the final version of the test was used as a basis for score sources (See Table 2 for the differences in scoring for the two versions of the psychometric instrument). The scores derived from the frequency counts on the three measures were then correlated in three configurations. The results are as follows in Tables 3 through 5. The degrees of freedom in Tables 3, 4 and 5 was 28 (N-2). The critical value of r for significance was .361 at the alpha level of .05. There was a significant relationship between the Test Scores and the Commands measures. All other measures proved nonsignificant.

The rationale behind the development of the psychometric instrument was based originally upon the premises developed by Kappas (1975). Therefore, items regarding suggestibility were included, although they had not fared well in the previous research (see Hoerchler & Holler, 1987). Also included were items pertaining to sexuality within relationships, personal space items, paralanguage items, body language items and anything that the researcher could rationally and intuitively include (See Rationale Behind the Psychometric Instrument in Chapter V). The main tenet behind this approach was that the test items remaining after item analysis would have been empirically derived or justified. Further rationale was that the final version of the test would show some

areas of strength for further research to pursue.

Table 1

Item-Total Correlation

Item:	r:	Item:	r:
1	.292	34	.114
2	.346	35	-.096
3	.191	36	.080
4	-.045	37	-.085
5	-.107	38	.079
6	.190	39	.240
7	.455	40	-.029
8	-.080	41	.215
9	.189	42	.160
10	-.118	43	.210
11	.213	44	.218
12	-.083	45	.164
13	.183	46	.104
14	.111	47	-.140
15	-.130	48	.133
16	-.153	49	.210
17	.040	50	.054
18	.423	51	.294
19	.330	52	-.041
20	.062	53	-.085
21	.194	54	-.071
22	.057	55	-.089
23	.048	56	.306
24	-.233	57	.368
25	.006	58	.246
26	.193	59	.087
27	-.314	60	.267
28	-.227	61	.242
29	-.196	62	.151
30	.209	63	.089
31	.068	64	-.387
32	.105	65	-.153
33	.330	66	-.046

Table 1 (Continued)

Item-Total Correlation

Item:	r:	Item:	r:
67	.205	100	-.012
68	.133	101	.308
69	.088	102	.549
70	.093	103	.339
71	.060	104	.232
72	.117	105	.065
73	-.090	106	.232
74	.290	107	-.176
75	.047	108	.234
76	.217	109	.010
77	.389	110	.027
78	.163	111	.013
79	-.170	112	-.163
80	.151	113	.262
81	.164	114	.338
82	.282	115	.223
83	-.110	116	.158
84	-.220	117	.186
85	-.120	118	.206
86	.362	119	.277
87	.130	120	.184
88	.494	121	.432
89	.310	122	.150
90	.417	123	-.122
91	.186	124	-.126
92	.475	125	.231
93	.210	126	-.285
94	.037	127	.283
95	-.160	128	.366
96	-.130	129	.247
97	.242	130	.198
98	-.160		
99	.166		

Table 2

Psychometric Scores in Original and Final Versions of the Direct /Inferential Instrument

Subject:	Original Test Score:	% of Poss. Total:	Final Score:	% of Poss. Total:
1	376	58	103	47
2	361	56	110	50
3	378	58	130	59
4	343	53	95	43
5	383	59	126	57
6	374	58	117	53
7	355	55	112	51
8	378	58	121	55
9	363	56	116	53
10	329	51	78	35
11	332	51	90	41
12	402	62	148	67
13	382	59	117	53
14	360	55	111	50
15	412	63	136	62
16	400	62	135	61
17	344	53	107	49
18	343	53	98	45
19	380	58	111	50
20	361	56	108	49
21	263	40	98	45
22	403	62	141	64
23	390	60	129	90
24	377	58	108	49
25	360	55	110	50
26	365	56	115	52
27	352	54	95	43
28	334	51	90	41
29	369	57	105	48
30	349	54	104	47

Table 3

Correlation Coeficient – X: Commands, Y: Images Self-Report

Count:	Covariance:	Correlation:	r^2:
30	2.0345	r= .3331	.111

Table 4

Correlation Coeficient – X: Test Scores, Y: Images Self-Report

Count:	Covariance:	Correlation:	r^2:
30	3.6552	r= .0547	.003

Table 5

Correlation Coeficient – X: Test Scores, Y: Commands

Count:	Covariance:	Correlation:	r^2:
30	8.6437	r= .4098	.168

CHAPTER 5

Discussion

Preliminary Examination of the Data

The primary goal of this project was to develop a psychometric instrument which was capable of producing significantly similar results to the previously developed behavioral instrument (See Hoerchler and Holler, 1987). In the process of the previous research the behavioral instrument was developed which established some preliminary validity for the Direct/Inferential construct. The significant correlation between the Commands measure and the Direct/inferential Test would indicate that this project has achieved its goal of establishing some validity for the psychometric measure of communication style. All this must be taken with a grain of salt, however, in that the test might be further improved and strengthened by future research.

The Images Self-Response Measure

The ISR was implemented in an attempt to determine the strength of latency in one of the command responses. The rationale behind its implementation was that if the latent strength of the command to write was strong, the subject would write more times than if it werenot strong. Thus the number of written responses should be proportional to the strength of the the command. The hope was that if this measure were successful in assessing the strength of one response, then it might be worthwhile to find a measure for the others. In this manner we could have measured the width of the continuum and also the depth or strength of latency of each response. While the ISR proved useful in the first study (See Hoerchler and Holler, 1987), this measure was found to be unsuccessful in the present study. The results do not correlate well with the other measures, nor are they striking in

any way that this research has been able to show. Consequently, this researcher would recommend to any who would replicate or continue this line of research that this measure be dropped. The only other aspect of the latency in responding to commands that might be of use is the measure of the amount of time that passed before the response. In some cases there appeared to be some resistance or rebellion to responding to some of the semi-obvious commands. It appeared in these cases as though the subject were fighting the response and yet eventually would respond. Therefore, it might be useful to use units of time rather than number of repetitions of the response to measure the strength of the trait at all levels of the continuum.

The Commands Measure

The construct of the direct/inferential communication dimension was supported by the results produced by this measure in the initial study (See Hoerchler & Holler, 1987). In this previous study the data, especially the significance of the correlation between the ISR and the Commands tests, was consistent with the hypothesis that the two different communication styles did indeed exist.

The factor that lent the most strength to the significance of the Commands/ISR correlation was the fact that the two sets of data came from two points of view on the same experience: the researcher's and the subject's. The observations made from the videotape of the Commands results came from the researchers' perceptions, whereas the record of whether or not the subject wrote anything, as it was implied that they do, and how much they wrote came from the subjects themselves. There was enough experimental realism to keep their focus on the task and off of the

fact that they were subjects in a research study. This enabled the gathering from the subjects of relatively unbiased data.

In this study, however, the ISR failed to corelate well with the Commands measure. Yet it is easy to see the operational workings of the Commands test. The responses are clear and obvserveable. Thus, in spite of its failure to correlate well with the ISR, the Commands instrument would appear to stand as functionally valid. The fact that it correlated well with the psychometric instrument in this study lends credence to its validity.

The rationale behind the Commands test from the start was to make observeable, in as clear and concise a manner as possible. The operation of the theory of the direct/inferential model of communicating. This it appears to do quite well even without the aid of the ISR. The premise, after all, is quite basic: A command is issued and the subject either responds within 6 sec, or does not respond within 6 sec. In both studies the Commands instrument functioned well.

Rationale Behind the Development of the Psychometric Instrument

In this section, only the items remaining in the final version of the psychometric instrument will be examined. To examine all of the 130 original items would be excessively long and fruitless. (The reader may want to refer to the complete version of the test in Appendix H.)

Overall the main rationale behind the construction of the test was to replace the behavioral instument. Consequently, the desire was that it would cover the same traits as the behavioral instrument, and yet possibly go into more detail. Each item had a specific rationale behind its development and inclusison which will be explained here. There is,

however, no way to absolutely guarantee that this item rationale was the correct reason that the item survived item analysis.

The next level of rationale was a less specific desire to have a test that would produce results that would correlate well with the Commands instrument and, therefore, measure the subjects with an inclination of isolating or making salient the level of directness. There were two levels of intent with regard to measuring the trait of directness. The first intent was to detect the presence of directness. The second was to measure its strength in order to place each subject on the continuum. In this process we must keep in mind that the amount of directness is assumed to be inversely proportional to the amount of inferentiality in each subject. In other words, if a person is 60% direct, then he or she could be considered 40% inferential. This, however, is an assumption and the two communication styles could prove to be independent of each other. This study is not equipped to consider that, however, and the two styles would appear to be mutually exclusive. That is, it would be difficult if not impossible to be directly communicating and inferentially communicating at the same time. But one could be directly sending while inferentially recieving. The whole point of this digression is that there are many avenues to pursue in the realm of this construct, and this researcher found it necessary to limit the procedure to the investigation of the possibilities that fall under the limited umbrella of the first assumption, while being aware that there may, indeed, be future changes and refinements.

There were some general considerations that led to the choice of items to detect and/or measure directness. The first was that, since communications usually carry emotional weight, people must be able to

defend against incoming negative messages. The problem here would be that if the message were fended off entirely no communication could occur. So the organism must develop ways of receiving communication and filtering it, decontaminating it or attenuating it to protect the organism from harmful effects stemming from negative emotional "payloads" attached to necessary communications.

In considering this process it was helpful to use Kohut's (1971) definitions of "self" and "person." Kohut defines the self as the organization of experience– the inner core of the identity. The person, in his definition is the external embodiment of the organism–the physical body and the parts of the personality that the organism chooses to present to the external world. The person may, for example present a false self to protect the inner real self. Thus the person may be used paradoxically to protect the self.

Several previously mentioned premises shaped the conceptualization process. a) Kappas' (1975) Model of Directness, b) Kappas' (1975) Model of the Physical Sexual Personality Style, and c) Eysenck's (1965) Model of Extraversion. Rather than go into detail, these areas will be elaborated presently. But some of the general tenets covered which fit with the Kohutian conceptual model are as follows: Low self-esteem would probably accompany defensiveness. A defensive organism would be fearful and, therefore, have an external locus of control (i.e. be controlling of others). The direct style would lend itself to the theme that the best defense is a good offense and the organism might not look defensive externally since it would approach that which it fears in a paradoxical manner, thereby protecting the self with the person through

the sense of personal space and its functions, as in the case of Kappas' (1975) physical sexual. Conversely, this shoud be detected and differentiated by the presence of anxiety produced when another organism approaches without surrendering control to the direct. The self would exist in isolation or be split off. Sex would equal love and satisfaction would be short lived since the isolated self is never allowed to take in the strokes given in sex or other pleasant contact. The direct could be expected to present as more sexual and possessive than his or her partner (as evidenced by comparison to partner items).

The first item, "I often feel that the person to whom I am speaking is beating around the bush," is a simple statement describing how a direct would feel, but also was attempting to show the difficulty that a direct has in delaying gratification and the anxiety resulting from not knowing the content of the message. The second item, "I have frequently had relationships end and not understood why they ended," was designed to indicate the process of missing cues as in filtering or attenuation. The third item, "I feel uncomfortable talking if I cannot use my hands," was designed to show the direct used body language in sending to drive points home. The assumption under this premise is that the sending of the direct's message is more imporant to him or her than listening to another communicator. The fourth item, "When I was a teenager I felt comfortable expressing my feelings to one or both of my parents," was expected to be inferential, but could show the lack of fear in the direct due to splitting or attenuation. The fifth item, "I have a tendency to tune out when someone is talking to me, and at times not hear what the other person is saying, because I am anxious to come up with my side of it ,"

was designed to show that the direct used body language in sending to drive points home. The assumption, once again, under this premise is that the sending of the direct's message is more imporant to him or her than listening to another communicator. The sixth item, " As a child, I felt that I was more affected by the tone of voice of my parents than by what they actually said," was to show the past anxiety that may have built up inhibition and produced the direct style. The seventh item, " I prefer reading non-fiction over fiction," was based on the direct's need to get to the point. The eighth item, "I generally see myself less favorably than others see me," was based on the assumption that the need for defense (assuming that the communication style is defensive) is accompanied by by low self-esteem. The ninth item, " In a new and unfamiliar situation, like a class, I feel uncomfortable drawing group attention to myself, even if I need to ask for something," seems paradoxical at first, but is based on the idea that exploration is an anxious situation for directs since they must show themselves as less than perfect. The tenth item, "I feel uneasy if someone I have just met looks me directly in the eyes when speaking to me, especially if the conversation is about me," was based on the physical defense of the self by the person--the eyes are then the chink in the armor, since they may be seen as the pathway into the self. The eleventh item, " My relationship is the number one priority in my life." was perceived to hold the notion that the direct has high physical needs and that this was presumed to be because he or she has difficulty holding an object solid. The twelfth item, "I feel that I demonstrate more outward love and affection to my partner than he or she does to me," was a comparison to partner item. These were built upon the premise that directs would

show more tendencies toward physical/sexual needs than their partners. The thirteenth item, " I am more jealous and/or possessive of my partner than my partner is of me" was another comparison to partner item. The fourteenth item, " When someone tells me directly to do something I often feel angry or rebellious," was based on the idea that directs have to be in control and that they do not ususally do this in a passive way. The fifteenth item, "I would like my partner to initiate sexual relations more often than he or she does at present," was another comparison to partner item. The sixteenth item, "I am more socially outgoing and extroverted than my partner is," was an item regarding extraversion and was another comparison to partner item. The seventeenth item, " I want to have sex more often than my partner does," was another comparison to partner item. The eighteenth item, " I prefer talking to someone in person over talking on the phone," once again refers to the direct emphasis on sending and the physical-ness that they feel is necessary in the process. The nineteenth item, " I feel uncomfortable if a person of the opposite sex, whom I have just met, touches me during a conversation," was based on the direct's need to be in control--that it is difficult to protect the self unless control is maintained.

The twentieth item, "I often feel lonely," simply expresses the true isolation of the self. The twenty-first item, " I often feel misunderstood," carries three concepts: (a)The isolation of the self, (b) That directs overstimulate listeners and cause attenuation of their own messages in the listener, and (c) That even if the message is received, the direct has difficulty in feeling gratified since the self is isolated from the person. The twenty-second item, "The thoughts in my head sometimes feel louder than the person

speaking to me." was based on the theme that the best defense is a good offense--directs plan what they are going to say instead of listening to the other person speak. The twenty-third item, " I do not have very many platonic relationships with the opposite sex." was based on the idea that it is difficult for the direct not to sexualize relationships. The twenty-fourth item, "I often feel that nothing I do is good enough," was based on low self-esteem. The twenty-fifth item, "I feel threatened when someone comes within my personal space," and the twenty-sixth item, " I feel angry when someone comes within my personal space," were both based on the need to maintain the external locus of control. The twenty-seventh item,"I often feel like my personal space is invaded." was based on the idea that boundaries might be a problem in the case of having a need for an external locus of control to defend the self. The twenty-eighth item, " I often feel that if a person loves me he or she should just know what I want," shows their constant feeling of starvation or stroke deprivation because of the isolation of the self. The twenty-ninth item, "I sometimes have trouble distinguishing reality from fantasy," was to show the split in the self, as was the thirty-first item, " I grow very calm in an emergency." This was also considered to be an indication of how easily the internal was separated from the internal. The thirtieth item, " I desire sex more often when I am under stress," was designed to show that, since the self was split off, few inner reserves were available to support the organism in times of stress. The thirty-second item, " I find the opposite sex threatening" was presumed to be a true expression of the self. The thirty-third item, " I consider myself a conformist," was based on the idea that exploration is an anxious situation for directs since they must show

themselves as less than perfect or at least as they really are. The thirty-fourth item, " When someone in authority tells me to do something, I am uncomfortable if I do not comply," was also based on the idea that exploration is an anxious situation for directs since they must show themselves as less than perfect or at least as they really are. The thirty-fifth item, " I sometimes feel as if machines have a life of their own," was designed to show the split between the person and the self. This was considered to be shown in the self's inability to ground itself completely through the experiences of the person and its contiguous contact with the external world. The thirty-sixth item, " I have a difficult time taking compliments in and really believe them," would show low self-esteem and the split off self. The thirty-seventh item, " I am a perfectionist," was designed to search for a genetic (in the psychoanalytic sense) source of the need to split. The thirty-eighth item, " When anyone comes within my personal space for very long it feels sexual," was based on the need to maintain the external locus of control and the sexualization that forms the vehicle for doing so. The thiry-ninth item, " When anyone comes within my personal space for very long it feels invasive," was based on the need to maintain the external locus of control. The fortieth and the forty-first items, " I often wish I could disappear," and, " I sometimes feel that no one can see me," were, in this context, considered to be true wishes of the self. The forty-second and forty-third items, "One of my parents was alcoholic" and, "One of my biological parents was alcoholic," were considered to be good sources of low self-esteem, splitting and denial. While they may appear to be redundant denial might force the first to go unanswered in cases such as divorce and/or adoption. The forty-fort

item, " I do not have much confidence," was one more low self-esteem item.

While the premises behind the inclusion and/or development of each item cannot be guaranteed to be the only reasons why these questions remained, these nevertheless wee the reasons behind their original inclusion. They do seem to work, however, even if one is not sure why.

Conclusions

The other findings are consistant with Kappas' (1975) construct of communication styles and, in that context, would quickly and fairly easily lend themselves to clinical implementation in the area of relationships, Industrial /organizational applications, and many other areas. These findings do not, however, support his theoretical assertion that suggestibility is behind their functioning. The model of multifaceted factors which form into a gestalt , does seem to fit this pattern, though and these would also be consistent with Rosenthal (1967) in his investigations on experimenter expectancy. The reader will recall that Rosenthal had encountered problems with experimenters communicating nonverbally to subjects directions as to how to support the experimenter's hypothesis through their performance in the experiment. And, as he noted, we can be all too successful at this process. While this ability to communicate can be a hindrance in situations like those just mentioned, one staggers at the thiought of the benefit that this ability could produce if it were able to be understood and controlled.

Eysenck's (1965) construct of the intoversion/extraversion continuum would also be consistent with the findings in this study. He, as

well as Kappas, associated the communication style traits to sexuality in the application of this model to the personality. With regard to this aspect of the theory, when constructing the original version of the test this author included items of a sexual nature, and yet there were reservations about including them. The question was, regardless of how accurate the items could be in assessing the desired trait, would people answer them? As we can see from looking at the final version of the test, they indeed must have , because there were quite a few of these types of questions left following the item analysis. The other aspect of these items is that they are oriented toward the person who is more sexual than his or her partner, or is very aware of or prone to sexualization between communicators. This would also fit with Eysenck's (1969) notion of the extrovert as being more highly sexual than the introvert. Indeed, one of the items remaining in the final version of the test is, " I am more socially outgoing and extroverted than my partner is." Along with this stands Kappas' notion of the physical sexual is that they are more intensely sexual and that the physical sexual traits are usually found in direct communicators (See Kappas, 1978).

While both Eysenck and Kappas rely fairly heavily on a developmental causality, the material in this study does not necessarily lend itself to the support of this belief. It is the belief of this author that the cause of the status of the communicator's style is a mixture of hereditary and developmental influences, and while there is support for this notion in the literature, this study does not go into the area of causality.

Piaget's model of how communication style is developed, as cited in Opper and Ginsburg (1988) , would be consistent with the findings in this study regarding his idea that movement is the precursor of symbolism.

Often the movements of the subjects mirrored the commands given. For example, the command, "There are two more pages in your packet," produced a puzzled look followed by the subject leafing through the packet to see if indeed there were two more pages, and yet not turning to the next page.

What this would appear to be is the expression or acting out of anxiety. One of the aspects of scoring the video tapes of the behavioral test that was noted by this author was that the test appeared to significantly raise the level of the subject's anxiety. After all they were not able to ask questions or clarify any of their inferential impressions of the video taped communication that they were receiving. They simply had to go with whatever impressions they formed. Many of them became quite distressed at the fact that they could not confirm what they were not sure that they knew. Under normal circumstances there would be a dual feedback system in place wherein both parties would form hypotheses about the message being communicated and confirm or disconfirm them in order to hone in on the heart of the theme of the message. This would fit with Stern's (1985) definition of intentional communiction. So the subjects were attempting to initiate intentional communication. In this case, however they were cut off from this process by the isolation created by the fact that the communication was coming from the video taped program. Thus the subjects were forced to make decisions and act upon their pure perceptions of the message. Often they showed signs of knowing that a message had been communicated, but knew not what that message was. Needless to say this contributed significantly to their rising anxiety. Could these be indications of what Guntrip (1969) refers to as

"unthinkable anxieties" that call up the defenses? Perhaps they are. And if this is so then these would be consistent with the idea that communication style could be a defense if it is forced to the extreme. Kappas (1978) posited that an individual will become more inferential as he or she becomes more fearful. Also, as Klein (1987) reminds us, there is the Hullian view that the state of nonreward produces inhibition, which in turn hinders or stops performance. Consequently, the fact that there was no feedback might have produced such inhibition and thereby, lessened the performance of the subjects. But that is from a direct point of view. Looking at it from an inferential point of view would indicate that inferential performance might have been encouraged by the very nature of the experimental setting. This, however, is like presenting two sides to the same coin, and noting that while they are different, they exist within the same context.

When turning the sound down on the videotape, it was discovered that those who scored highly on the direct side tend to use fewer nonverbal cues. The researcher was often unable to tell where in the sequence of commands they were, whereas in the case of the inferential subjects it was almost always easy to tell which command was occurring.

While this author is fairly satisfied with the results of this study, future studies might wish to improve on the procedures utilized here. Nunnally (1978) recommends 5 to 10 times as many subjects as there are items. This would be a recommended procedure to follow. Time measures for the strength of messages might be employed in future studies. The development of subscales of the psychometric instrument would also be quite useful. For example, a subscale to determine the

sexual style would be quite useful in the application of counseling couples. Other subscales that might be derived would be those that might detect aggression, shyness, or even patterns that would accompany and signal the need for further testing, such as sexual dysfunction, paranoia, or depression. There would definitely need to be further research in these applications, however, especially in the area of norm groups. Factor analysis would have been a desirable addition to this study, had there been enough memory in the availble computer. Another useful pursuit would be the development of more items which would be even more focused into the areas that have shown themselves to be productive in this pursuit.

One problem associated with this study has been that age old problem of attempting to acquire a sample that is truly representative of the general population. This sample, like those in most studies was a convenience sample. Although this author attempted to choose a convenience sample that contained a wide representation of people, the fact is that this sample still is a convenience sample and, therefore, might not be representative of broader populations.

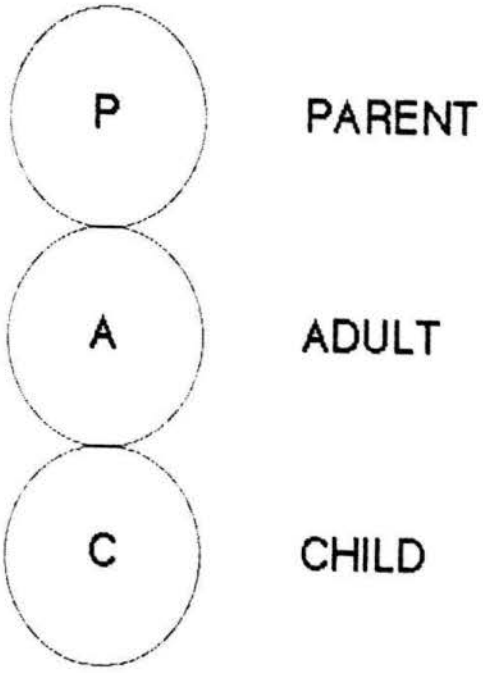
Another step in the procedure of following this study would be the testing of the reliability of the instruments involved. The reliability of the psychometric instrument has as yet to be tested. The reliability of the other two measures, while they have performed well in the two studies, do not have known reliabilities. Perhaps with larger, broader and randomly assigned samples, their reliability could be tested. If their reliability could be further supported then the further pursuit of the study of the

Direct/Inferential construct might prove quite useful in the field of applied psychology.

Appendix A

Ego States

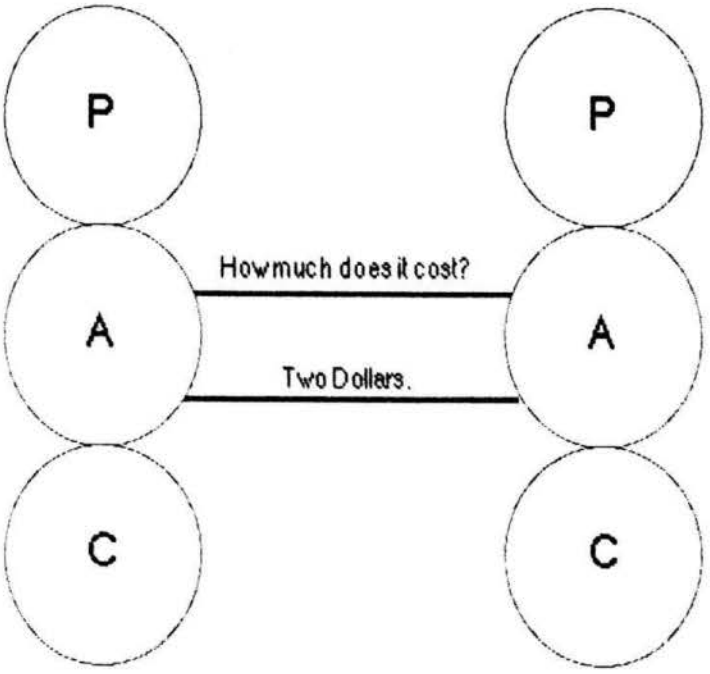
Ego States



(Note. Adapted from Woollams & Brown, 1978, pp.65-77.

Appendix B
Complimentary Transactions

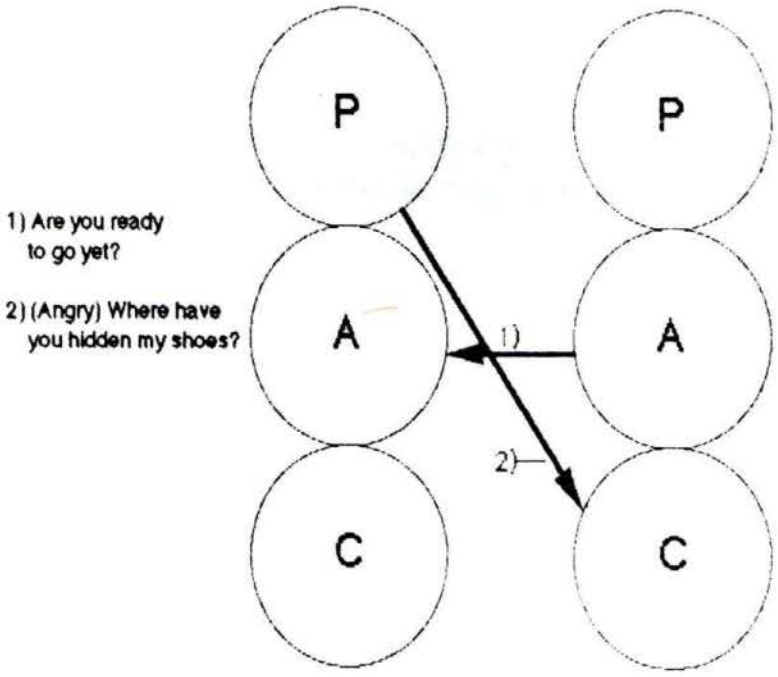
Complimentary Transactions

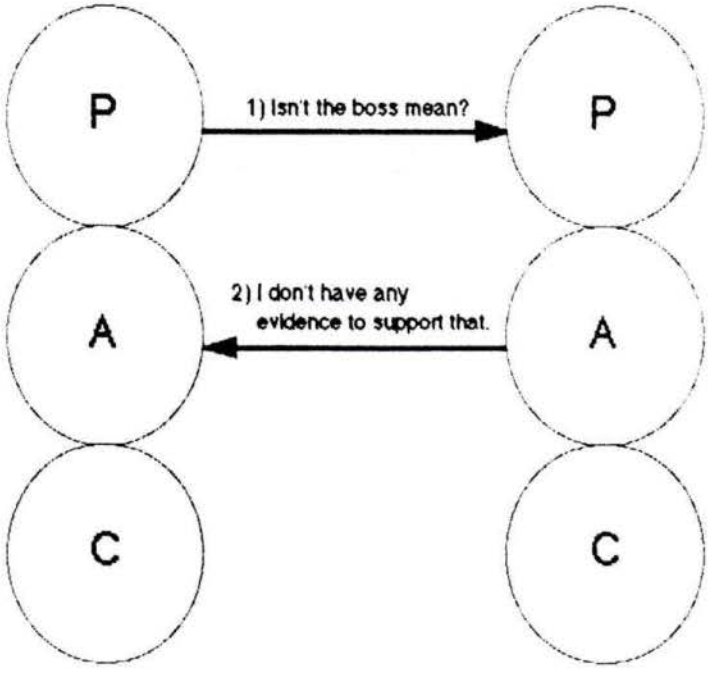


Note. Adapted from Woollams & Brown, 1978, pp.65-77.

Appendix C
Crossed Transactions

Crossed Transactions

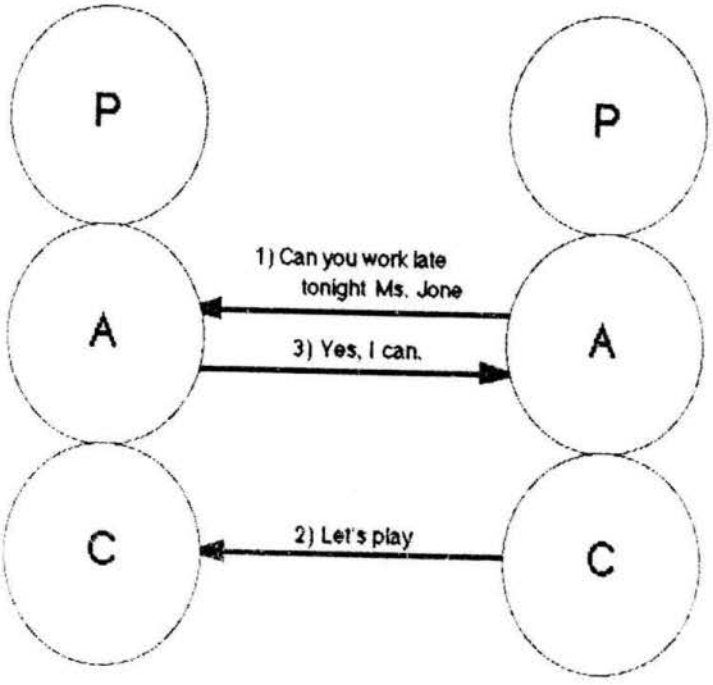




Note. Adapted from Woollams & Brown, 1978, pp.65-77.

Appendix D
Ulterior Transactions

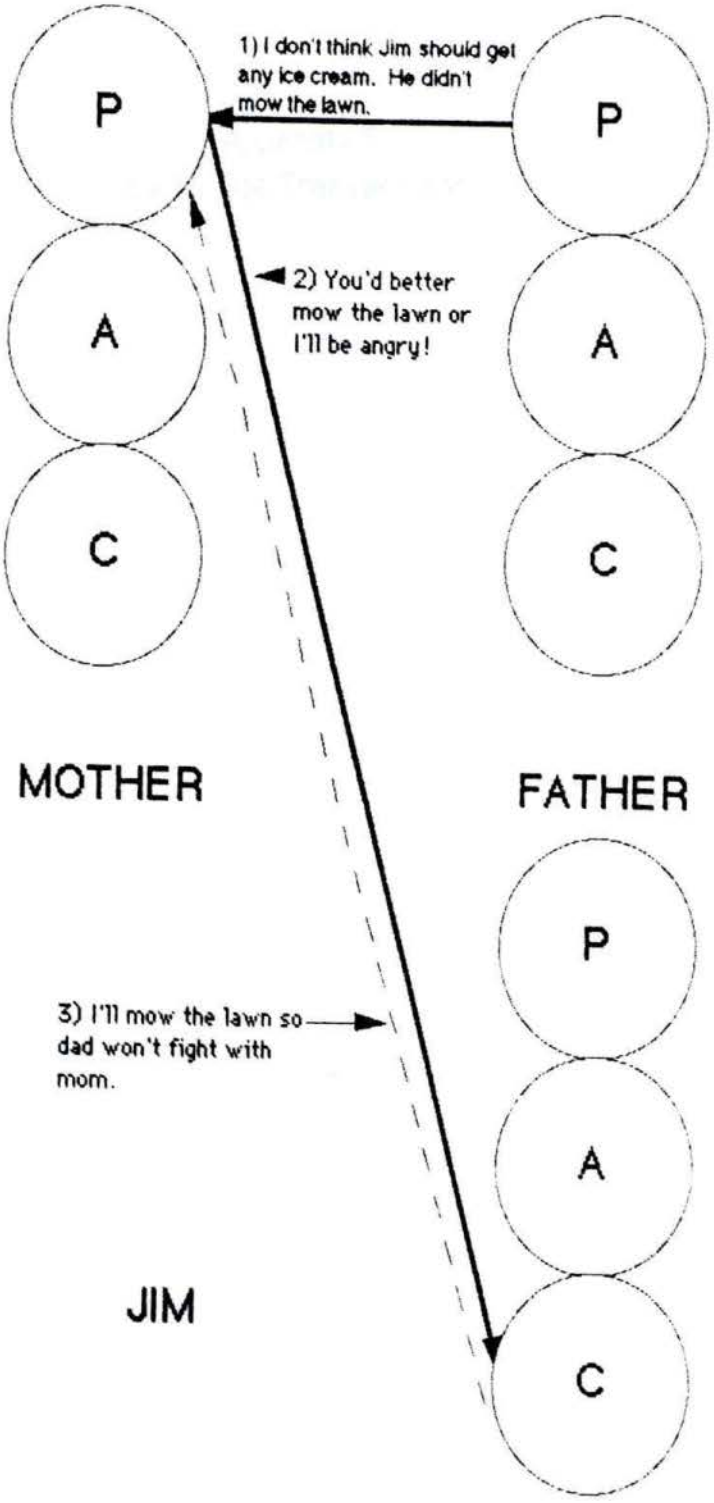
Ulterior Transactions



Note. Adapted from Woollams & Brown, 1978, pp.65-77.

Appendix E
Caroms

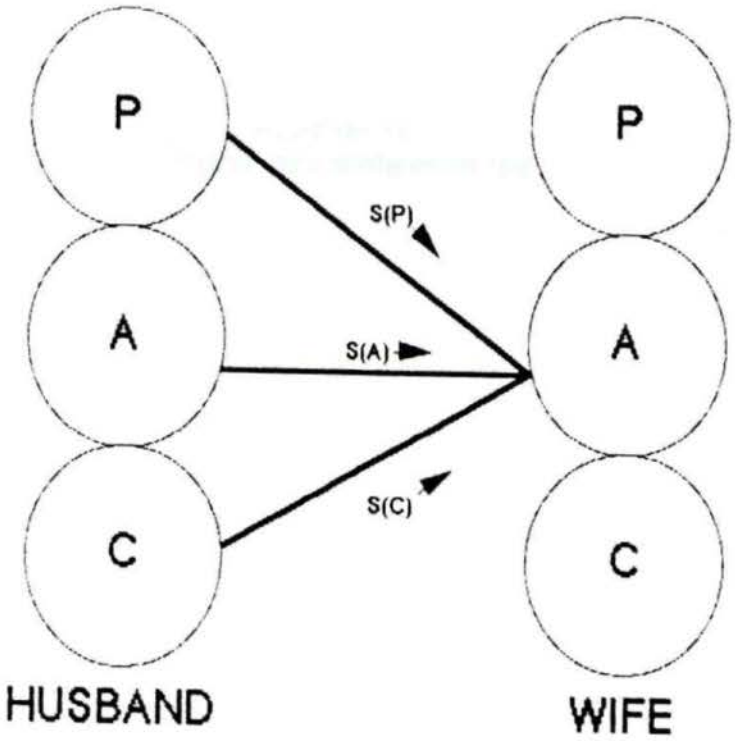
Caroms



Note. Adapted from Woollams & Brown, 1978, pp.65-77.

Appendix F
Bull's Eye Transactions

Bull's Eye Transactions



Husband to wife: "Perhaps we can talk about who does the checkbook S(A) if you'll let me help you S(P) and tell me what you want S(C)."
Wife: "That's why I'm frustrated -- I haven't been telling you what's bothering me and staying in touch with my feelings."

Note. "A bull's eye transaction is completed when the Adult interpretation is responded to with a switch in ego states an adult response, hence, a completed bull's eye transaction is Adult to Adult (Woollams & Brown, 1978, p.76).

Note.
S(A) = Statement to Adult
S(P) = Statement to Parent
S(C) = Statements to Child

Note. Adapted from Woollams & Brown, 1978, pp.65-77.

Appendix G
Original Direct/Inferential test

Original Direct/Inferential test

Please go with your first impression and check the most applicable answer. If it is at all possible please answer the question and do not use the "Don't know " category. Please answer the questions as honestly as possible. All test results are kept confidential and are coded to protect your identity.

1) I often feel that the person to whom I am speaking is beating around the bush.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

2) I have frequently had relationships end and not understood why they ended.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

3) My personal space is very important to me.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

4) I prefer a diplomatic appoach to asking directly for what I want.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

5) People who do not get to the point irritate me.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

6) I sometimes feel uncomfortable talking to someone whose face I cannot see.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

7) When I am speaking, I prefer that the person to whom I am speaking look at me.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

8) I feel uncomfortable talking if I cannot use my hands.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

9) I feel that some people are too honest.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

10) When a person is very honest it embarrasses me.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

11) I have walked in my sleep at some time in my adult life.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

12) When I was a teenager I felt comfortable expressing my feelings to one or both of my parents.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

13) I have a tendency to look directly into people's eyes when I am in a discussion with them.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

14) I have a tendency to move closer to some one when I want to make a point.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

15) I feel that most people I meet for the first time are uncritical of my appearance.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

16) In a group situation with people whom I have just met I feel comfortable initiating a conversation.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

17) I feel comfortable holding hands or hugging someone with whom I am in a relationship while other people are present.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

18) When someone talks about feeling cold physically I feel cold physically also.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

19) I have a tendency to tune out when someone is talking to me, and at times not hear what the other person is saying, because I am anxious to come up with my side of it.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

20) I feel that I learn and comprehend better by seeing and/or reading than by hearing.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

21) In a new class or lecture situation, I usually feel comfortable asking questions in front of the group.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

22) When expressing my ideas, I find it important to relate all the details leading up to the subject so that the other person can understand it completely.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

23) I enjoy relating to children.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

24) I find it easy to be at ease with my body movements, even when faced with unfamiliar people and circumstances.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

25) I prefer reading fiction over non-fiction.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

26) If I were to imagine sucking on a sour, juicy, bitter, yellow lemon, my mouth would water.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

27) I feel comfortable being complimented In front of others for something well done.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

28) I feel that I am a good conversationalist.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

29) I feel comfortable when complimentary attention is drawn to my physical body or appearance.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

30) I have awakened in the middle of the night and felt that I could not move my body or could not talk

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

31) As a child, I felt that I was more affected by the tone of voice of my parents than by what they actually said.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

32) When someone speaks of a fear of something and I have also experienced that fear, I tend to have a fearful or apprehensive feeling also.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

33) After an argument I tend to dwell on what I could or should have said.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

34) Sometimes I tune out when someone is speaking to me, maybe not even hearing what was said, and end up thinking of something totally off the subject.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

35) I sometimes feel uncomfortable or embarrassed when I am complimented in front of others.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

36) When I first meet someone I am often afraid that I will not know what to say and that I will freeze and not be able to speak.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

37) It makes me uncomfortable to have attention drawn to my body and/or physical appearance.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

38) I was molested as a child.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

39) When I am in an unfamiliar situation I cannot relaxed in my body movements.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

40) I prefer reading non-fiction over fiction.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

41) When someone describes a very bitter tast to me, I have difficulty physically feeling it.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

42) I generally see myself less favorably than others see me.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

43) I feel uncomfortable showing affection, such as holding hands or kissing, when others are present.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

44) In a new and unfamiliar situation, like a class, I feel uncomfortable drawing group attention to myself, even if I need to ask for something.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

45) I feel uneasy if someone I have just met looks me directly in the eyes when speaking to me, especially if the conversation is about me.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

46) In a group situation with new acquaintances I would feel uncomfortable with the attention I would receive from initiating a conversation.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

47) When I am in a relationship I find it difficult or embarrassing to verbalize my love for my partner.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

48) If my partner terminates a relationship that I did not wish to end, I find my thoughts drifting back to him or her, and my energies turning toward restoring the relationship to the point where I find it difficult to concentrate upon other things.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

49) My relationship is the number one priority in my life.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

50) I enjoy selecting and giving gifts to my partner.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

51) I feel that I demonstrate more outward love and affection to my partner than he or she does to me.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

52) I enjoy having my partner show me attention and/or flatter me when others are present.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

53) If I found that my partner had cheated on me, I would lay more blame on the third party for leading my partner astray than my partner for going astray.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

54) It is easier for me to express intimate feelings and attitudes than it is for my partner to do so.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

55) I would find it easy to accept my partner's children from a previous marriage or relationship.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

56) I am more jealous and/or possessive of my partner than my partner is of me.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

57) When someone tells me directly to do something I often feel angry or rebellious.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

58) I would like my partner to initiate sexual relations more often than he or she does at present.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

59) I often have cold hands and feet, even when the weather is warm.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

60) I am more socially outgoing and extroverted than my partner is.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

61) I want to have sex more often than my partner does.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

62) When someone seems angry I feel that I should do something to fix it.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

63) I feel that if I have to ask for affection it's not worth it.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

64) Having to wait in lines often makes me angry.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

65) I feel uncomfortable in crowds.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

66) I feel uncomfortable approaching strangers for information.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

67) I prefer talking to someone in person over talking on the phone.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

68) The tone of a person's voice is more important to me than what that person is saying.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

69) People often get impatient when I'm explaining something.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

70) Extended eye contact makes me uncomfortable.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

71) In conversations I am uncomfortable with long silences.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

72) If I'm going to talk about something important, (like asking for a raise, etc.), I prefer to do it in person rather than on the phone.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

73) "Peace at any price," would be a good motto for me.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

74) I feel uncomfortable if a person of the opposite sex, whom I have just met, touches me during a conversation.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

75) In a relationship I need a lot of time alone.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

76) I often feel lonely.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

77) I often feel misunderstood.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

78) People often interrupt me when I am speaking.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

79) The idea of getting up in front of a group of people to speak makes me uncomfortable.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

80) I would prefer a job where I did not have to deal with people.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

81) I feel like machines are as important as people.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

82) The thoughts in my head sometimes feel louder than the person speaking to me.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

83) I feel that I am good looking.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

84) When someone stares at me I feel scared.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

85) Most of my friends are of the opposite sex.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

86) I do not have very many platonic relationships with the opposite sex.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

87) People with loud voices make me uncomfortable.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

88) I often feel that nothing I do is good enough.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

89) People with soft voices make me uncomfortable.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

90) I feel threatened when someone comes within my personal space.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

91) I often feel that if people really knew me they would not like me.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

92) I feel angry when some one comes within my personal space.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

93) I often feel like my personal space is invaded.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

94) When I have a conflict with someone who is important to me, I am almost always the first to apologize.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

95) Conflict makes me feel so uncomfortable that I will give in, even if I feel that I am right.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

96) My parent of the opposite sex was physically affectionate when I was a child.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

97) I often feel that if a person loves me he or she should just know what I want.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

98) I sometimes feel, when a person to whom I am speaking does not look at me, like I do not exist.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

99) As a child I spent most of my time playing alone.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

100) I often awaken from a dream and am not sure if it is real or not.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

101) I sometimes have trouble distinguishing reality from fantasy.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

102) I desire sex more often when I am under stress.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

103) I grow very calm in an emergency.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

104) I find the opposite sex threatening.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

105) I often find myself having sexual thoughts about someonewhom I have either just met or have only casual or working contact.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

106) I consider myself a conformist.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

107) In most situations I do not feel the need to conform to what is going on around me.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

108) When someone in authority tells me to do something, I am uncomfortable if I do not comply.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

109) I often find myself trying to figure out what someopne else is thinking.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

110) When someone interrupts me as I am making an important point, I often feel that I should or can not interrupt the other person, and so I just give in and do not continue.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

111) When someone seems scared I feel that I should do something to fix it.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

112) When someone seems sad I feel that I should do something to fix it.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

113) I sometimes feel as if machines have a life of their own.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

114) I have a difficult time taking compliments in and really believe them

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

115) I am a perfectionist.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

116) When someone stares at me I feel angry.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

117) I feel threatened when a person of the opposite sex comes within my personal space.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

118) When anyone comes within my personal space for very long it feels sexual.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

119) When anyone comes within my personal space for very long it feels invasive.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

120) My parent of the opposite sex was not physically affectionate when I was a child.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

121) I often wish I could disappear.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

Appendix G (Continued)

122) My family of origin was not close.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

123) My family of origin was close.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

124) My parents were divorced before my ninth birthday.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

125) My parents marriage was not close.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

126) My parents marriage was close.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

127) I sometimes feel that no one can see me.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

128) One of my parents was alcoholic.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

129) One of my biological parents was alcoholic.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

130) I do not have much confidence.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

Appendix H

Direct/Inferential Test

Direct/Inferential Test

Please go with your first impression and check the most applicable answer. Please answer the questions as honestly as possible. All test results are kept confidential to protect your identity.

1) I often feel that the person to whom I am speaking is beating around the bush.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

2) I have frequently had relationships end and not understood why they ended.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

3) I feel uncomfortable talking if I cannot use my hands.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

4) When I was a teenager I felt comfortable expressing my feelings to one or both of my parents.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

5) I have a tendency to tune out when someone is talking to me, and at time not hear what the other person is saying, because I am anxious to come up with my side of it.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

6) As a child, I felt that I was more affected by the tone of voice of my parents than by what they actually said.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

7) I prefer reading non-fiction over fiction.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

8) I generally see myself less favorably than others see me.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

9) In a new and unfamiliar situation, like a class, I feel uncomfortable drawing group attention to myself, even if I need to ask for something.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

10) I feel uneasy if someone I have just met looks me directly in the eyes when speaking to me, especially if the conversation is about me.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

11) My relationship is the number one priority in my life.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

12) I feel that I demonstrate more outward love and affection to my partner than he or she does to me.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

13) I am more jealous and/or possessive of my partner than my partner is of me.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

14) When someone tells me directly to do something I often feel angry or rebellious.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

15) I would like my partner to initiate sexual relations more often than he or she does at present.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

16) I am more socially outgoing and extroverted than my partner is.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

17) I want to have sex more often than my partner does.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

18) I prefer talking to someone in person over talking on the phone.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

19) I feel uncomfortable if a person of the opposite sex, whom I have just met, touches me during a conversation.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

20) I often feel lonely.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

21) I often feel misunderstood.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

22) The thoughts in my head sometimes feel louder than the person speaking to me.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

23) I do not have very many platonic relationships with the opposite sex.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

24) I often feel that nothing I do is good enough.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

25) I feel threatened when someone comes within my personal space.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

26) I feel angry when someone comes within my personal space.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

27) I often feel like my personal space is invaded.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

28) I often feel that if a person loves me he or she should just know what I want.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

29) I sometimes have trouble distinguishing reality from fantasy.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

30) I desire sex more often when I am under stress.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

31) I grow very calm in an emergency.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

32) I find the opposite sex threatening.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

33) I consider myself a conformist.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

34) When someone in authority tells me to do something, I am uncomfortable if I do not comply.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

35) I sometimes feel as if machines have a life of their own.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

36) I have a difficult time taking compliments in and really believe them.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

37) I am a perfectionist.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

38) When anyone comes within my personal space for very long it feels sexual.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

39) When anyone comes within my personal space for very long it feels invasive.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

40) I often wish I could disappear.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

41) I sometimes feel that no one can see me.

STRONGLY DISAGREE | DISAGREE | DON'T KNOW | AGREE | STRONGLY AGREE

42) One of my parents was alcoholic.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

43) One of my biological parents was alcoholic.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

44) I do not have much confidence.

STRONGLY DISAGREE	DISAGREE	DON'T KNOW	AGREE	STRONGLY AGREE

Appendix I

Commands Script

Commands Script

Researcher seats subject and pats pockets for 6 sec. [Command 1]

Researcher on videoscreen: Thank you for participating in our research on perception. you should have a packet, likethis in front of you (researcher on screen leafs through the packet) [Command 2]. 6 sec pause. In a moment, you will be viewing some images on the screen in front of you. The images will flash very quickly on the screen. You will be given 10 sec to respond. Please go with your first impression and do not go back and change anything [Command 3]. 6 sec pause. Get ready.

Present slides 1-4.

Researcher on videoscreen: There are two more pages in your packet [Command 4]. 6 sec pause. You might want to turn to the next page [Command 5]. 6 sec pause. Get ready.

Present slides 5-8.

Researcher on videoscreen: The closer you get to the screen, the easier the images are to see [Command 6]. 6 sec pause.

Present slides 9-12.

Researcher on videoscreen: Put your pencil down now [Command 7]. 6 sec pause. Thank you again for your participation in our research. The researcher or his assistant will give you any further instructions.

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