The rocky road from actions to intentions

Newton, Elizabeth Louise, Ph.D.

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THE ROCKY ROAD FROM ACTIONS TO INTENTIONS

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By

ELIZABETH LOUISE NEWTON

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by

Elizabeth Newton

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I certify that I have read this thesis and that in my opinion it is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

_____
Lee Ross

I certify that I have read this thesis and that in my opinion it is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

_____
Mark Lepper

I certify that I have read this thesis and that in my opinion it is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

_____
Rod Kramer

Approved for the University Committee on Graduate Studies:

_____
Dean of Graduate Studies

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In memory of Dr. Robert Knox,

who gave me so much.

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ABSTRACT

When interacting with others, we often fail to anticipate factors in the situation or in our partners that may bias both how we interpret the intentions behind their behaviour and how they likewise analyze our actions and intentions. In particular, if we do not recognize how impoverished our behaviour is relative to our *thoughts* about our behaviour, we will greatly overestimate the ease with which our partners will be able to interpret this behaviour accurately. In this dissertation, two experimental demonstrations of people's overestimation of their partner's ability to read their behaviour are presented. In the first experiment, subjects were asked to finger-tap a popular tune of their choosing. Asked to estimate how likely it was that their listeners would be able to identify this tune, these subjects showed substantial overconfidence: tappers estimated that half the listeners would guess their tune; in reality, listeners were only able to identify two out of one hundred fifty tunes. Informed observers--people who knew what tune was being tapped but who had never served as tappers or listeners themselves--were also overconfident. They also estimated that fifty percent of listeners would be able to identify the tune. Male tappers and observers were more extreme than females in this failure to appreciate the listener's perspective. This result is discussed in the context of broader gender differences in perspective-taking. The second experiment illustrated how people may similarly overestimate the ability of others to identify the intentions behind their behaviour in a social interaction. Results showed that people did, however, recognize how impoverished *their* perspective was in terms of figuring out their partner's behaviour and were, therefore, less confident in their ability to read their partner's intent. Real-world implications of this bias are discussed.

Chapter One

Introduction

Did Mr and Mrs Jones *intend* to harm their child by denying her medical treatment?

Did Herbert *intend* to hit Frederick with the tennis ball?

Did you *intend* to snub Jack at the party?

The question of intention lies at the heart of our moral, legal and social systems. If it is apparent that we have behaved intentionally, we are to be held responsible. Intention, if discovered, may be considered even more important than actual behaviour. Regardless of how much they have been injured, people will retaliate less and become less angry if they believe that their partner did not mean them any harm. People will, on the other hand, retaliate more and become more angry when they learn that that their partner *did* intend them harm. Frederick may stop plotting Herbert's demise if he realizes that Herbert has always had bad aim. Woe is Herbert if Frederick discovers he is Wimbledon-bound (Nickel, 1974).

"The attribution of intentions is a necessary step in the assignment of more stable characteristics to the actor" (Jones & Davis, 1965). We look for intentionality to assess cause, blame, praise and, eventually, character---to reduce any ambiguity behind others' behaviour. In order to have confidence in this assessment we must assume that intentions are well-defined in behaviour. In assuming such, however, we overestimate both our skills in reading the intentions of others and our ability to translate our own intentions into behaviour.

Why our actions may not reflect our intentions

The Situation

Certain situational factors may interfere with a person's ability to communicate an intention successfully. Political decision-makers often mispredict their own behaviour for the frequent occasions when world politics exceeds the scope of their imaginations (Jervis, 1976). Likewise, social actors may mispredict their own ability to communicate an intention when situational complexities exceed their imaginations. Mavis may, for example, believe that she has successfully communicated her interest in Robert when she grabs his arm as they are walking. Robert may, on the other hand, think that Mavis is just nervous as they are walking through a more dangerous part of town. "A statement about a phenotype (e.g., a behavioural technique) does not permit unequivocal conclusions about the genotype (e.g., motivation) and vice-versa" (Frenkel-Brunswick in Heider, p.37). In order to communicate successfully, individuals must hold compatible construals of the situation in which they are interacting. With every difference in construal, the risk for miscommunication increases.

One might expect, thus, that the greater the difference between two people, the higher the likelihood that they will miscommunicate. Walburga von Raffler-Engel (1988) discusses such difficulties in cross-cultural communication. If two people from different cultures can talk to each other in some common language they will often erroneously assume that they also hold the extra-linguistic features of communication in common. Each person may then reinterpret their partner's intent in terms of their own cultural norms.

Although they may not give construal differences sufficient weight, most people are at least aware that *some* possibilty exists for misinterpretation when they are communicating cross-culturally.

> As many world travelers attest, there is something unsettling about being in a
>
> country in which the behaviour of the natives is ambiguous or mysterious. Is
>
> that man staring at me out of hostility or curiousity? Is this woman standing
>
> so close to me because she finds me attractive or is it just fashionable to
>
> stand nose to nose around here?

When, however, people are communicating within their own culture or, further, within their own tight-knit social group, they may overestimate their in-group similarities. They may assume, if the thought even occurs, that *of course* everybody is construing the situation in the same way. Given similar situational constraints one might expect that the greater the perceived *similarity* between two people, the higher the likelihood that they will miscommunicate.

In *every* communication we must, according to Walburga von Raffel- Engel (1988), consider the following factors:

a. How the *situation* in which communication takes place is categorized by the sender and by the receiver and how each of them believes the other categorizes it.

b. How the *context* of the communication is judged by the sender and the receiver and how each party believes the other judges it.

c. How the *interpersonal relationship* of the interactants is judged by either party and how it is believed to be judged by the other and for what reasons. Judgement of interpersonal

relationships is seen to involve: social status, age, gender affiliative type, degree of

familiarity and level of intelligence.

Mehrabian (1968), too, describes four factors that may impact communication accuracy:

attributes of the communicator, of the addressee, of the communication channels and of the

message. A misunderstanding about any one of these factors may result in

miscommunication.

With so many situational considerations, so many possible construals and hence so

much room for error, it is no wonder that our intentions may not be clear in our actions.

The Person

People may differ in their ability to translate their intentions into action. Certain people

may, for instance, have more developed social communication skills. A social

communication ability, according to Judith Hall (1977), is "any ability that aids the exchange

of information through spoken language (including all aspects of voice quality and

paralanguage) or through visual, spatial or even olfactory cues".

Hall lists action skills that would certainly aid in the communication of intention.

a. The ability to send non-verbal cues of affect and orientation to others.

b. The ability to express one's moods, thoughts and desires verbally.

c. The ability to coordinate verbal and nonverbal signals.

d. The ability to communicate in a socially appropriate fashion.

Abrahamson (1966) adds: "a great deal of discrepant communication undoubtedly occurs

because we 'say' one thing overtly (verbally) but another covertly (behaviourally).

Coordination of these two systems, within the individual, is thus crucial for effective communication." (p. 34)

High sending accuracy is not considered a uniquely positive talent. Zuckerman and Larrance (1977), for instance, propose that people with high perceived encoding ability (good senders) may avoid others if they fear that by revealing their emotions they will make themselves more vulnerable. Nevertheless, the ability to communicate one's intentions when necessary is generally advantageous.

Who are these people with superior social communication skills?

Researchers have looked for correlations between social communication ability, or "sending accuracy", and various personality attributes. Their research, although disparate, converges on the positive relationship between heightened self and other awareness and superior social communication skills.

If people are self-aware---if, for instance, they are unambiguous about exactly *what* it is they are trying to convey and if they recognize the strengths and weaknesses of their particular communicating style---they will be more successful in communicating their intent. People with better self-understanding are more self-disclosing (Franzoi & Davis, 1985). High disclosers have also had more occasion to discover the strengths and weaknesses of their communicating style. We might then expect high self-disclosers to be more skilled in expressing their intentions. Disclosure increases with age. Bender (1967) has found that heterosexual females and homosexual males are the most disclosing. Heterosexual males also tend to disclose less negative personal information than females (Naifeh & Smith, 1984). Does the ability to convey our intentions show a similar relationship to "gender role" or a

similar increase with age? One might also expect that high self-esteem would be associated with greater self-efficacy and hence greater efficiency in communication. The nature of this relationship, however, is unclear as self-esteem has been positively linked to sending accuracy in some studies (Buck et al. 1979) but not in others (Notarius & Levenson, 1979).

People who are more sensitive to the predispositions, expectations, biases and intentions of others can better anticipate how best to communicate their *own* intentions to a particular audience. A sensitivity to the social environment allows perceptive actors to recognize and correct those situations where the audience has misread the intent behind their behaviour. High empathy, for instance, has been linked to high sending accuracy (Notarius & Levenson, 1979). Adult women are both more empathic and better senders than adult men. This, according to Buck (1977), is probably the result of greater social pressure on women to hone their communication and empathic skills. This gender difference was much smaller among pre-school children. It was only as boys got older (between 3.5 and 6 years) that their sending accuracy lagged behind the girls. The depressed person, on the other hand, is often too self-preoccupied to recognize the subtle demands and reactions in the social environment. Not surprisingly, then, depression has been associated with low sending accuracy (Gerson & Perlman, 1979; Prachkin et al. 1977).

Social communication ability has also been correlated with measures of self-monitoring (Snyder, 1974). High self-monitors were more skilled than low self-monitors in accurately communicating some intended emotion. They were able, at the experimenter's request, to be happy then sad then fearful then angry in rapid succession. However, this emoting was merely acting--a useful talent of the high self-monitor. Are high self-monitors also more skilled at communicating *felt* emotion and intent? High self-monitors are concerned with

behavioural appropriateness. If provided with the opportunity they will seek information

about peer behaviour for a longer period and more frequently than low self-monitors (Snyder,

1974). High self-monitors tailor their behaviour to the situation (Snyder & Swann, 1976).

What others witness may not be a translation of true emotion or attitude but rather a powerful

"intention" to fit in or, perhaps more precisely, not to stand out. When driven to express

some potentially distinguishing, non-normative sentiment, high self-monitors may be more

like people with a high need for approval who are *less* skilled at communicating emotion than

people with low approval need (Zaidel & Mehrabian, 1969).

We see, then, a number of personal and situational reasons why an intention may or may

not be unveiled in action. It is likely that personal and situational factors will interact; certain

people may be particularly poor at conveying certain intentions in certain situations. A

manager may, after years of experience, be highly confident in her ability to communicate

intentions to an employee. She may no longer question whether or not she has been

understood. If thrown into a novel situation--the normally confident employee is suddenly

sensitive and insecure after a major publisher has rejected his novel--the manager may be

particularly unlikely to sense that she has been misread. As usual, she hands him a corrected

draft of his work without commenting on it; he, suddenly, inteprets her silence as

disapproval.

The Strong Intention

Paradoxically, a situation in which we all may be especially unlikely to convey our

intentions is one in which our intentions are coupled with particularly *strong* affect. The

more we want something *and* the more worried we are about exposing our vulnerabilities by

revealing our intentions, the less likely it seems that this intention will be translated into behaviour. We may be ambivalent about whether or not we should risk conveying an "accurate" picture of our intentions. This ambivalence may cause us to inhibit our behaviour to the point that our intentions could no longer be discernible from our behaviour. We are, however, too immersed in our affectively highlighted intentions to recognize how much our behaviour has been inhibited. When considered in this affectively charged context, every small behaviour we perform will be exagerrated in our minds and we will assume that we have made our intentions clear. That is, we become so overwhelmed by the salience of emotionally threatening intentions that even the most minute of corresponding behaviours will trigger such a wealth of emotions that we will overcompensate by underacting. Every little relevant action will seem all-revealing of intention; behaviour will be minimalized because of a subjectively vivid yet objectively imperceptible overspill of emotion. How could such a seemingly maladaptive coupling--the stronger the intention, the weaker the behaviour--be so pervasive?

This seems to violate our more commonsensical notion that the stronger the intention, the stronger the behaviour. In one study of Brazilian children, for instance, researchers found that by five years of age children "understood" that as intention intensity increases, behaviour increases (positive relation). Between the ages of seven to nine, children "learn" that as intention intensity decreases, behaviour decreases (negative relation) (Vikan & dos Santos, 1987).

Although people *do* have a strong need for self-expression, they may be inhibited by an even stronger need for self-defense, noncommunication and withdrawal (Langs, 1987). We may bury our intended message in layers of self-protective encoding if we sense danger either

from others or within ourselves. Anxiety, disturbing affect or threat will automatically

invoke unconscious encoding. This occurs "whenever open and direct communication is

perceived as dangerous internally and as a source of anxiety, or externally as a source of

potential disturbance of an interpersonal relationship" (Langs, 1987). The fear that

communicating openly is dangerous may itself be salient or unconcious. This fear, whether

conscious or unconscious, may be fueling an approach-avoidance conflict and an

ambivalence about communicating unequivocally. We may not, however, recognize how this

ambivalence has inhibited out behaviour.

This minimalized behaviour can be contrasted with the hypothesized "overkill signal"

(Morris, 1982). The "overkill signalling behaviour" is a behaviour that is inappropriately

intense for the context---the exaggerated guffaw, the overwrought grimace. When we feel

insufficiently moved, we may compensate by overacting:

> He says to himself (unconsciously , of course): this joke is worth a Strength
>
> Four Laugh, but I am suffering from a Strength Three Sadness. To balance
>
> this I must give a Strength Seven Laugh and that will make the equation
>
> right--he is pushed this way because of a feeling that he must erect a really
>
> powerful barrier against the collapse of his inhibitions, the inhibitions which
>
> are helping him to conceal his true mood (Morris, 1982. p 117)

Thus we underact with minimalized behaviour and we overact with overkill signalling.

In both cases we assume that we have conveyed the impression that we intended. Yet, in the

first case we have hidden our intentions and in the latter we have revealed that which we

meant to hide.

There are certain difficult social situations where our strong intentions, our perceptions of emotional threat and our resulting social anxiety may be particularly likely to muffle our self-expression.

> Social anxiety arises when people are motivated to make a preferred
>
> impression on real or imagined audiences but doubt they will do so, and thus
>
> perceive or imagine unsatisfactory evaluative reactions from subjectively
>
> important audiences (Schlenker et al. , 1982).

Certain social situations have been rated as generally difficult, distressing and likely to elicit "social nervousness" (Levenson & Gottman, 1978):

a. assertive situations

b. public performances

c. conflict, dealing with hostile people

d. meeting strangers

e. dealing with people in authority

f. fear of disapproval, criticism, making mistakes, looking foolish.

g. intimate situations, especially with the opposite sex.

We communicate much less effectively when we are apprehensive of evaluation (Gynther, 1957). Yet, in any of these situations even the slightest behavioural communication of intent may immediately assume exaggerated cognitive proportions. We are so self-conscious and so emotionally alert that every action sets off a wave of emotional associations. Unaware of this mental exaggeration *after* the fact, we will look to our cognitions and emotions to determine the extent to which we have communicated our

intention. Seeing this now inflated mental representation, we will assume that we have more than amply communicated our intent and we will retreat even further. Our anxious retreat from emotional expression may increase our physiological arousal (Lanzetta & Kleck, 1970; Torangeau & Ellsworth, 1978) thereby narrowing our focus and highlighting even further the strength of our emotions and, we *assume*, the strength of our behaviour. Thus, in a reversal of Bem's self-perception theory, we look to our internal state to figure out how we behaved. Internally, we may be struck by the salience of our intentions and the vividness of our emotions, externally our behaviour may be confusing and ambiguous. We may be ambivalent about expressing our attraction for our companion and we will inhibit our behaviour; yet we will be too aware of our emotions and intentions to recognize the extent of this inhibition.

> In the case of young lovers experiencing the first intense emotions of mutual
> attraction, there are some very noticeable patterns of gazing. If both boy and
> girl are acutely shy, they may spend a lot of time looking away from each
> other. As they talk, they exchange only the briefest of glances. For most of
> the time they will stare down at the ground or gaze in opposite directions.
> Sometimes their deflected gaze is so intent that it seems that there must be
> something fascinating lying on the ground near their feet. Their eyes are
> riveted here, as if concentrating hard on some tiny speck of dust. Internally,
> it is the conflict between fear and sexual attraction that is creating the
> problem of where to direct their eyes.
>
> (Morris, 1985, p. 71)

Even though they mirror each other's behaviour, each person may still be unsure of what the other's averted glance is signalling--love? anger? boredom? fear? It would be too presumptous, too fortuitous and too potentially disturbing to conclude that "this must be love". Yet each person may simultaneously assume that as their *own* feelings of attraction are so strong, their partner must surely recognize the behavioural signs. Everything I am doing screams out my intent. My behaviour---read looking nervously away and mumbling inaudibly---is so *obviously* signalling my attraction. Yet, as Rogers (1952) tells us: ".. the stronger our feelings, the more likely it is that there will be no mutual element in communication. There will be just two ideas, two feelings, two judgements missing each other in psychological space."

Why we can't see that our intentions have not been transmitted

How is it that we can experience such an objectively inadequate behaviour as so seemingly revealing? It is not that we, in general, consider such acts to be self-explanatory. The same behaviour in others would seem ambiguous at best. *Why* is my partner refusing to look at me and speaking too quietly for me to hear? Rather, it seems that by dwelling on our intentions we distance ourselves from, and thereby lose any objectivity about, our behaviour.

Although we have intended to send a specific message, what we have actually conveyed is often outside our conscious awareness (Langs, 1987). Goffman (1959) argues that if we are focusing more attention on our own thoughts than on our interaction, we will be concentrating less on what we are saying and more on whether or not we are creating a favourable impression. Here, then, we are focusing more on our intentions---are they being translated into action? Of *course* they are, I feel them so strongly---and less on our actual behaviour or the dynamics of the interaction. "It is just when emotions are strongest that it is

most difficult to achieve the frame of reference of the other person or group. Yet, it is then that the attitude is most needed if communication is to be established." (Rogers, 1952)

Our unilateral attentional focus might be explained in terms of action theory. Wegner (1984) writes that actions have a number of identities that are arranged hierarchically. Lower level identities deal with the specific details of an action---I am opening the door and hiding the brown velvet painting in the closet. Higher level identities are concerned with why the action is taken (because it's brown velvet) and the implications of an action---will Aunt Hetty notice that it's gone? Hopefully not. Would hanging the brown velvet painting be more painful than the wrath of Aunt Hetty? Yes. The higher level of identification will usually be the more salient. The more salient the higher level identity (the stronger our intentions), the less salient the lower level identity (the less we concentrate on our behaviour). Thus, we have been too preoccupied to notice that our behaviour has been inadequate in conveying our intentions. This preoccupation may be compared to the notion of "cognitive busyness". Gilbert (1988) has found that when people are cognitively rehearsing information they are less likely to consider situational constraints that may have affected others' behaviour. Too "busy" to use all the information available to them, they will resort to dispositional inference. Perhaps, then, people are too "busy" rehearsing or dwelling on their intentions to consider how interpretation of their behaviour may be constrained by this particular situation. They are either unaware of or unable to recognize the feedback signals from others that would indicate to them that they had not been understood. They will thus resort to dispositional or *intentional* self-inference and assume that "they did what they felt".

With time, we might expect that the strength of the memory of our intention will outweigh the memory of the behaviour from which we were detached. Kravilashvili (1987)

has found that the more important our intention has been considered to be and the more that we have involuntarily rehearsed an intention in mind, the more likely this intention is to be remembered. Thus, we will remember our intentions, assume we behaved appropriately and judge the situation accordingly.

An Exception to the rule

Of course, there are times when we will realize that we have failed to divulge our intentions. We may work harder to perform our intended action. Heckhausen notes two additional ways that we may respond to such a failure: we may abandon the intention all together or we may hold onto the intention even though it cannot be realized. Freud supports this notion of an intention laying dormant:

> Normal behaviour after an intention has been formed coincides fully with the experimentally-produced behaviour of people to whom what is described as a "post hypnotic suggestion at long range" has been given under hypnosis...The suggested intention slumbers on in the person concerned until the time for it's execution approaches. Then it awakes and impels him to perform the action (p. 152, 1965).

Our unrealized intention may remain, but the barriers to its'expression are still in the way. If we retain an unachievable intention it will, according to Heckhausen, take up valuable working memory space thereby impairing the fulfillment of other intentions. Thus, Heckhausen proposes, we have a limited capacity for translating intention into action.

How others will judge us

How then are others going to interpret our ambiguous behaviour? Will they question our intentions or will they accept our behaviour as ambiguous and uninterpretable?

Again, several situational and personal factors may direct our partners' analysis of our behaviour. If our partners sense that they have been sent a cryptically encoded message, they may react in a number of ways (Langs, 1984). We know that they will be more likely to make intentional rather than situational attributions about our behaviour. They may consciously or unconsciously detect an underlying message and, either to protect the self or to provoke the other, find some way to ignore any latent meaning. They may, on the other hand, confront and question us about the meaning of our disguised communication. In most circumstances, however, such a direct approach is inappropriate:

> For many nonverbal cues it may be hard to describe what it was that the
>
> person did, and even if we can describe it, we are timid raising the issue,
>
> because the ambiguity of the cue means that we may be wrong about it
>
> (Hastorf, Schneider & Ellsworth, 1979).

People will usually attempt to unriddle a message or behaviour no matter how ambiguous it may be. Rather than seek clarification from the sender, they will often rely on their own interpretation. Boswell (1986), for example, compared subjects' interpretations of poetic metaphors with their interpretations of randomly generated words combined into nonsensical metaphors. Subjects could easily find significant meaning in both types of metaphor. They were also quite confident in both cases that theirs was the correct interpretation!

The perceiver seeks to find *sufficient reason* why the person acted and why the act took on a particular form..the perceiver's explanation comes to a stop when an intention or motive is assigned that has the quality of being reason enough" (Jones & Davis, 1965. p. 220)

There are two common errors that people may commit when considering a particular message. They may take at "face value" a message with latent meaning (the notion of "face value" itself being very dependent on each particular person's idiosyncratic construal of the situation) or they may attribute latent meaning to a message that *should* be taken at face value. Jervis (1976) adds: "what the sender means to be central may strike the receiver as unimportant or unintelligible. What is obvious to the former may be hopelessly ambiguous to the latter or, worse yet, have a clear meaning that is different from the intended one ."

The Person

People may differ in their ability to infer intention from action. Hall (1977) lists certain skills that may be involved in understanding what others are trying to communicate to us. They include the ability to:

a. interpret nonverbally communicated affect, interpersonal orientation and intentions.

b. decode verbally communicated meaning, including both the literal and the metaphoric meanings.

c. compare and contrast verbal and non-verbal meanings in order to detect messages characterized by verbal-nonverbal discrepancies, such as sarcasm, and in order to note how nonverbal cues may qualify a verbal message.

d. understand social contexts, roles and social scripts.

e. *attend to communications that may be unconscious on the part of the sender--an inadvertent communication of anxiety, for example.*

"Non-verbal information is usually more ambiguous..as..its'domain is the domain of inner feelings about oneself and one's relationships with others" (Hastorf et al.,1979). Yet, "He that has eyes to see and ears to hear may convince himself that no mortal can keep a secret. If his lips are silent, he chatters with his fingertips, betrayal oozes out of him at every pore" (Freud, 1959, p.94).

When verbal and nonverbal channels convey different meanings, good receivers are especially likely to have greater trust in nonverbal signals (Mehrabian, 1972). The good "receiver" will notice what Morris (1982) terms "displacement activities". That is, small, seemingly irrelevant movements--rapid knee movements, jiggling keys--during moments of inner conflict or frustration.

Buck (1983) sets out three factors that may explain a person's nonverbal receiving ability in some particular situation:

a. experience and skill in decoding nonverbal behaviour in general.

b. experience and skill in decoding the nonverbal behaviour of this specific person.

c. the nonverbal expressiveness of the sender.

High receiving ability, like high sending ability, may not be considered a uniquely positive talent. There are certain times where the ability to detect subtle, perhaps even fleeting, emotions may be more disturbing than it is useful. Nevertheless, the advantages of being able to interpret the behaviour of others accurately are obvious.

Who are these people with superior social "reading" skills?

Once again, we find a positive relationship between heightened other awareness, social concern and superior reading skills. People who are more sensitive to the predispositions, expectations and biases of others are also better equipped to interpret their behaviour and to discern their intentions. Thus, people who show high empathy and high perspective taking ability (PTA) are particularly accurate in reading others. High PTA's became more accurate with experience whereas low PTA's did not (Davis, 1981).

It is important to consider how *motivated* people are to decode the behaviour of others. Not all people are generally motivated to understand the behaviour of others.

> A striking case is the calculating prodigy who was so prone to see the world
> in terms of numerical combinations that, after seeing a play, he was entirely
> unaffected by the scene but instead informed his hosts of the exact number of
> words uttered by the various actors, and of the number of steps taken by
> others in their dances (Ball, in Heider, p.57).

With more interest, we might expect more accuracy (DePaulo et al. 1983). People are, for example, more detailed and more organized in their impressions when asked to understand rather than evaluate others (Mahood & Press, 1975). People involved in situations in which there is a high cost for misreading intentions---violent prisoners, for example---may be particularly motivated to develop their receiving skills. Certain people--psychologists and priests, for example--may be more generally interested in seeking a deeper understanding of others' behaviour. High self-monitors use information from others in order to tailor their own behaviour to the situation. They are, thus, both especially motivated and particularly skilled at reading others. Most people will be deeply motivated in only certain situations--we

are usually more interested in understanding why our spouses, rather than our dry-cleaners, seem irritable.

Women are found to be generally superior in decoding behaviour (Hall, 1977). This gender difference may, however, merely reflect a *motivational* difference stemming from a power inequity. The superior social sensitivity of a woman may merely be the superior sensitivity of those relegated to a subourdinate role. Subourdinates must be able to anticipate and interpret the thoughts and behaviours of their superiors in order to cater to their needs and gain their approval. When the leader/subourdinate role is crossed with gender, women show no advantage over men in social sensitivity. "Women's intuition would perhaps more accurately be referred to as subourdinates' intuition" (Snodgrass, p. 152, 1985).

Their Expectations and Intentions

How our partners judge our intentions will, of course, be influenced by their own intentions and expectations. How they see us behave will be dramatically affected by how they expect us to behave. If, for instance, they are expecting to be rejected, they may interpret our ambiguous behaviour--the averted glance, the inaudible mumbling--as boredom or rejection. Einhorn and Hogarth (1978) describe the overconfidence with which people hold their expectations. If available information is processed, it is often distorted to confirm the individual's initial hypothesis.

People can derive from the same information their own idiosyncratic, even contradictory, conclusions. After watching a particularly violent football game, both Princeton and Dartmouth fans saw the other team as the *clear* provokers (Hastorf & Cantril,

1954). In a similarly biased construal--dubbed the "hostile media effect"--both Pro-Arab and Pro-Israeli partisans felt that television news coverage of the 1982 massacre of civilians in Lebanese refugee camps *clearly* favoured the other side (Vallone, Ross & Lepper, 1985).

People may be biased by broad expectations they apply to communications in general. They may, for example, be biased by "the assumed desirability of effects", :

> As the perceiver considers the multiple effects of action, he will usually
>
> assume that some of the effects were more desirable to the actor, and
>
> therefore more diagnostic of his intentions than others. These assumptions
>
> by the perceiver tend to operate as hypotheses which bias the inference
>
> process. Thus, upon observing that an action leads to a normally desirable
>
> effect, the perceiver usually will believe that most persons, including the
>
> present actor, find that effect desirable. The achievement of this effect will
>
> therefore be regarded as the actor's most likely intention. The perceiver
>
> may, of course, be wrong in his assumptions about people in general. This
>
> particular actor may have intended to produce effcts in the choice area that
>
> most people would be indifferent about or even feel negatively toward.
>
> Thus, cultural assumptions or social stereotypes may obscure the true
>
> significance of an action (Jones & Davis, 1965, p. 222).

Our partners will also have certain expectations for our particular interactions.

> Matters are not helped when receivers are attuned to subtleties, because in
>
> searching for subtleties the impact of the receiver's expectations is
>
> increased......a message from the president of a firm will mean one thing to

someone working on increasing sales and quite another to someone in charge

of cutting costs..and neither of these interpretations may coincide with what

the president had in mind (Jervis, 1976, p. 205).

Researchers have illustrated the biasing effects of prior expectations. "The vain man

will think that everybody looks at him because of his positive value; the guilty man will think

they do so because of his negative value". Aggressive people tend to see their behaviour as

adaptive in a hostile world populated with similarily aggressive people. It follows that when

faced with ambiguous action, aggressive children are more likely than others to attribute

hostile intent to their peers (Dodge, 1987). Kelley and Stahelski (1970) discovered

misperceptions of intention in a mixed motive prisoner's dilemma game. Competitive

players often wrongly expected that their partners would also be competitive. Schiffenbauer

(1974) found a similar effect when he asked subjects to judge which emotion various

photographed people were feeling. Emotionally aroused subjects more often attributed their

own type of emotion and a similar intensity of emotion to the photographed person.

Thus we will often project our own thoughts and emotions onto our environments:

> I was sitting in a tram and reflecting on the fact that many of the friends of
>
> my youth who had always been taken as frail and weakly were now able to
>
> endure the most severe hardships--ones which would quite certainly be too
>
> much for me. While in the middle of this disagreeable train of thought, I
>
> read, only half attentively, a word in large black letters on a shop-sign that
>
> we were passing: "Iron Constitution". A moment later it struck me that this
>
> word was an inappropriate one to be found on the board of a business firm. I
>
> turned round hastily and catching another glimpse of the sign saw that it

really read : "Iron Construction". (Sachs ibid--in Freud, 1965)

After having allowed our expectations to affect our perceptions, we can then expect our partners' expectations to drive their responding behaviours. If they expected to be rejected and then interpreted our behaviour as rejecting, we might now expect our partners to reject us in turn. Similarily, subjects have been found to behave more competitively in a game when they were led to expect that their partner disliked them (Jones & Panitch, 1971) or that their partner was generally a hostile person (Snyder & Swann, 1978). It is only if we have companions who can separate themselves from their own interests long enough to focus on *our* intentions, that we might expect them to be able to second-guess accurately the motivation behind our behaviour.

Judging others' responses in the context of our intention rather than our actual behaviour

Having assumed that we have succeeded (naturally) in conveying our intentions, we now judge our partner's behaviour as a direct response to that intention. What we *should* be doing, however, is considering our partner's behaviour as a direct response to our actual behaviour--behaviour which we may, unfortunately, have inflated mentally. So many responses may then seem inadequate given our intentions. These same behaviours may, however, be a fitting response to the behaviour that our partner witnessed.

It is the peculiar characteristic of the...Hobbesian fear...that you yourself

vividly feel the terrible fear that you have of the other party, but you cannot

enter into the other man's counter-fear, or even understand why he should be

particularly nervous. For you know that you yourself mean no harm and that

you want nothing from him save guarantees for your own safety; and it is

never possible for you to realize or remember properly that he cannot see the

inside of your mind. He can never have the same assurance of your

intentions that you have. As this operates on both sides, the Chinese puzzle

is complete in all of its interlockings and neither party can see the nature of

the predicament he is in for each only imagines that the other party is being

hostile and unreasonable. (Herbert Butterfield, quoted in Jervis, 1976, p 69).

We will be much more prone to make a dispositional inference about our partner than

we will be to make the situational inference that it was something *we* did that is eliciting this

response (Ross, 1980). "The crucial question is the degree to which a state's actions...have

transformed the other state's intentions" (Jervis, 1976). Yet, we know that people will often

underestimate their own role in eliciting the behaviour of others. Thus, Kelly and Stahelski's

competitors did not realize the influence that their behaviour had on their initially cooperative

counterparts. Rather, they just took the "cooperators" now competitive behaviour as further

evidence as to the competitive nature of the world.

What if we come to realize that our behaviour did *not* reflect our intention and that our

partner's response is thus *quite* appropriate? Even if we discover that we have been

misunderstood and attempt to tell our partner our true intentions, it may be too late. If a

person's self-description and behaviour are contradictory, observers will rely more on

behaviour in forming an impression unless they are aware of powerful situational pressures

that are compelling this person to self-discrepant behaviour. Our partners may feel that our

vivid, concrete behaviour is more telling than our later disclaimers. Furthermore, they have invested too much in formulating and acting out their response. They may merely conclude that we are now regretting what we *surely* intended in the past. This may be similar to what happens occasionally when we are misheard: "Did you say these pants make me look fat??" "No, I said they make you look *fit!*" Even *after* you have corrected your companion, they may still seem to harbour feelings relevant to the intent they mispresumed ("I can't *believe* that you would say something like that--on today of *all* days'). The mispresumed statement or behaviour has aroused so much emotion, activated so much cognitive processing that-- perhaps in some unexpected twist of effort justification theory--it is both difficult and wasteful to dismiss the entire event as a misunderstanding.

Ross, Lepper, and Hubbard (1975) have documented a similar perseverance of initial impressions. After drawing inferences about a particular person, subjects learned that the information on which these inferences were based was bogus. Yet, even after this information had been discredited, people clung to their first impressions. It may, then, be quite difficult to convince our partners to completely ignore an intention that they have falsely attributed to us.

How we can better express our intentions

If we can break the intense focus on ourselves and learn to focus externally--on our partners and on the situation in which we are interacting--we may be better able to translate our intentions into a "language" that our partners can understand. We must remain sensitive to the fact that our partners may also be biased by their own intentions and expectations. We must recognize that no behaviour is objective, it is our partners' *perceptions* of our behaviour that are most important.

Grice (1975) offers guidelines to maximally efficient communication:

Maxim of Quality: Be non-spurious (speak the truth, be sincere).

Maxim of Quantity: Don't say more or less than is required.

Maxim of Relevance: Be relevant.

Maxim of Manner: Be perspicuous; avoid ambiguity and obscurity.

Speakers, according to Higgins (1981), should: "take the listener's characteristics into account, convey the truth as one sees it, try to be understood, give neither too much nor too little information and be relevant." Rogers (1952) carries this notion to extremes: "Each person can speak up for himself only after he has first restated the ideas and feelings of the previous speaker accurately and to that speaker's satisfaction".

How we can learn to detect mistranslated intentions in the behaviour of others

Will an improvement in our ability to convey our intentions ensure an improvement in our ability to detect the intentions of others? Research on the relationship between sending accuracy and receiving ability has been contradictory. Some have found a positive relationship (Zuckerman, 1975), while others have found no relationship (Harper, 1979). How then can we become better readers? Higgins (1981) suggests: "Listeners should take the speaker's characteristics into account, determine the speaker's communicative intent, pay attention to the message, be prepared for receiving it and try to understand it." The main question, however, remains: *how* do we acomplish this? Because people differ greatly in their "natural expressiveness" (Lanzetta & Kleck, 1970), it will be difficult to distinguish between what is and what is not an undeveloped intention.

Langs (1983) proposes that we may improve our ability to understand others if we are

aware of the following seven signs of a hidden message:

a. any message incomplete, illogical or unrealistic is likely to contain hidden meaning.

b. contradictory messages.

c. a discordance between intended and received messages. (Langs does not reveal how to

discover true intent)

d. inexplicable errors--slips of the tongue, memory lapse.

e. highly charged emotional content

f. emotional symptoms--phobias, obsessions, anxiety, psychosomatic

   disorders.

Any interpretation based on one or two of these "signs" could be tentative at best.

Nevertheless, because we are more vigilant to verbal and nonverbal channels of

communication, we will be less hasty in assuming that we accurately understood our

partner's intent. With less unquestionning self-confidence we will become more accurate in

unearthing our partner's true intentions.

Thus, one of our greatest mistakes as social perceivers is our tendency to believe that

others see the world as we see it. When we do not recognize how our subjective thought

processes influence how we interpret the world, we expect others to construe situations just as

we do (Nisbett & Ross, 1980). Having established this false consensus, we can then easily

discount anyone who might have some completely diffcrent (read dillusioned!) interpretation.

We have learnt a great deal about how this egocentric bias may colour attributions both

about our own behaviour and about the behaviour of others. Our *fundamental* attribution

error (Ross, 1977) is our tendency to attribute our own behaviour to the situation and the

behaviour of others to their dispositions. Researchers have shown us a number of ways these biases may affect our perception: we may be overconfident in our social predictions, extreme in our personal judgements, unrelenting in our stereotyping and idiosyncratic in our recall. What seems to be missing, however, is a discussion of the role of subjective construal in the communication and interpretation of intent. The ability to define intent is an important component of social interaction; it is important in understanding others' behaviour--*Why* did he grimace when I started singing--and in formulating our own behaviour--if I ignore him he will realize that I *don't* appreciate his grimacing.

Misperceptions of intent seem inevitable. Others have no direct access to our intent; they cannot see how our beliefs and expectations lead us to a particular intention and a subsequent behaviour. This process may, on the other hand, be extraordinarily vivid to us: "I would love to ask Sir Heatheringbone about his latest book...but I'd hate to be pushy...and he's probably tired of people fawning over him anyway...and he may not even remember me. Maybe I won't say anything". We assume that others will construe our behaviour as we have intended it---"if Sir Heatheringbone even notices me he will realize that I don't want to bother him". We may not stop to consider that others may have their own beliefs and expectations that will lead them to construe our behaviour *quite* differently: Sir Heatheringbone, concerned that his new book is too introspective, may assume--quite rationally within the context of his own expectations--that we were too embarassed to stop and speak to him this time because, as expected, we did not like his book. In many cases we will not discover that we have miscommunicated or misperceived intent. We may not have the opportunity or we may consider it inappropriate to bring up the incident again. Our construals of the situation will, thus, remain intact. I will assume that Sir Heatheringbone appreciated my leaving him alone, and he will assume that I hate his book.

We may be particularly intransigent in our construals because of the *hedonic relevance* of so many of these interactions. We are so involved, so much a part of the event, that we expect that the event will naturally look the same to others. Sally assumes that Joe will feel badly because he stepped on her toe and caused her pain. Joe, meanwhile, is waiting for Sally to apologize for tripping over his foot and causing *him* pain. If an event has significant hedonic relevance--if, for instance, we are interacting with someone we want to impress or if an interaction has left us frustrated and angry--we may infer intent in behaviour that was not even intentionally directed towards us. Simon may assume that Bart is ignoring him; Bart may be so caught up in his thoughts that he hasn't even seen Simon.

With certain people, employees, doctors, professors, romantic interests, we may be particularly motivated to receive some sort of evaluative feedback: Am I performing well? Is my prognosis good? Do you like me? If we are not receiving sufficient feedback or if we believe that these people are witholding information from us, we become hypervigilant and oversensitive to any behaviour that could possibly be construed as evaluative. By inferring intent--Mr. Heimlitz didn't smile when he said hello, he must want me to know he's disappointed with my work--we create information, albeit misguided, which we can now use to guide our future actions: I'll stay at the office late tonight and resubmit another project tommorow.

If we have strong expectations, we may also inappropriately infer confirmatory intent in others. If, for example, we feel guilty about something we did, we may interpret the most unrelated of behaviours as clear disapproval intended for us. We may also assume that behaviour is intentionally motivated when, in reality, it has been situationally determined. We may fail to make adequate inferential allowance for mediating factors that may be

guiding others' behaviour. Such a misattribution seems particularly likely if the interaction has caused us some affect for which we want to assess praise or blame. If we go to register a complaint, we may assume that the clerk is annoyed at us, asking us intrusive questions and speaking loudly to embarrass us into withdrawing our complaint. We may fail to discount sufficiently for the fact that this is an uncomfortable situation: we were already annoyed when we arrived, the clerk is asking the requisite questions in a job for which thunderous locution is rewarded! It is much more personally empowering to attribute an emotion to a person than to a situation. Rather than passively accept emotions inspired by a situation, we can now actively vent our emotions. By attributing personal intent we can express our pleasure or, in the case of our poor clerk, voice our anger and in so doing relieve ourselves of unexpressed affect.

Thus, when we are interacting we often do not anticipate factors in the situation or in our partners that may affect and bias both how we interpret the intent driving their behaviour and how they so analyze our behaviour. Others may, as a result, assume that we had one intent--an intent that fits into their expectations for and construal of the situation--when, in fact, we had some different intent or, perhaps, *no* particular intent at all. If we have certain clear intentions that are driving our behaviour--to treat our partners kindly, for instance--we may just assume that our partners could clearly read this intent from our behaviour. If we have behaved with no particular intent towards our partners---if, for instance, we consider our behaviour irrelevant or incidental to our partners or if it is a powerful *situation* rather than our intent that is driving our behaviour---we will not expect and may not realize, even after the fact, that our partners have construed our behaviour as intentional. Likewise, if we have not considered situational and personal factors that are driving our partners' behaviour, we may not realize, again even after the fact, that we have misconstrued their behaviour as

intentional.

It is, perhaps, our failure to recognize that others do not share our private, subjective worlds that most fundamentally lies behind our failure to anticipate that others may misconstrue our intentions. Our internal worlds are vivid and rich, we can never achieve this same richness in our overt communications. When we think about our intended behaviour, we complement these thoughts with emotions, associations, memories and much more. When others witness our behaviour, it is no longer embedded in this elaborate context. Others must rely on our isolated behaviour in order to figure out the meaning behind our behaviour. It is no wonder, then, that people may not always be accurate in their attempts to discern our intentions. If, however, we do not recognize how impoverished our behaviour is relative to our *thoughts* about our behaviour, we will overestimate the ease with which our partners will be able to interpret this behaviour.

Our first set of studies were designed as a simple demonstration of this egocentrism. We wanted to show people a case where people make judgements and predictions that would be reasonable if, but only if, these others had access to their private, subjective worlds. The study sought to show that people would overestimate the degree to which others could successfully interpret their behaviour. The task used in Study I was a non-social one. Subjects were asked to estimate how likely it was that listeners could identify a tune that they had tapped.

Our second set of studies were designed to bring these questions of egocentrism into the social realm. Would people assume that if their intentions and preferences were clear to them, they must surely be clear to their audience? Would subjects be overconfident in the ability of their partners to read their intentions from their behaviour, even if they recognized

that they should not be too confident in their attempts to understand the intentions of their partners since they did not have access to *their* private thoughts and emotions? How can people assume that their own intentions are transparent yet that the intentions of their partners are opaque? Study 2 set up a social interaction in which these questions were addressed.

Chapter Two

The Egocentricity of Construal.

Study 1

Introduction

You will close your eyes and you will see again, but you will only see what

your brain wants you to see: more than the world, yet less. You will close

your eyes and the real world will no longer compete with the world of your

imagination. You will know, discern, judge, calculate, imagine, predict and

you will end by thinking that there is no other reality than that created by

your mind.   (The Death of Artemio Cruz--Carlos Fuentes)

Our emotions and cognitions are so vivid, so comfortable, so *perfectly* catered to us, it is no

wonder that we so confidently rely on them in formulating our own behaviour and in

perceiving the behaviour of others. Yet, with our eyes half-closed, with every step we take

away from the real world into our imaginations, we create a reality that is more and more

idiosyncratic and, in so doing, we widen the communication gap between ourselves and

others. It is not surprising, then, that we may construe situations completely differently than

our neighbours. How we interpret their behaviour, how they interpret our behaviour, how we

interpret their interpretations of our behaviour--all of these will be coloured by our particular

construal processes. Yet, we often do not acknowledge this variety of interpretations, we

assume that others will define situations just as we do.

'objective' situation. Our behaviour and the internal processes driving this behaviour are inextricably linked. When we think of our behaviour, we think of it in the context of these internal processes. We cannot imagine how it must look to others when it is not so highlighted. We assume, egocentrically, if the meaning behind our behaviour is patently obvious to us, it is *at least* recognizable to them.

We wanted to find a prototypic example of this schism between internal and external processes—some situation where internal processes are necessarily vivid, behaviour is necessarily flat and the actor is somehow unaware of this great discrepancy. What elements would be common to this prototype and to less extreme situations where, nevertheless, this discrepancy occurs? Our thoughts led us to music. Just as we can feel great swells of emotion, we can hear the dramatic cadenza of a Beethoven concerto in our minds.

> The inner processes show types of development which may be given names,
> usually applied to musical events such as *crescendo* and *diminuendo*,
> *accelerando* and *ritardando*.   (Kohler, in Heider,)

We can create rich musical worlds in our minds. Worlds which, unless we are ventriloquists extraordinaire, we cannot fully reproduce for others. Yet, if we can simultaneously enact our "internal symphony" and engage in behaviour which is both guided and highlighted by this symphony, we will be unaware of the huge gap between what we and our audience are hearing. We devised the following tapping task to test this phenomenon: Imagine that as you are walking to work, a simple tune--Yankee Doodle--is running through your mind. How would you describe this imaginary musical performance? The voice, most probably your singing voice, is recreating the melody and rhythm of Yankee Doodle. You

may, depending on your musicality and your excitement with Yankee Doodle, be colouring your performance with dynamics, accentuation, phrasing and deliberate enunciation. You are able to produce and listen to a full-coloured musical performance.

Imagine now that you have an audience and they have asked you to use your finger to tap whatever tune it is that you are imagining on your desk. How do you go about performing this task? Once again, you recreate melody and rhythm in order to guide your tapping. The tapping does not interfere with your melody--unlike, for instance, if you were to reproduce the rhythm of Yankee Doodle on a single note on the piano. Your tapping, rather, compliments the melody and becomes an integral part of your performance. You cannot seperate yourself from the tune to focus exclusively on your tapping---one is an extension of the other. You may, then, feel yourself enhancing your tapping with fine subtleties---dynamics, accentuation, phrasing---in a medium where, realistically, subtlety is virtually useless. Your audience, meanwhile, is not privy to your mental performance and *must* focus exclusively on your tapping. What you imagine to be a meaningfully held note is, to your audience, merely an absence of tapping. It could be a held note or it could be a rest between phrases. A tap, outside of the vivid musical context into which you have incorporated it, is just a tap.

You are now asked to estimate how likely it is that your audience can guess what you are tapping. How accurate will you be in your estimation? Even if you do recognize that finger-tapping is a limited medium, you have no way of knowing how meaningless your tapping is when it is not highlighted by the musical imagination that is driving it. It is difficult to adopt the perspective of your audience because you cannot serve simultaneously as the actor--i.e. the tapper and the observer--i.e. the listener. You will probably then vastly

overestimate the degree to which your unadorned tapping resembled Yankee Doodle and, hence, the ability of your audience to identify it as such.

It was this reasoning that prompted the design and procedure of Study I. Part I was designed to test our basic proposition. It was hypothesized that tappers *would* overestimate the ability of listeners to identify the tapped tune. It was further hypothesized that informed observers-- people who had never served as listeners or tappers themselves--would also overestimate the ability of listeners to identify the tapped tune? Part II was designed to test this question.

Method

PART I

Subjects

80 Stanford undergraduates--48 males and 32 females were recruited in pairs. 40 subjects were from the undergraduate psychology pool and 40 were recruited on a volunteer basis. The two groups of subjects were indistinguishable in the results. Subjects were paired randomly-- some were in mixed-pairs and some were in same-sex pairs. The nature of the gender-mix did not affect the results.

Procedure

Subjects were separated and randomly assigned the role of either "tapper" or "listener". Tappers learned that they would be finger-tapping three tunes for listeners to identify and were given a list of 25 well-known songs (see Appendix A) from which they chose three for tapping. Tappers also learned that they should, between each song tapped, estimate the

likelihood or probability that the listeners correctly wrote down the name of the tune that they had just tapped. They would also be asked to estimate what percentage of an audience of 100 listeners would be able to name the tune if they heard the tapping amplified in a recital hall. Listeners, meanwhile, learned that they were going to be guessing what tune their partner was tapping. They were told to write down their guess after each tune. After agreeing not to communicate with their partners until the tapping exercise was over, listeners and tappers were brought together, seated with their backs facing each other and told to start tapping!

Having tapped all three tunes, tappers were asked to name the first tune they had tapped. The experimenter then told both the listeners and the tappers that she would be tapping out this tune and that they were to estimate what percentage of an audience of 100 listeners would be able to name the tune if they heard the tapping amplified in a recital hall.

PART II

How would informed observers---people who knew what was being tapped but who had

never served as tappers or listeners themselves--- estimate what percentage of an audience of

100 listeners would be able to name a tune that the experimenter had identified and then

tapped? Would they, like the tappers, supply the same 'extra accompaniment?

Method

Subjects

80 Stanford undergraduate and graduate students--36 males and 44 females-- were recruited. Subjects were paid two dollars each for participating. Graduate and undergraduate student results were indistinguishable.

Procedure

Subjects were told that the experimenter was going to name and then to tap out 3 tunes for them. Subjects were asked to estimate what percentage of an audience of 100 listeners would be able to name each tune.

Results and Discussion

PART I

We found resounding support for our hypothesis. Subjects overestimated the ability of both their partners and a hypothesized audience to identify the tunes they were tapping.

When asked to estimate the likelihood that their listeners correctly guessed the name of the tune that they had just tapped, subjects' guesses averaged 50%, and ranged from 10 to 95. Similarly, when asked to estimate what percentage of an audience of 100 listeners would be able to name the tune if they heard the tapping amplified in a recital hall, subjects mean estimate was 51%, with a range from 8 to 95. In reality, however, there were only 3 hits in 120 tries, a success rate of only 2.5 percent--a rate that was outside the entire *range* of the tapper's estimates (see Table 1).

Table 1
Tappers Estimate Probability of Tune Identification:
Tappers Tap for Listeners

Tappers Predict Listener Accuracy	Tappers Predict Audience Accuracy
X = 50%	X = 51%
MD = 55%	MD = 50%
R = 10-95	R = 8-95
SD = 25	SD = 24

Listener Accuracy
2.5%

Note. N = 40 tappers, 40 listeners, 120 songs

Prompted by reported gender differences in perspective-taking, we looked at male and female estimates seperately. We found that although both males and females gave unrealistically high estimates, male tappers were significantly more likely to give inflated estimates. Thus, although males and females both provided responses within the range of 10 to 95%, males guesses averaged 56% whereas females guesses averaged 44%. This gender difference was highly significant ($t=-4.49$, $p<.0001$).

Tappers apparantly continued to invoke their "personal musical accompaniment" when estimating what percentage of on audience of 100 listeners would be able to name a tune that the experimenter was tapping. The experimenter's tune was the same tune that the tapper had chosen in the first round—the tapper had already tapped the tune and the listener had already tried to identify it. Tappers maintained their overconfidence with a guess of 50%. In otherwards, being able to sit back and hear someone else do the tapping did not spare them from becoming too absorbed in their melodies to appreciate the listener's deprived perspective.

Once again, men—with a mean estimate of 55%—were more overconfident than females who estimated 46%. This gender difference was also significant ($t=-4.00$, $p=.0000$).

We note that the listeners themselves recognized that other listeners, focusing on a similarily impoverished stimulus, would be equally unlikely to guess the tapper's tune. Accordingly, they gave a mean estimate of only 3%. These results are presented in Table 2.

Table 2
Tappers And Listeners Estimate Probability of Tune Identification:
Experimenter Taps

Tappers Predict Listener Accuracy	Listeners Predict Audience Accuracy
X = 50%	X = 3%
MD = 52%	MD = 0%
R = 10-90	R = 0-50
SD = 23	SD = 11

Note. N = 40 tappers, 40 listeners, 40 songs

PART II

Finally, we see the estimates made by observers, who did no tapping but were informed in advance of the tune to be tapped. They, like the tappers, overestimated the ability of the hypothesized audience to identify the tunes. Across 240 songs, subjects' guesses averaged 50%, with a range of 2 to 98. These findings are displayed in Table 3.

Once again, male observers were more likely than females to show this egocentrism. Males guessed that 57% of the audience would identify the tune, the females guess was 43% (t= 3.98, p= .0001).

In short, our demonstration was a success. That is, the tapper and observer subjects in this study were so embedded in their own imaginations--so caught up in the richness of the melodies they were "hearing"--that they could not recognize how impoverished the same stimulus was from the perspective of the listener. We also found a provocative gender difference. That is, male tappers and observers were more extreme than females in their failure to appreciate the listener's perspective.

Why were men more likely to assume that their partners would be able to discern their tunes. Certainly, it is not that men *were* better able to communicate their melodies through tapping. Given that listeners were only able to identify 3 out of 150 tunes, it is safe to assume that neither men nor women were particularly successful in this near impossible task. Might this difference reflect some broader difference in perspective-taking? Recall that women are more likely and more able to consider the perspective of others in social interactions (Hall, 1977). This difference may be attributable to greater motivation and

Table 3
Naive Observers Estimate Probability of Identification:
Experimenter Taps

Observers Predict Audience Accuracy
X = 50%
MD = 52%
R = 2-98
SD = 25

Note. N = 80 listeners, 240 songs

vigilance on the part of women. That is, women are socialized at an early age to attend to others and this heightened social awareness may lead to more accuracy in social interpretation. If men, on the other hand, are not as interpersonally focused, they will be less likely to consider how their construal of a situation might differ from their neighbours. Perhaps it is not surprising, then, that men were less likely to recognize the impoverished perspective of the listener. If men are less likely to consider their partner's perspective and hence less likely to consider how their behaviour will be construed, or *mis*construed, it follows that they will also be less likely to anticipate how likely it is that their tapping will be misidentified. [1]

In Study One, we created a situation in which tappers, were steadfast in their own perspectives and unwilling or unable to adopt the perspective of listeners. To what degree are these results reflective of our more general tendency to be blinded by our egocentric focus? To what degree are we likely to cling steadfastly to our own perspectives? Will people-- caught up in the richness of their own minds--fail to recognize the impoverished perspective of their audience and, thus, overestimate the ability of this audience to interpret their behaviour? Will they then just assume that their audience have accurately identified the intentions that drove this behaviour? Study Two was designed to bring these questions into the social realm.

Chapter Three

Social Interaction Study and General Discussion

Study Two

Introduction

The object of Study 2 was to create a vivid, involving situation for subjects, one that elicited relatively impoverished behaviour from an actor who was simultaneously experiencing a rich set of private thoughts and feelings. Just as tappers had been asked to estimate how likely it was that listeners could identify the tune behind their tapping, actors would be asked to estimate how likely it was that their partners could identify the intentions behind their behaviour. The expectation was that actors, like "tappers", would fail to recognize the extent to which their partners would be handicapped in making judgements and inferences about their behaviour because they, like listeners, did not have access to the vivid, private world—the "music"—that accompanied this behaviour. Both tappers and actors, thus, would be overconfident in the ability of their audience to identify their behaviour.

In Study 2, pairs of subjects would be obliged to decide, after a brief interaction, whether they wanted to work together or work separately on an upcoming task. Subjects also had to discern, without having discussed the task with their partners, whether or not their partners would want to work together. It was expected that subjects would be overconfident in the ability of their partners to guess whether they wanted to work alone or together. That is, since subjects were so aware of their own preferences, they would just take it for granted that their partners could "see" these preferences in their mode of interaction, neglecting to realize that their behaviour might look quite different from the impoverished perspective of

their partners.

Notwithstanding this high confidence in their partner's ability to read them, we expected these same subjects to recognize how impoverished *their* perspective was in terms of figuring out their partner's behaviour. That is, even though subjects would egocentrically assume their own intentions were clear, they would still recognize the ambiguities in their partner's behaviour—ambiguities that could not be resolved by consulting *their* thoughts about their behaviour. Thus, it was expected that subjects would be *more* confident about their partner's ability to read whether *they* wanted to work alone or together than they were in their own ability to read their partner's preference.

In view of the "tapping" study, we elected to focus specifically on a particular gender difference. Female tappers and observers were significantly more likely to consider the impoverishment of the listener's perspective. They were, thus, less confident than males in the ability of listeners to identify the tapped tune. It was expected that female actors would also be more likely to consider the impoverishment of their partner's perspective and, hence, that they would be less confident than males in their partner's ability to identify whether they would want to work alone or together.

Since subjects did *not* have private access to their partner's thoughts, overall accuracy in terms of subject's ability to read their partner's preference was expected to be low.

Specifically, then, it was hypothesized that subjects would be *more* confident about their partner's ability to read whether they wanted to work alone or together than they were in their own ability to read their partner's preference. It was hypothesized that women would be less confident than men in their partner's ability to guess their preference. It was hypothesized that few subjects would *actually* be able to read their partner's intentions and that accuracy

would be low. Study 2 was designed to test these hypotheses.

Method

Overview

The purpose of Study 2 was to design a situation in which subjects would develop a certain intention or preference--i.e. to work together or alone-- in relation to their partners. The goal was to see whether subjects would be overconfident in the ability of their partner's to guess their preference and whether or not subjects were accurate in guessing their partner's preference.

Subjects

50 Stanford undergraduates--22 women and 28 men--were recruited in pairs from an undergraduate psychology course for credit. Subject pairs did not know each other beforehand.

Procedure

Each subject was brought to a different room upon arrival so that subject pairs did not meet each other. Subjects were given the following written instructions:

> Later in this experiment you will be asked to complete an analytic task. You
>
> will be rated and scored on your performance. The object will be to get as as
>
> many points as possible. You will be given a choice: you can either work
>
> alone or work with someone else--the subject in the next room. Both the

subject next door and you must decide whether you want to work alone or together. If you work together, you share the same score. Before you make this decision you will learn about your partner in two ways: you will read their answers to 3 biographical type questions and you will interact with them for about 10 minutes. While you are interacting with them you must *not* discuss the upcoming task--neither the task itself nor whether you want to work together. Your object when you are interacting is to get to know your partner enough to decide whether or not you want to work with them. After you have interacted you will be seperated, asked whether or not you want to work with your partner and-that decided--you will start with the task. One 'no' from either subject will mean that you will not work together. Half of the subjects will be told to say no--that they *cannot* work with their partner. Therefore *if you decide to work alone your partner will not know whether you decided no or whether you were told to say no.*

The purpose of telling subjects that the experimenter may tell some subjects to say 'no' was to make it easier for subjects to choose to work alone since their partners would not know for certain that they had been 'rejected'.

After ensuring that they thoroughly understood the instructions, the experimenter asked subjects to write down their answers to three biographical questions (see Appendix C). She reminded them that their partners would be reading these so they should not write down anything that they wished to remain private. Subjects were then given their partners bio's to read and reminded that they should not discuss the upcoming task in their 10 minute interaction. Subjects were next brought together, told that they would be videotaped for later

analysis and left alone to interact.

The experimenter returned after 10 minutes, separated the subjects once again and asked them to fill out a questionnaire (see Appendix D) before preceding with the task. The questionnaire asked subjects to describe their own thoughts and their impressions of their partners thoughts after the interaction and posed a number of specific questions: Do you want to work alone or with the other subject on the analytic task? Why? Do you think the other subject will choose to work alone or with you? Why? How confident are you (0-100%) that the other subject will make this decision? Do you think the other subject think you will choose to work alone or together? Why? How confident are you that the other subject will think this? [2]

After filling out the questionnaire, subjects were told that they were not actually going to be performing a task and then thorougly debriefed. The experimenter also asked subjects permission to show their videotaped interaction to observer subjects in a later experiment.

Results and Discussion

Our primary interest was whether or not subjects *were* more certain that their intentions had been accurately discerned by their partners than vice- versa. Specifically, we expected that subjects would show relatively high confidence in their partner's ability to read their intentions but relatively low confidence in their ability to read their partner's intentions.

The results relevant to this hypothesis are displayed in Table 4. As predicted, subjects, were relatively confident that their partners could discern whether they would want to work

Table 4
Subjects' Overconfidence in their Partner's Ability to Read their Intentions

Subjects' Confidence in Partner's Ability , to Read Them	Subjects' Confidence in Own Ability to Read Partners	t
X = 73%	X = 53%	6.47, p = .000
MD = 75%	MD = 50%	
R = 40-100	R = 40-100	
SD = 15	SD = 15	

alone or together. The mean confidence rating was 73% ($sd=$ 15) with a range of 40% to 100% and the median estimate was 75%. But, as predicted, these same subjects were much less confident in their ability to guess whether their partners wanted to work alone or together. The relevant mean rating was 53% ($sd=23$) with a range of 10% to 85% and a median estimate was 50%. Thus, subjects showed significantly more confidence in their partners ability to read their preferences than in their own ability to read their partners ($t=$ 6.47, $p<.0001$). [3]

It may be recalled that Subjects were given a chance, in an open-ended question, to comment on their various estimates. Their responses were consistent in explaining that *they* had made their preferences *obvious*, but that their partners had not.

Gender Differences

It had been hypothesized that female actors, like female tappers, would be *less* confident than men in the ability of their partner's to read their intent. This hypothesis was disconfirmed. There were no gender differences.

Confidence vs. Accuracy

We now turn to the question of accuracy. How successful *were* subjects in discerning whether or not their partners wanted to work alone or together? Unfortunately we encountered a problem that made it difficult to answer this question, that is a highly skewed baserate. A majority of subjects (92%) chose to work together--a choice most subjects, in an open-ended question, attributed to their preference for company and the ambiguity of the upcoming task. Thus, 46 people chose to work together whereas 4 people chose to work alone. Furthermore, 41 people predicted that their partners intended to work together and 9

people thought they intended to work alone. With two such skewed baserates, accurate predictions were virtually inevitable in most cases. Thus, we had no way of telling whether subjects could actually discriminate people who wanted to work together from those who wanted to work alone . It was hard to know whether they had an accurate idea about what people in general might choose or whether they were guided by the egocentric assumption that others would share their response.

The fragmentary data available do suggest, however, that subjects were *not* able to distinguish subject's actual choices. We see in Tables 5 and 6 that of the 4 subjects who actually wanted to work alone, *none* of their partners guessed this preference. Nevertheless, these 4 subjects were 71% confident that their partners *would* be able to recognize that they wanted to work alone. It is interesting to note that all 4 subjects who chose to work alone also assumed that their partners would want to work alone--another hint that the high accuracy we found otherwise in the study might be due, at least in part, to a combination of a high baserate and the tendency for subjects to assume that others would share their preferences. Indeed, all but 5 of the remaining subjects both chose to work together and assumed that their partners would share their preference.

We were interested in looking for further evidence of the fact that subjects were overconfident in the ability of their partner's to read them. We looked at the data on subject's perceptions of their partner's tension (see Table 7). Partners rated how tense they felt, how tense they thought their partners felt and how tense they thought their partners thought they felt on a 7 point scale (0=tense>>7= relaxed). Subjects were unable to discriminate how tense their partner's were really feeling. Thus the correlation between ratings for partner's and partner's own rating was only -.04. On a 7 point scale, subjects gave themselves a mean

Table 5

Accuracy of Subjects' Predictions of Partner's Choice

	Partner's Choice		
Subject's Predictions	Alone	Together	TOTAL
Alone	0	9	9
Together	4	37	41
TOTAL	4	46	50

Table 6
Subject Choice versus Subject Prediction

	Prediction for Partner	
Own Choice	Alone	Together
Alone	4	0
Together	5	41

Table 7
Subjects' Underestimations of Partner's Discomfort

	Subject's Own Self Rating	Partner's Rating of Subject	Subject's Prediction of Other's Rating of Subject	t
Comfort	3.1	3.4	5.2	$4.50, p < .0001$

rating of 3.1 (*sd=1.6*) with a range from 1 to 7. Subjects expected their partners to recognize

their tension, predicting that they would give them a mean rating of 3.4 (*sd*=1.7) with a range

of 1 to 7. Thus, there was virtually no difference between subjects self-ratings and their

anticipation of their partner's rating of them. Subjects did *not* however, recognize that their

partners also felt tense. They assigned their partners a mean rating of 5.2 (*sd*=1.6) with a

range of 2 to 8. There was, thus, a significant difference (*t*=4.5, p<.0001) between subjects

perceptions of their own versus their partner's tension.

Thus, subjects were unable to discriminate how tense their partners were and yet

remained confident--*over*confident-- that their partners would recognize their discomfort.

Subjects were highly aware of their own tension---internal cues of tension and discomfort

would be vivid and salient. So vivid, in fact, subjects expected that their partners would be

able to recognize this tension. Partners, however, did not have access to these internal cues

and thus showed no discriminative accuracy.

Summary

As predicted, subjects were *indeed* more confident about their partner's ability to read whether they wanted to work alone or together than they were in their own ability to read their partner's preference. There was, however, no gender difference. Unlike our female tappers, female actors were no less confident than males in the ability of their partners to take their perspective and, hence, recognize their intention.

Subjects were, contrary to prediction, quite accurate in predicting whether their partners would want to work alone or together. It seems, however, that they may have been showing stereotypic rather than discriminative accuracy. That is, since there was such an overwhelming tendency for subjects to choose to work together rather than alone, most subjects would be accurate if they just assumed that their partners had the same intentions as themselves. This argument is supported by the fact that no subjects were able to discriminate if their partners wanted to work alone. Thus, subjects could not distinguish those choices contrary to the baserate from those congruent with the baserate.

Subjects were also unsuccessful in discriminating how relaxed or tense their partners were. They assumed, nevertheless, that their partners would be highly accurate in recognizing how tense they were.

We may conclude, then, that people will believe that their own preferences and intentions are obvious to others in the same way that the melody being tapped seems transparent to the tapper. Yet, we find other people's preferences and intentions opaque without recognizing that *they* don't appreciate this opacity any more then we appreciate it about our own behaviour.

GENERAL DISCUSSION

As an introduction to the research, we proposed a number of questions. Our data has allowed us to answer some of those questions and to better recognize how we might go about answering those that remain.

The first and most crucial question was: *Do people overestimate the likelihood that their partners will be successful in discerning the meaning behind their behaviour?* Our data spoke clearly to this question. We found that people were *indeed* overconfident in the ability of others to understand them. Tappers were fifty percent confident that listeners would be able to identify their tapping. Subjects in Study Two thought that others would accurately discern how tense they were. As we have seen, neither prediction was true. Listeners were unable to name the tapped tune--the task was virtually impossible--and subjects were completely unable to recognize how tense their partners were. Thus, subjects were wrong in assuming that their behaviour was transparent.

Our second question was: *Why do people believe that their behaviour is so transparent? Why are they confident that their actions reflect their thoughts?* Our data suggest that one reason why people may be so confident is that the link between their thoughts and their behaviour is so clear to them, they cannot recognize how opaque the isolated behaviour must seem to their partners. Thus tappers, caught up in their own vivid melodies, expected that listeners would be able to identify their tunes. "This tune I'm tapping is so obviously Edelweiss, *anyone* could recognize it". Subjects in the social interaction study expected others to see how tense they were because their *own* internal tension cues were so strong and

vivid. The data illustrate,thus, that people fail to recognize the degree to which others may have a different perspective. Tappers did not sit back and realize how flat their tapping must appear to listeners. Interacting subjects did not realize that what they saw so clearly as their own 'nervous' behaviour might appear as something altogether different to their partners---it might, for instance, be interpreted as unfriendliness or arrogance.

Even if subjects were unaware of their egocentric perspective, wouldn't they have encountered at least a few vivid, emotional situations in which they couldn't *help* but discover that someone had misread their intent? How, then, could they remain so overconfident? We are not able to answer these questions with our data. However, it might be interesting to explore this question further. It could be that memories of any such eventful misunderstandings are vastly outweighed by memories of times when people have assumed---rightly or wrongly--that they have successfully communicated their intent. It could also be that this overconfidence is further bolstered by regular interactions with others who will 'fill in the gaps' in their partner's behaviour, who will come to understand their partner's intentions when they might otherwise be unclear. We can be sure that no matter how attuned our listeners were to our tappers, they could not have better discerned the tune---the task was too difficult. Recall that subjects in the social interaction study had been inaccurate in judging how relaxed or comfortable their partners felt. Would these results change if subjects had been interacting with people they knew well? Could these people, who had some experience interpreting their partner's ambiguous behaviour--'fill in the gaps' and better recognize just how uncomfortable their partners were? Would they, through their experience, have gained better insight into their partners' internal worlds? One could also propose, however, that the better subjects knew their partners, the *more* confident they would be in their partner's ability to read them and the less able they would be to discern when they had

been misread.

Our next question asked: *Why might our partners have so much difficulty in discerning our thoughts and intentions from our behaviour?* As we have said, our partners do not have access to our private thoughts, thoughts that would clarify or highlight our behaviour. We can sing along with the tune we are tapping, we can feel our hearts beating with tension--they cannot. Our partners may also be unaware of how the situation, or their particular construal of the situation, is constraining both our behaviour and their interpretations of our behaviour. In future studies we could ask subjects how they thought the situation was affecting their partner's behaviour. Would they discount situational forces and assume that their partner's behaviour was primarily reflective of dispositional qualities and intent?

We then asked: *Are certain people particularly likely to be read accurately by others? Do certain people have more developed social communication skills?* We did not address this question directly. We might predict, however, that if people are more likely to consider their partner's perspective, they will be less egocentric in assuming their intentions are clear and, hence, less often misunderstood. Thus, tappers who were less extreme in their estimates--that is, more aware of the listener's perspective--may also be more sensitive to the fact that others did not share their perspective and, hence, less easily misunderstood.

In a preliminary interview designed to explore these questions further, we did find that tappers who gave lower estimates also reported that their intentions were less often misunderstood. Female tappers, who gave significantly lower estimates than men, were significantly less likely than men to report that others misunderstood their intentions. The skewed baserate and the resulting confusion between sterotypic and discriminative accuracy prevented any reasonable analyses of gender differences in Study Two. It would be

interesting, then, to see if women will be more likely to consider their partner's perspective in a more complex, interactive study. If women *do* so distinguish themselves, the next step will be to look for the root of this gender difference. How is it that women have come to hone their perspective-taking abilities? Is it just that women are less socially powerful and, hence, more motivated to understand the behaviour of others?

Our next question was: *Will people attempt to unriddle others behaviour, no matter how ambiguous it may be? Will they be unjustly confident that their interpretation is the correct interpretation?* Our data show that interacting subjects were actually less confident in their ability to understand others than they were in the ability of others to understand them. In response to an open-ended question, a majority of subjects stated explicitly that their partner's behaviour had been difficult to interpret and that they were, thus, less confident in their ability to read them. Subjects here were interacting with strangers. Even though they did not recognize how obscure these strangers might find *their* unfamiliar behaviour, perhaps subjects realized that they had no precedent on which to interpret their partner's behaviour. It might be interesting to see how these results might change if subjects were interacting and deciphering people they knew. Perhaps we might find that subjects were *too* confident in their ability to read their friends. They may assume that if they had read them successfully before, they could read them just as successfully now. If they did not recognize how a particular situation might differentially affect their partner's behaviour they might, then, misread their partner's intent.

Our data suggest that some people are much more confident in their ability to read others. We did find variablity in subject's confidence estimates. Some gave an estimate of 10 percent, some gave an estimate of eighty five percent. Again, our high baserate prevented

us from distinguishing whether highly confident subjects *were* actually better able to read their partners. It might be interesting to see if this high confidence is warranted, if these people really do have better reading skills. If they are not, how do they maintain this high confidence?

We had also wondered: *How will people's own expectations and intentions affect how they read their partners?* The social interaction data hints that subjects will falsely assume that others share in their intentions. Thus, all subjects who wanted to work alone in Study Two, assumed that their partners would *also* want to work alone. We might further be interested in how subject's expectations might affect their interpretation of their partner's intent. If, for instance, subjects were lead to believe that their partners might reject them, might they then interpret their behaviour as rejecting and assume that their partners wanted to work alone? It might also be telling to see how subject's mood might affect how they interpreted their partner's intent. Would subjects project their own emotions onto their partners? Would angry subjects see malintent in the behaviour of their partners? Would optimistic subjects be overpositive in their analyses of their partner's intent?

As a final question we asked: *What can we do to ensure that our partners do not misread our intentions?* We have seen that in order to create an ideal personal environment for the expression and the interpretation of intent, we must show a greater sensitivity to the social environment. We must recognize that others may not have compatible construals of the situation in which we are interacting. We must better anticipate when our partners will not share our perspective. We must then help our partners to hear our 'music', help them to appreciate the internal cues that are driving our behaviour. Then, and only then, will we be justified in assuming that our behaviour is transparent.

Footnotes

1. In a pilot study, we interviewed men and women about the frequency with which they found themselves misunderstood. We also gave them the tapping task. Two results were worth noting paranthetically, in view of the gender differences in the tapping task. First: male tappers were, once again, more overconfident in the ability of their listeners to identify the tapped tune. Second: the tapping task significantly distinguished subjects who more often found themselves misunderstood. Thus tappers who were more often misunderstood were more overconfident that their listeners would be able to identify the tapped tune.

2. Subjects made their confidence ratings on a scale from 0-100%. We may have some 'noise' in these ratings as it is difficult to determine whether 0% or 50% means "just guessing". Nevertheless, the problem holds for *both* ratings so it should not affect our most important result--i.e. the significant difference between subject's high confidence in their partner's ability to read their intent versus subject's relatively lower confidence in their own ability to read their partner's intent.

3. Subjects made their confidence ratings on a scale from 0-100%. We may have some 'noise' in these ratings as it is difficult to determine whether 0% or 50% means "just guessing". Nevertheless, the problem holds for *both* ratings so it should not affect our most important result--i.e. the significant difference between subject's high confidence in their partner's ability to read their intent versus subject's relatively lower confidence in their own ability to read their partner's intent.

References

Abrahamson, M. (1966). *Interpersonal accomodation.* New York: Macmillan.

Bender, V., Davis, Y., Glover, O., & Stapp, J. (1976). Patterns of self-disclosure in homosexual

and heterosexual college students. *Sex Roles, 2,* 149-160.

Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of*

Management Review, 13, 442-453.

Blier, L., & Blier-Wilson, L. (1989). Gender differences in self-rated emotional expressiveness.

Sex-Roles, 2, 287-297.

Boswell, D.A. (1986). Speaker's intentions: Constraints on metaphor comprehension. *Metaphor*

and Symbolic Activity, 1, 153-70.

Buck, R. (1977). Individual differences in nonverbal sending accuracy and electrodermal

responding: The externalizing-internalizing dimension. In R. Rosenthal (Ed.), *Skill in*

nonverbal communication. Cambridge, MA: Oelgeschalger, Gunn and Hain.

Buck, R. (1983). In *Nonverbal communication: The social interaction sphere.* New York: Sage.

Chandler, M., & Helm, D. Developmental changes in the contributions of shared experience to

social role-taking competence. *International Journal of Behavioural Development, 7,*

145-156.

Clark, H. H. (1985). Language use and language users. In G. Lindzey, & E.Aronson (Eds.), *The*

handbook of social psychology (pp. 179-231). New York: Random House.

Cranach, M. von, & Harre, R. (1982). *The analysis of action.* Cambridge: Cambridge University

Press.

Daly, E.M., Abramovich, R., & Pliner, P. (1980). The relationship between mothers' encoding

and their childrens decoding of facial expressions of emotion. *Merrill-Palmer Quarterly*,

29, 25-34.

Davis, M. (1981). A multidimensional approach to individual differences in empathy. *Journal of*

Personality and Social Psychology, *10*, .

DePaulo, B., Brittingham, G., & Kaiser, M. (1983). Receiving competence-relevant help: Effects

on reciprocity, affect and sensitivity to the helper's nonverbally expressed needs. *Journal*

of Personality and Social Psychology, *45*, 1045-1060.

DePaulo, B., Stone, J., & Lassiter, G. Deceiving and detecting deceit. In B.R. Schlenker (Ed.),

The self in social life (pp. 323-370). McGraw.

Dodge, K., & Tomlin, A. (1987). Utilization of self-schemas as a mechanism of interpretational

bias in aggressive children. *Social Cognition*, *5*, 280-300.

Einhorn, & Hogarth. (1978). Confidence in judgement. Persistence of the illusion of validity.

Psychological Review, *85*, 395-416.

Ekman, P. (1985). *Telling lies.* New York: Norton.

Flavell, J. (1985). *Cognitive Ddvelopment (2nd Ed)*. New Jersey: Prentice-Hall, Inc..

Franzoi, S., & Davis, M. (1985). Adolescent self-disclosure and loneliness: Private self-

conciousness and parental influences. *Journal of Personality and Social Psychology*, *48*,

768-780.

Freud, S. (1959). *Fragment of an analysis of a case of hysteria [1905]*. New York: Basic Books.

Freud, S. (1965). *The psychopathology of everyday life.* New York: W.W. Norton & Company.

Fuentes, C. (1964). In *The Death of Artemio Cruz*. New York: Farrar.

Gerson, A.C., & Perlman, D. (1979). Loneliness and expressive communication. *Journal of*

Abnormal Psychology, *88*, 258-261.

Gilbert, D., Pelham, N., & Krull, D. (1988). On cognitive busyness: when person perceivers meet

persons perceived. *Journal of Personality and Social Psychology, 54,* 733-41.

Glick, B.R., & Gross, S.J. (1975). Marital interaction and marital conflict: A critical evaluation of

current research strategies. *Journal of Marriage and the Family, 37,* 505-572.

Goffman, E. (1959). *Strategic Interaction.* New York: Ballantine Books.

Gottman, J. (1979). *Marital Interaction: Experimental investigations.* New York: Academic

Press.

Grice, H.P. (1975). Logic and conversation. In Cole, & Morgan (Eds.), *Syntax and semantics,*

Vol. 3: Speech acts (pp. 225-242). New York: Academic Press.

Hall, J. (1977). Gender, gender roles and nonverbal communication skills. In R. Rosenthal (Ed.),

Skill in nonverbal communication (pp. 140-171). Cambridge, MA: Oelgeschalger, Gunn

and Hain.

Harper, R.G., Wiens, A.N., & Matarazzo, J.D. (1979). The relationship between encoding-

decoding of visual nonverbal emotional cues. *Semiotica, 28,* 172-192.

Hastorf, A.H., & Cantril, H. (1954). They saw a game: A case study. *Journal of Abnormal and*

Social Psychology, 49, 129-134.

Hastorf, A., Schneider, D., & Ellsworth, P. (1979). *Person Perception.* Reading, Mass.:

Addison-Wesley publishers.

Heckhausen, H., & Kuhl, J. *From wishes to Action: Dead Ends and Short Cuts on the long way to*

action.

Higgins, E.T. (1981). The communication game: Implications for social cognition and

persuasion. In E.T. Higgins, C.P. Herman, & M.P. Zanna (Eds.), *Social Cognition: The*

Ontario Symposium on Personality and Social Psychology. Hillsdale: Erlbaum.

James, Henry. (1881). *The Portrait of a Lady*. Oxford: Oxford University Press.

Jervis, R. (1976). *Perception and misperception in international politics*. New Jersey: Princeton University Press.

Jones, E.E., & Davis, K.E. (1965). From acts to dispositions. The attribution process in person perception. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology*. New York: Academic Press.

Jones, S.C., & Panitch, D. (1971). The self-fulfilling prophecy and interpersonal attraction. *Journal of Experimental Social Psychology, 7*, 356-66.

Kelley, H.H., & Stahelski, A.J. (1970). Social interaction basis of cooperator's and competitor's beliefs about others. *Journal of Personality and Social Psychology, 16*, 66-91.

Kravilashvili, L. (1987). Remembering intention as a distinct form of memory. *British Journal of Psychology, 78*, 507-18.

Laing, R.D., Phillispon, H., & Lee, A.R. (1966). In *Interpersonal perception: A theory and a method of research*. New York: Springer-Verlag.

Langs, R. (1983). *Unconcious communication in everyday life*. New York: Jason Aronson, Inc..

Lanzetta, J.T., & Kleck, R.E. (1970). Encoding and decoding of nonverbal affect in humans. *Journal of Personality and Social Psychology, 16*, 12-19.

Levenson, R.W., & Gottman, J.M. (1978). Toward the assessment of social competence. *Journal of Consulting and Clinical Psychology, 46*, 453-62.

Mehrabian, A. (1972). *Non-Verbal Communication*. New York: Aldine.

Mehrabian, A., & Reed, H. (1968). Some determinants of communication accuracy. *Psychological Bulletin, 70*, 365-81.

Morris, D. (1982). *Manwatching: A field guide to human behaviour*. New York: Harry N. Abrams, Inc.

Morton, T.V. (1978). Intimacy and reciprocity of exchange: A comparison of spouses and

strangers. *Journal of Personality and Social Psychology, 36,* 72-81.

Naifeh, S., & Smith, G. (1984). *Why can't men open up?.* New York: Clarkson N. Potter.

Nickel, T. (1974). The Attribution of intention as a Critical Factor in the Relation between

Frustration and Agression. *Journal of Personality, 42,* 489.

Nisbett, R.E., & Ross, L. (1980). *Human Inference: Strategies and shortcomings of social*

judgement. Englewood Cliffs, NJ: Prentice Hall.

Noller, P. (1981). Gender and marital adjustment level differences in decoding messages from

spouses and strangers. *Journal of Personality and Social Psychology, 39,* 1135-1148.

Notarius, C., Wemple, C., Ingraham, C., Burns, T., & Kollar, E. (1987). Multichannel responses

to an interpersonal stressor: Interrelationships among facial display, heart rate, self-report

of emotion and threat appraisal. *Journal of Personality and Social Psychology, 43,* 400-

409.

Park, B., & Judd, C. (1989). Agreement on initial impressions. Differences due to perceivers' trait

dimensions and target behaviours. *Journal of Personality and Social Psychology, 56,* .

Pavitt, C., & Cappella, J. (1979). Coorientational accuracy in interpersonal and small-group

discussions: A literature review, model and simulation. In D. Nimmu (Ed.),

Communication yearbook. New Brunswick: Transaction Press.

Piaget, J., & Inhelder, B. (1956). *The child's conception of space.* London: Routledge & Kegan.

Prachkin, K.M., Craig, K.D., Papageorgis, D., & Reith, G. (1986). Nonverbal communication

deficits and response to performance feedback in depression. *Journal of Abnormal*

Psychology, 95, 224-234.

Prizant, B., & Wetherby, A. (1987). Communicative intent: A framework for understanding

social-communicative behaviour in autism. *Journal of the American Academy of Child

and Adolescent Psychiatry, 26,* 472-79.

Raffler-Engel, Walburga von. (1988). The impact of covert factors in cross-cultural

communication. In Fernando Poyatos (Ed.), *Cross-cultural perspectives in nonverbal

communication.* New York: C.G. Hogrefe.

Ross, L., Lepper, M.R., Strack, F., & Steinmetz, J. (1974). Social explanation and social

expectation: Effects of real and hypothetical explanations on subjective likelihood.

Journal of Personality and Social Psychology, 14, 385-397.

Rubin, Z., Hill, C.T., Peplau, L.A., & Dunkel-Schetter, C. (1980). Self-disclosure in dating

couples : Sex-roles and the ethic of openness. *Journal of Marriage and the Family, 42,*

305-311.

Schiffenbauer, A. (1974). Effects of observers' emotional state on judgements of the emotional

states of others. *Journal of Personality and Social Psychology, 30,* 31-35.

Sillars, A. (1985). Interpersonal perceptions in relationships. In W. Ickes (Ed.), *Compatible and

incompatible relationships.* New York: Springer Verlag.

Snodgrass, Sara E. (1985). Women's intuition: The effect of subourdinate role on interpersonal

sensitivity. *Journal of Personality and Social Psychology, 49,* 146-155.

Snyder, M. (1987). *Public appearances/private realities: The psychology of self-monitoring.* New

York: W.H. Freeman & Company.

Snyder, M., & Swan, W.B., Jr. (1976). When actions reflect attitudes: The politics of impression

management. *Journal of Personality and Social Psychology, 34,* 1034-1042.

Storms, M.D. (1973). Videotape and the attribution process: Reversing actors' and observers'

points of view. *Journal of Personality and Social Psychology, 27,* 165-175.

Taylor, S.E., & Fiske, S.T. (1975). Point of view and perceptions of causality. *Journal of Personality and Social Psychology*, 439-445.

Vallore, R.P., Ross, L., & Lepper, M.R. (1985). The hostile media phenomenon:Biased perception and perceptions of media bias in coverage of the Beirut Massacre. *Journal of Personality and Social Psychology*, *49*, 577-585.

Vikan, A., & Santos, C. dos. (1987). Quantifying intentions: Developmental change in conceiving intentions. *Scandinavian Journal of Psychology*, *28*, 162-66.

Wegner, D.M., Vallacher, R.R., Macomber, G., Wood, R., & Arps, K. (1984). The emergence of action. *Journal of Personality and Social Psychology*, *96*, 259-79.

Zaidel, S., & Mehrabian, A. (1969). The ability to communicate and infer positive and negative attitudes facially and vocally. *Journal of Experimental Research in Personality*, *3*, 233-241.

Zajonc, R.B. (1965). Social facilitation. *Science*, *149*, 269-74.

Zuckerman, M., & Larrance, D. (1977). Individual differences in perceived encoding and decoding abilities. In R. Rosenthal (Ed.), *Skill in nonverbal communication*. Cambridge, MA: Oelgeschalger, Gunn and Hain.

Zuckerman, M., Lipets, M.S., Koivumaki, J.H., & Rosenthal, R. (1975). Encoding and decoding nonverbal cues of emotion. *Journal of Personality and Social Psychology*, *32*, 1068-1076.

APPENDIX A: SONG CHOICES FOR STUDY ONE

TUNES FOR TAPPING

PATRIOTIC SONGS

My Country 'Tis of Thee

America the Beautiful

Yankee Doodle

CHRISTMAS CAROLS

Silent Night

Joy to the World

I'm Dreaming of a White Christmas

CHILDREN"S SONGS

Twinkle, Twinkle Little Star

Baa Baa Black Sheep

Rockaby Baby

POP STANDARDS & SHOW TUNES

Oklahoma

Edelweiss

Yesterday

Do a Deer

Love me Tender (Auralea)

Rock around the Clock

Raindrops keep falling on my head

Mrs Robinson

FOLK SONGS

Michael Row the Boat Ashore

This Land is your Land

It's a small world (after all)

Auld Lang Syne

T.V. THEME SONGS

Flinstones

Bonanza

The Brady Bunch

Gilligan's Island

APPENDIX B: BIOGRAPHICAL QUESTIONS FOR STUDY 3

BIOGRAPHICAL QUESTIONS

1. How would someone who knows you *very well* describe you?

2. Briefly describe something you have done that you are proud of?

3. What are 2 things that *really* annoy you.

APPENDIX C: PAIR QUESTIONNAIRE FOR STUDY 3

PAIR QUESTIONNAIRE

SEX: M F

Please answer these general questions about your interaction. You can use the opposite side

of the page if you need more space. Your answers will be kept strictly confidential. Only the

experimenter will have access to this questionnaire.

*** Do you want to work alone or with the other subject on the analytic task?

Alone------ Together------

Why?

***Do you think the other subject will choose to work alone or with you?

Alone------ Together-----

Why?

How confident are you that you (0-100%) that -------%

the other subject will make this decision?

***Do you think the other subjects thinks you will choose to work alone or together?

Alone----- Together-----

Why?

How confident are you that the other ------%

subject will think this?

1. Please describe your intentions during the interaction.

2. How do you think your partner would describe you as a result of your interaction?

3. What do you think your partner believed about your intentions?

4. How would you describe your partner's behaviour during the interaction?

5. What do you think were your partners intentions during the interaction?

6. How much did you enjoy the interaction with your partner?

0.......1.......2.......3.......4.......5.......6.......7

Very   Very

Little   Much

0.......1.......2.......3.......4.......5.......6.......7

Uncomfortable   Comfortable

7.......6.......5.......4.......3.......2.......1.......0

Confident   Unconfident

0.......1.......2.......3.......4.......5.......6.......7

Introverted   Extroverted

7.......6.......5.......4.......3.......2.......1.......0

Cooperative   Competitive

0.......1.......2.......3.......4.......5.......6.......7

Unconcerned with   Concerned with

my feelings   my feelings

10. How do you think your partner would answer these questions in

    describing you?

0.......1.......2.......3.......4.......5.......6.......7

Very   Very

Cold   Warm

7.......6.......5.......4.......3.......2.......1.......0

Friendly   Unfriendly

0.......1.......2.......3.......4.......5.......6.......7

Arrogant   Humble

7.......6.......5.......4.......3.......2.......1.......0

Relaxed   Tense

0.......1.......2.......3.......4.......5.......6.......7

Uncomfortable   Comfortable

7.......6.......5.......4.......3.......2.......1.......0

Confident   Unconfident

0.......1.......2.......3.......4.......5.......6.......7

Introverted   Extroverted

7.......6.......5.......4.......3.......2.......1.......0

Cooperative   Competitive

0.......1.......2.......3.......4.......5.......6.......7

Unconcerned with   Concerned with

my feelings   my feelings

11. Would you want to interact with this person again in another context?

0.......1.......2.......3.......4.......5.......6.......7

Definately   Definately

Not   Yes

12. Do you think your partner would want to interact with you again?

0.......1.......2.......3.......4.......5.......6.......7

Definately   Definately

Not   Yes

10. Do you think your partner would think you would want to interact

with them again?

0.......1.......2.......3.......4.......5.......6.......7

Definately   Definately

Not   Yes

APPENDIX D: OBSERVER INSTRUCTIONS FOR STUDY 4

OBSERVER INSTRUCTIONS

VIDEOTAPE ANALYSIS

As you know, you will be asked to watch and analyze a videotaped interaction between two subjects. Before you watch the videotaped interaction, you will be shown the same information our subjects were given before interacting.

A DESCRIPTION OF THE PROCEDURE VIDEOTAPED SUBJECTS WENT THROUGH.

The two subjects did not see each other when they first arrived. They were, instead, brought to different rooms. The experimenter greeted them and gave them them following instructions:

INSTRUCTIONS FOR SUBJECTS

**Later in this experiment you will be asked to complete an analytic task. You will be rated and scored on your performance. The object will be to get as as many points as possible. You will be given a choice: you can either work alone or work with someone else--the subject in the next room. Both the subject next door and you must decide whether you want to work alone or together. If you work together, you share the same score. Before you make this decision you will learn about your partner in two ways: you will read their answers to 3

biographical type questions and you will interact with them for about 5 minutes. While you are interacting with them you must *not* discuss the upcoming task--neither the task itself nor whether you want to work together. Your object when you are interacting is to get to know your partner enough to decide whether or not you want to work with them. After you have interacted you will be seperated, asked whether or not you want to work with your partner and-that decided--you will start with the task. One 'no' from either subject will mean that you will not work together. Half of the subjects will be told to say no--that they *cannot* work with their partner. Therefore *if you decide to work alone your partner will not know whether you decided no or whether you were told to say no.***

After reading these instructions, each subject was asked to answer 3 biographical questions which would then be shown to the other subject. On the next page you will find both the questions and the responses of each subject.

After each subject had read the other subject's biographical answers, they were brought together to meet each other for the first time. They were told that they would be interacting for about 5 minutes or so. In that time they were to get to know the other person as much as possible and to decide for themselves whether or not they would want to work with that person on the analytic task. They were told, however, *that they could NOT discuss the upcoming task or the experiment itself.* The experimenter told the subjects that their interaction would be videotaped for later analysis. She then turned on the tape and left them in the room to interact.

You are about to watch that interaction. You will be shown the interaction twice. The first time just try to get a general impression of the subjects. You will then be shown the questions you will be asked about the interaction. Once you have an idea of the kind of

analysis we are looking for, you will be shown the tape a second time. After this second

viewing you will be asked to fill out the questionnaire.

APPENDIX E: OBSERVER QUESTIONNAIRE FOR STUDY 4

SHEET A

SEX: M F

Please answer these general questions about the interaction. You can use the opposite side of the page if you need more space. Your answers will be kept strictly confidential. Only the experimenter will have access to this questionnaire. The experimenter will tell you which is Subject #1 and which is Subject #2.

*** Do you think that Subject #1 will choose to work alone or with Subject #2

on the analytic task after this interaction?

Alone------ Together------

Why?

How confident are you (0-100%) that _____%

Subject #1 will make this decision?

***Do you think that Subject #2 will choose to work alone or with Subject #1?

Alone------ Together-----

Why?

How confident are you (0-100%) that -------%

Subject #2 will make this decision?

***Do you think that Subject #1 thinks that Subject #2 wants to work alone or together?

Alone----- Together-----

Why?

How confident are you that Subject #1 ------%

will think this?

***Do you think that Subject #2 thinks that Subject #1 wants to work alone or together?

Alone_____ Together_____

Why?

How confident are you that Subject #2 _____%

will think this?

1. What do you think were Subject #1's intentions during the interaction?

2. What do you think were Subject #2's intentions during the interaction?

3. How would you describe Subject #1's behaviour during the interaction?

3. How would you describe Subject #2's behaviour during the interaction?

4. How do you think Subject #1 would describe Subject #2 as a result of the interaction?

5. How do you think Subject #2 would describe Subject #1 as a result of the interaction?

6. How much do you think Subject #1 enjoyed the interaction?

0.......1.......2.......3.......4.......5.......6.......7

Very   Very

Little   Much

7. How much do you think Subject #2 enjoyed the interaction?

0.......1.......2.......3.......4.......5.......6.......7

Very   Very

Little   Much

8. How much do you think Subject #1 thought Subject #2 enjoyed it?

0.......1.......2.......3.......4.......5.......6.......7

Very   Very

Little   Much

9. How much do you think Subject #2 thought Subject #1 enjoyed it?

0.......1.......2.......3.......4.......5.......6.......7

Very   Very

Little   Much

10. How would YOU describe Subject #1?

0.......1.......2.......3.......4.......5.......6.......7

Very   Very

Cold   Warm

7.......6.......5.......4.......3.......2.......1.......0

Friendly   Unfriendly

0.......1.......2.......3.......4.......5.......6.......7

Arrogant   Humble

7.......6.......5.......4.......3.......2.......1.......0

Relaxed   Tense

0.......1.......2.......3.......4.......5.......6.......7

Uncomfortable   Comfortable

7.......6.......5.......4.......3.......2.......1.......0

Confident   Unconfident

0.......1.......2.......3.......4.......5.......6.......7

Introverted   Extroverted

7.......6.......5.......4.......3.......2.......1.......0

Cooperative   Competitive

0.......1.......2.......3.......4.......5.......6.......7

Unconcerned with   Concerned with

my feelings   my feelings

11. How do you think Subject #2 would describe Subject #1

0.......1.......2.......3.......4.......5.......6.......7

Very   Very

Cold   Warm

7.......6.......5.......4.......3.......2.......1.......0

Friendly   Unfriendly

0.......1.......2.......3.......4.......5.......6.......7

Arrogant   Humble

7.......6.......5.......4.......3.......2.......1.......0

Relaxed   Tense

0.......1.......2.......3.......4.......5.......6.......7

Uncomfortable   Comfortable

7.......6.......5.......4.......3.......2.......1.......0

Confident   Unconfident

0.......1.......2.......3.......4.......5.......6.......7

Introverted   Extroverted

7.......6.......5.......4.......3.......2.......1.......0

Cooperative   Competitive

0.......1.......2.......3.......4.......5.......6.......7

Unconcerned with   Concerned with

my feelings   my feelings

12. How would YOU describe Subject #2?

0.......1.......2.......3.......4.......5.......6.......7

Very   Very

Cold   Warm

7.......6.......5.......4.......3.......2.......1.......0

Friendly   Unfriendly

0.......1.......2.......3.......4.......5.......6.......7

Arrogant   Humble

7.......6.......5.......4.......3.......2.......1.......0

Relaxed   Tense

0.......1.......2.......3.......4.......5.......6.......7

Uncomfortable   Comfortable

7.......6.......5.......4.......3.......2.......1.......0

Confident   Unconfident

0.......1.......2.......3.......4.......5.......6.......7

Introverted   Extroverted

7.......6.......5.......4.......3.......2.......1.......0

Cooperative   Competitive

0.......1.......2.......3.......4.......5.......6.......7

Unconcerned with   Concerned with

my feelings   my feelings

13. How do you think Subject #1 would describe Subject #2?

0.......1.......2.......3.......4.......5.......6.......7

Very   Very

Cold   Warm

7.......6.......5.......4.......3.......2.......1.......0

Friendly   Unfriendly

0.......1.......2.......3.......4.......5.......6.......7

Arrogant   Humble

7.......6.......5.......4.......3.......2.......1.......0

Relaxed   Tense

0.......1.......2.......3.......4.......5.......6.......7

Uncomfortable   Comfortable

7.......6.......5.......4.......3.......2.......1.......0

Confident   Unconfident

0.......1.......2.......3.......4.......5.......6.......7

Introverted   Extroverted

7.......6.......5.......4.......3.......2.......1.......0

Cooperative   Competitive

0.......1.......2.......3.......4.......5.......6.......7

Unconcerned with   Concerned with

my feelings   my feelings

14. Do you think Subject #1 would want to interact with Subject #2 again

    in another context.

0.......1.......2.......3.......4.......5.......6.......7

Definately   Definately

Not   Yes

15. Do you think Subject #2 would want to interact with Subject #1 again

in another context.

0.......1.......2.......3.......4.......5.......6.......7

Definately   Definately

Not   Yes

16. Do you think Subject #1 would think that Subject #2 would want to

interact again?

0.......1.......2.......3.......4.......5.......6.......7

Definately   Definately

Not   Yes

17. Do you think Subject #2 would think that Subject #1 would want to

interact again?

0.......1.......2.......3.......4.......5.......6.......7

Definately   Definately

Not   Yes

18. How do you think your perspective as an observer differs from

the perspective of someone who is participating in the interaction?

(i.e. Subject #1 or #2).

APPENDIX F: PRELIMINARY INTERVIEW STUDY

Method

Subjects

Subjects were 40 undergraduates--18 were male, 22 were female.

Procedure

Upon arrival, subjects were told that the experimenter was going to first name and then tap out 2 tunes for them. Subjects were to estimate what percentage of an audience of 100 listeners would be able to name each tune. After completing the tapping task, subjects were told about the second part of the experiment--the interview. The experimenter promised to return to the tapping task once the interview was completed. The interview, the experimenter explained, would focus on times when the subjects had misread someone else's intentions or when someone else had misread the subject's intentions (the experimenter varied the order in which these and any other duo options were presented). After answering any questions and explaining that she would be videotaping the interview for later analysis, the experimenter proceeded with the interview. Once the interview was completed (approximately 45-55 minutes later), the experimenter described the rationale behind both the tapping task and the interview.

Results & Discussion

Subjects were first asked the following question:

1. In your experience, which of these events has been more likely: Are you more likely to misread other people's intentions, are they more likely to misread your intentions or are these 2 events equally likely?

50 % of subjects reported that others were more likely to misread their intentions; 42% reported that they were more likely to misread others and 8% reported that these 2 events were equally likely. A gender difference was indeed found. 78% of the men said that they were more often misread whereas 68% of the women said that they misread others more often ($x2 = 12.67$ (df=1, p<.0001).

The questions that followed were dependent on each subject's answer to #1. Subjects who reported that they were more often misread by others were given Form 1 (see Appendix B); subjects who misread others more often were given Form 2 and those who said that both events were equally likely were given Form 3. For certain questions (marked *), each subject might suggest more than one answer, thus percentage totals will exceed 100%.

Form 1: OTHERS MISREAD ME MORE OFTEN (14 males, 6 females)

2. How often do these misunderstandings occur in your life?

50 % of subjects reported that these misunderstandings occured frequently, while 50% said they occured only now and then.

3. Do you think you are hard to read?

60% of subjects said yes they were hard to read, 40% said they were not hard to read.

3b.*If yes, why don't you make yourself easier to read?

75% of subjects mentioned some reason why they couldn't help being hard to read. Many cited some apparantly fixed personal characteristic which made it difficult for others to read their intentions:

"I have stoic facial expressions because of my European upbringing"

"Some people say I have a poker face, I guess I'm just not very expressive."

66% of subjects explained why they didn't want to make themselves easier to read even if, on occasion, it meant that others would misread their intentions:

"I don't like to offer myself up for interpretation a lot--it's like a safety mechanism. I don't think it's good to be read like an open book."

"It's good for me because I can remove the mask when I need to; I can use it in business."

"I'm a chameleon--it's just a mask because I have been hurt emotionally in the past as a young person. I anticipate pain. If people could read me anytime they wanted to, I'd be much more vulnerable."

3c.*if no, why do you think this happens?

All subjects who felt they were not hard to read, believed that it was some characteristic of others that was leading them to misread the subjects' intentions:

"People are too concerned with themselves to really pay attention to what I'm trying to get across"

"People see what they want to see".

4. With whom do you most frequently have these misunderstandings?

45% of subjects said it was their friends who misread them most often, 40% cited their significant others. Strangers, parents and romantic interests were each chosen by 5% of subjects.

5.* Can you describe the most common type of situations where someone will misread your intent?

60% of subjects described a situation where someone took offense when none was intended: "When you are trying to be funny and someone takes it as criticism. Meanwhile, I'm saying it in a tone that I would think would make it obvious that I was joking."

35% mentioned a situation where someone attributed intent to behaviour that was not intentionally motivated:
"I may be caught up in something--like I'm going to a midterm and going over a chemistry reaction in my head, and I may not notice that other people are going by and they'll think I'm ignoring them intentionally. Truth is, I didn't even see them."

15% described a situation where they expected someone to see beyond their overt behaviour to their underlying intentions and were disappointed when they did not.
"Sometimes I'll tell my boyfriend: 'I don't want you to come over', but I'm just saying it to say it, to make myself feel better instead of waiting for him to say he doesn't want to come. But really I do want him to come over and I'll think he knows it but is just taking everything I say literally so he doesn't have to come over."
10% referred to a situation where someone distrusted the intentions they had made explicit, believing that they were hiding their true intentions:
"My girlfriend lives in Philadelphia now and I told her that I'm going to move there when I graduate. She thinks I'm just trying to appease her rather than going because I want to.

6.* Why do you think these misunderstandings occur?

40% of subjects speculated that perhaps confusion arose from the fact that similar overt behaviour may correspond to two very different intentions:

"When I'm mad, I don't talk much and when I'm tired I don't talk much. Even though the difference is obvious to me, other people may just see that I'm not talking and assume that I'm mad when I'm just tired."

30% thought that others may have certain expectations that may bias how they infer intent.

"I work with this woman who has had some bad experiecnes with sexism in the past. Two of the other men we work with have also said some pretty chauvinistic things. Because of that, and because I'm male, she sees malintent in everything I do."

25% said that others may mispresume their intentions because their behaviour and, hence, their intentions are ambiguous.

"Sometimes I'll hold back until I'm sure I know what I'm thinking, then I'll discuss it. Up to that point my behaviour will be pretty unfocused and people may misread my intentions."

15% of subjects attributed these misunderstandings to the fact that others overanalyze them.

"My girlfriend is very analytic--she reads too much into situations. She's a modern thought and literature major: she reads a 4 line poem and has to write a 20 page paper on it. I think she uses the same minute analysis when she's analyzing me!"

7.* How have you discovered that you have been misunderstood?

65% of subjects said that the person in question had said something that made it obvious.

65% mentioned that the person's behaviour made it obvious. 15% had realized upon thinking back on the situation and 5% said that someone else had alerted them to the situation.

8. Are you misread more by men, women or is it equal?

70% of subjects (71% of the men, 66% of the women) reported that they were more frequently misread by women. 15% of subjects (17% of the women, 14% of the men) said they were more misread by men and the remaining 15% said it was equal. Many subjects interjected that even though they were more often misread by women, these women knew them better as they were more attentive and receptive.

9.* If you wanted to ensure that nobody misread your intentions next week, how would you do it?

55% of subjects said they would be more open and communicative. 35% would try to take the other's perspective, to anticipate how others might interpret their actions. 20% would eliminate certain specific behaviours that are frequently misunderstood and 10 % would bring up the issue the moment they realized that they had been misunderstood.

10. Can you think of any times when you have misread other people's intentions?

90% of subjects said yes, 10% said no.

11. With whom do you most frequently have these misunderstandings?

39% said they misread their significant others most often, 39% cited their friends, 11% misread strangers most frequently. Parents and romantic interest were each chosen by 5% of subjects.

12.*Can you describe the most common type of situations where you have misread someone else's intent?

55% said they attributed intent to behaviour that was not intentionally motivated; 55% said they didn't see beyond others overt behaviour to their underlying intentions; 22% took offense when none was intended and 22% falsely believed that others were hiding their true

intent.

13.*Why don't you misread other people's intentions more often?

55% explained that they understood people well:

"My mom's a psychologist, I know what's going on behind the scenes."

"I'm a good judge of people. I can usually jump from my perspective from theirs."

"Other people tend to generalize more--to assume that other people are more like them, maybe they just don't take the time."

55% said they would ask right away, if they found someone's behaviour ambiguous:

"If I don't know what they are getting at, I have no problem asking them where they are coming from."

FORM 3: I MISREAD OTHERS MORE OFTEN (15 females, 2 males)

2. How often do therese misunderstandings oocur in your life?

53% reported that these misunderstandings occur frequently, 41% said they occur now and then and 6% said they occur only rarely.

Why do you think you are more likely to misread others?

47% of subjects thought that they were too analytical:

"I never take anything at face value. I'm always looking for hidden motives--I'm not one to leave well enough alone."

35% cited low self-esteem:

"I have a low self-image, I don't always see things that clearly. I can't emotionally distance

myself from some situations. I tend to be unrealistic. I'm always interpreting other people's behaviour negatively.

25% added that they tend to jump to conclusions before considering the situation more carefully.

4. With whom do you most frequently have these misunderstandings.

47% of subjects said they misread their significant others most often, 47% mentioned their friends and 6% cited their parents.

5.* Can you describe the most common type of situations where you have misread someone else's intent?

41% of subjects described a situation where they took offense when none was intended:

"My boyfriend will try to be funny and I'll take it as criticism."

41% mentioned a situation where they attributed intent to behaviour that was not intentionally motivated:

"Sometimes people will walk by me without saying hello. I'll be hurt and think they are ignoring me. Then I'll find out they didn't even see me.

35% didn't see beyond others overt behaviour to their underlying intentions.

"Sometimes when my husband comes home from a hard day at school, he will do something that he thinks shows he's had a bad day and wants affection. I think that because he's being so quiet, he must want to be alone."

18% said they falsely believed that others were hiding their true intent:

"Someone invites you to a party and your'e not sure if they want to or it they're just trying to be polite."

6.* Why do these misunderstandings occur?

65% claimed that their own expectations biased how they inferred intent:

"If you are a pessimist, you naturally look for the worst. I don't want to take everything

positively because it seems like your'e being vain--taking something that doesn't belong to

you. I'd rather just go at it from a negative aspect."

18% mentioned overt behavour that seemed to correspond to the intentions they

mispresumed:

"If my boyfriend is really angry at me, he will clam up--barely talk to me. If he is sad, he's

just as quiet. He'll get mad when I assume he's mad at me when he is really just upset.

Sometimes, I just can't tell the difference between his two moods."

18% said they misread behaviour that was ambiguous and 18% said they had a tendency to

overanalyze situations.

7. How have you discovered that you have misread someone's intentions?

59% of subjects said that the person in question had said something that made it obvious.

35% said that the person's behaviour made it obvious. 23% had realized upon thinking back

on the situation and 18% said that someone else had alerted them to the situation.

8. Who do you misread more--men, women or is it equal?

65% of subjects (all the women) said they misread men more often. 29% said they misread

both equally (100% of the men chose this option). 6% of subjects said they were more often

misread by women.

9.* If you wanted to ensure that you did not misread anyone's intentions next week, how

would you do it?

47% said they would eliminate certain specific personal characteristics that lead them to misread others. 23% would try to take the other's perspective. 18% said they would bring up and question any behaviour or intention that seemed ambiguous and 18% said they would be more open and communicative.

10. Can you think of any times when other people have misread your intentions?

100% of subjects said yes.

11. With whom do you most frequently have these misunderstandings?

76% said they were misread by their friends more often. 18% cited their significant others and 6% mentioned their parents.

12.*Can you describe the most common type of situations where someone else has misread your intent?

53% described a situation where they expected someone to see beyond their overt behaviour to their underlying intentions. 23% reported a situation where someone took offense when none was intended. 18% referred to a situation where someone believed they were hiding their true intentions. 6% mentioned a situation where someone attributed intent to behaviour that was not intentionally motivated.

13.*Why don't people misread your intentions more often?

88% explained that they were open and communicative--that they made their intentions explicit:

"I think I display my emotions and intentions clearly--I am expressive, easy to read."

18% said they bring it up right away if they think that someone has or may misread them:

"I try to clear up any ambiguities before the situation arises.

THE TAPPING TASK

Form 1 subjects--subjects who felt that they were misread more often-- scored a mean of 50% (SD=24; R=0>>90) on the tapping task. Form 2 subjects--subjects who misread others more often--scored a mean of 40% (Sd=25, R=0>>>95) on the tapping task. The difference (T=1.81) was significant at P <.10. The overall score for males was 52% (SD=22, R= 0>>>85) and 42% for females (Sd=27, RD=0>>>95). This difference (T=1.86) was also

significant at P<.10.

These discrepancies seem to offer support for the logic behind our main hypothesis. That is, we maintain that people who report that they are more likely to misread the intentions of others are people for whom the question and process of analysis are salient--people who are keenly focused on their social environment. These people will be more accurate in their interpretation of others--more skilled, more likely to take another's perspective--when they can maintain some emotional distance, when they are not hedonically threatened and when they are not motivated to overanalyze in order to reduce ambiguity. Thus, in a cut and dry, non-hedonically threatening situation, such as the tapping task, we would expect our Form 2 subjects, the 'misreaders', to more often recognize how meaningless the tapping is from the listener's perspective.

Summary

We found a significant gender difference: 78% of the men reported that others were more likely to misread their intentions and 68% of the women said they were more likely to misread the intentions of others. The majority of those who were misunderstood admitted that yes, they were hard to read but there were a number of reasons why they couldn't or wouldn't 'wear their hearts on their sleeves'. The risk of being occasionally misunderstood was considered less threatening than the vulnerability that might stem from laying oneself exposed for easy and accurate analysis. These subjects were most frequently misunderstood by significant others and friends--people with whom they had a lot of contact and to whom they felt close.

The most common type of situation reported was one where someone took offense when none had been intended by the subject. Why did this happen? The most popular speculation was that perhaps others were confused by similar overt behaviour--a sarcastic tone, for instance--that corresponded to two very different intentions--humour or insult. Most subjects realized they had been misunderstood through something their partners said or did.

The majority of subjects felt that they were more frequently misread by women. They were careful to explain, however, that this might have been because women knew them better and were more attentive to them--that is, women were more likely to try and read them at all. If they were going to attempt to be better understood, most subjects would be more open and communicative and would try harder to take other people's perspectives. On those occasions where these subjects misread others--others again, most commonly being significant others and friends--they were most likely to attribute intent to unintentionally motivated behaviour or to fail to see beyond others overt behaviour to their underlying intentions, that is to fail to

fully appreciate their perspective. These 'misunderstood' believed, however, that an ability to understand people well and a willingness to ask about any behaviour they didn't understand prevented them from misreading others more often.

Subjects who reported that they misread others more often believed that low self-esteem and the tendency to be overly analytical were primarily to blame. As we would now predict, they most frequently misread significant others and friends. These subjects were most likely to take offense when none was intended or to attribute intent to behaviour that was not intentionally motivated. The majority saw their own expectations or pre- judgements at the root of these misunderstandings. They, too, realized they had misread through something their partners said or did.

Most subjects said they misread men more often (the few men, here, said they misread both equally). If they were going to try to prevent this misreading, subjects wouud eliminate certain personal characteristics, such as overanalysis, insecurity and distrust. If these subjects were to be misread themselves, the culprits were much more likely to be friends than significant others. This is not surprising as most 'significant others' in this category were men. The most common scenario, here, was one where subjects expected someone else to see beyond their overt behaviour to their underlying intentions. Thus, like the other group, they show an egocentric focus, however here there seems to be an expectation that others will analyze behaviour to the same degree as they do. The misreaders believed that the primary reason why they were not misread more often was because they were open and communicative.

Thus, one of our major conclusions from these interviews would be that women are more likely to see intent in both intentionally *and* unintentionally motivated behaviour. They

will be less likely to dismiss any behaviour as meaningless or random. In the second part of the study, we wanted to test this proposition empirically, to set up some standardized yet reasonably involving situation to which a larger number of subjects could be exposed. *Would women scrutinize the situation more closely and perceive more intentionally motivated behaviour?*