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**Extroversion versus Similarity: An Exploration of Factors Influencing Communication
Accuracy of Social Cognitions**

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Abstract

Although extroversion has been linked to effectiveness in numerous communicative situations, it is unclear whether this dimension of personality promotes communication competence because of enhanced levels of expressiveness or through other processes, such as perceived similarities. Expanding on this theoretical divide, two contrary predictions were advanced representing both perspectives, i.e., amount of information versus similarity. In the current study, the view that source extroversion promotes interpersonal accuracy based upon amount of information was supported rather than the similarity prediction. Implications for future research are discussed.

Extroversion versus Similarity: An Exploration of Factors Influencing Communication Accuracy of Social Cognitions

Misunderstandings are experienced at every level of human interaction and in every context, in part, due to the quality of the communication presented by the source (Brandt & Powers, 1980, Powers and Lowry, 1984a,b). Although many misunderstandings are inconsequential, some ultimately have serious impact upon the quality of life. Identifying and understanding the factors that contribute to misunderstandings, or conversely communication accuracy, is essential to increase the potential for satisfying social relationships.

Powers and Lowry (1984a) defined basic communication fidelity (BCF) as the “degree of congruence between the cognitions of two or more individuals following a communication event” (p. 58). The degree of congruence establishes the level of communication accuracy. Measures of interpersonal communication accuracy, such as BCF (Powers & Spitzberg, 1986), represent one of the foundational elements of communication competence (McCroskey, 1984). Early BCF studies involved the communication of tangible cognitions, such as geometric shapes (Brandt & Powers, 1980, Powers and Lowry, 1984a,b) as the test bed for this construct. However, the attention of BCF researchers soon turned to social cognitions. This expanded focus on social cognitions established the reliability and validity of measuring the communication accuracy of such images in social and professional contexts (Powers & Love, 1989; Powers & Spitzberg, 1986). Later, Kopecky and Powers (2002) found both gender and relationship level to be factors impacting the communication accuracy of social cognitions. The current study seeks to enhance understanding of the communication accuracy of social cognitions by examining two competing explanations related to the ability to acquire higher levels of self-identity communication accuracy (personality and similarity) in the social cognition context.

Theoretical Perspective

Extroversion and Interpersonal Accuracy

Since Eysenck's (1967) seminal work, extroversion has been viewed an integral part of personality and is said to have many manifestations in social life including assertiveness, gregariousness, cheerfulness, and energy (John & Srivastava, 1999). Extroversion measures an individual's tendency to be gregarious, assertive, and sociable while introversion, its bipolar opposite, describes the tendency to be reserved, timid, and quiet (Antonioni, 1998).

Headey and Wearing (1989) suggest that extroversion predisposes individuals to have favorable life events in friendship and work, and that these traits lead to a positive sense of well-being. McCrae and Costa (1986) argue that extroverts adapt to stressful events more efficiently than introverts do. Extroverts experience more positive emotions and less negative sentiments than do introverts (Moberg, 1999). In addition, extroverts are seen as more socially oriented people. Brown and Hendrick (1971) found that extroverts are generally more popular due to the fact that they are seen as more interesting, warm, and more influential than do introverts. These studies point to the idea that extroverts may communicate more effectively with others simply because they send out more interpretable cues and information than introverts.

Extroverts tend to have strong social skills and a desire to work with others (Antonioni, 1998; McCrae & Costa, 1987). These individuals exude more confidence and assertiveness. They tend to seek social support from friends when faced with different forms of stress (Amirkhan, Risinger, & Swickert, 1995). They draw energy from other people and things outside themselves. They think by talking out loud and need the company of others to maintain

emotional balance (Kurcinka, 1994). Introverts draw energy from within and need time to reflect on their experiences to understand them. They need opportunities to watch or listen before carrying out an act and need time alone before they are ready to share their experiences. This information supports a proposal stating that extroverts convey more information in a communication event.

Numerous studies point to specific communication outcomes or behaviors directly related to differences along the extroversion-introversion continuum. Extroverts talk more than do introverts (Campbell & Rushton, 1978; John & Srivastava, 1999). Thorne (1987) notes that introverts and extroverts have distinctive communication styles and tendencies. Extroverts spend less time pausing before speaking in a conversation. They tend to speak more than introverts, although they do not self-disclose any more than introverts. People who speak more quickly are often extroverts while those who speak at a slower than average rate are usually introverts. Siegman (1956) argues that the greater amount of pausing and less speaking among introverts results from a higher cognitive activity and less impulsivity. Other research indicates that extroverts are more expressive than introverts (Giles & Street, 1994). In either case, more evidence is presented that different levels of the extroversion trait denote specific communication behaviors.

In regards to communicative events, extroverts display a wide range of topics and claims of common ground. In contrast, introverts engage in fewer, more focused conversations (Thorne, 1987). Previous studies of interpersonal perception and extroversion (Kenny, 1994; Kenny, Horner, Kashy, & Chou, 1992; Malloy & Albright, 1990) suggest that extroverts maintain higher levels of interpersonal accuracy than do introverts.

Perceived-Similarity and Communication Accuracy

A contrary explanation for communicative accuracy stems from the concept of similarity as proposed in Byrne's (1997) law of interpersonal attraction. According to this position, humans are attracted to others with whom they share similar characteristics such as attitudes, beliefs, values, and personality traits. Because such similarities are self-confirming and rewarding in nature, people recognize and communicate these similarities in an on-going manner. Furthermore, Kenny and Kashy (1994) suggest that as a function of interpersonal communication, such as self-disclosure, humans discover the shared attitudes and perspectives held with their partners. These, in turn, strengthen their social bonds leading to increased interpersonal accuracy.

It would stand to reason that conversation partners communicate more accurately with one another when they possess similar personality traits. Consequently, partners of similar extroversion levels would communicate more accurately than would partners with dissimilar levels. Thus, there are two clear lines of thought that are in competition with each other. On the one hand, literature clearly supports the notion that extroverts should produce greater communication accuracy than introverts due to their increased communication cues. On the other hand, a significant body of literature supports the notion that people of similar levels of extroversion/introversion should produce greater communication accuracy of their extroversion or introversion regardless of that level due to the ease of recognition.

Hypotheses

Based on the preceding theoretical perspective, the following contrasting hypotheses were advanced:

- H1: Individual sources in pairs with similar levels of extroversion will have significantly higher BCF regarding self-identity social cognitions than will individual sources in pairs having dissimilar levels of extroversion.
- H2: Individual sources with high extroversion will have significantly higher BCF than will individual sources with low extroversion regardless of the partner's level of extroversion.

Method

Participants

Participants in this study were 111 (40 male, 71 female) undergraduates enrolled in an introductory-level college speech communication courses. All participants were volunteers for a study of communication effectiveness and were given credit toward completion of the course in exchange for their involvement.

Procedures

Participants first completed a questionnaire containing demographic questions and a measure of extroversion (Francis, Brown, & Philipchalk, 1992) ($\text{Alpha} = .91$). Each person then selected one of three identical research sessions to attend approximately one week later. A median split of extroversion scores classified participants as either high or low extroversion. Pairs of participants were randomly assigned to one of three group categories based on their classification as demonstrating either High or Low Extroversion: 25% of the pairs were placed into the High-High category, 50% were placed into High-Low category, and 25% were placed into the Low-Low category. At each of the three sessions, partners were brought together and given a sheet of general conversation topics and instructed to get to know each other better over the next 10 minutes.

After the communication event had concluded, partners were separated and seated on opposite sides of the room to complete the final questionnaire. The first section of the questionnaire used the same extroversion measurement form as previously completed a week earlier but now asked the participants to indicate how they portrayed themselves in the communication event ($\text{Alpha} = .94$). The second section was distributed upon completion of the first. Each participant then reported his/her perception of the extroversion displayed by his/her partner using the same extroversion form ($\text{Alpha} = .92$). Thus for each pair, the cognition of extroversion that was intended to be communicated to the partner could be compared to the cognition developed by the partner. The absolute difference score was computed and treated as representative of each person's communication accuracy (BCF) in this context with this partner.

Results

The mean and standard deviation for self-reported extroversion was 29.61 (6.11) with a median of 31. Means and standard deviations for the extroversion and BCF by treatment groups appear in Table 1. A 2 x 2 ANOVA in which actor extroversion (high v. low) and partner

Table 1: Means and Standard Deviations for BCF Treatment Groups.

<u>Actor x Partner Extroversion</u>	<u>Mean</u>	<u>Standard Deviation</u>
Low Actor, Low Partner	6.88	3.91
Low Actor, High Partner	7.14	3.23
High Actor, Low Partner	4.14	2.46
High Actor, High Partner	3.82	2.36

Note: In this study, a lower BCF number represents greater accuracy while a higher BCF number indicates less accuracy.

extroversion (high v. low) were predictors of dyad level BCF yielded one significant main effect ($F_{1,1,120} = 30.34$; $p < .0001$; $\eta^2 = .203$). Scheffé t-tests detected a significant difference in BCF for actor extroversion ($p < .0001$) and no significant difference in BCF for partner extroversion ($p = .68$). There were no interaction effects. Pairs in which the actor had high extroversion communicated with high accuracy regardless of the partner's level of extroversion. Pairs in which the actor had low extroversion communicated with lower accuracy regardless of the partner's extroversion level.

Discussion

After the results of the experiment were analyzed, only one of the hypotheses was supported. The first hypothesis, that paired individuals with similar extroversion levels will communicate more effectively than dissimilar personality pairs, was not confirmed. This result does not support the claim that individuals will communicate more effectively with others who have similar extroversion scores. It is important to note that the results of this test do not rule out the possibility that other similar social cognitions and characteristics do directly relate to communication fidelity.

The second hypothesis, that regardless of their partner extroversion level, high extroversion speakers will communicate their personality traits more effectively than low extroversion speakers, was unequivocally sustained. Test results show overwhelming support for the hypothesis that high extroverts are more effective communicators than low extroverts. This finding is consistent with previous studies of interpersonal perception and extroversion (Kenny, 1994; Kenny, et al, 1992; Malloy & Albright, 1990) and provides support for the second of the two competing hypotheses.

These results support the idea that extroverts reveal more social cognition related cues than introverts and therefore produce higher BCF, irrespective of their partner's extroversion. Given this finding, scholars should recognize that encoding more information when communicating can lead to more effective communication of at least one element of self-identity. This result is significant because it allows researchers to analyze communication events more efficiently and will lead to a better understanding of improved communication methods. By discovering one of the keys to more effective communication, scholars can take another step towards understanding how and why some communication events result in success while others leave the receiver with a drastically flawed interpretation of the sender's original message.

These findings lead researchers to new questions and concerns. Questions arise quickly about a maximally beneficial level of information that avoids over/under loads of information

and the role of personality and communication accuracy. If extroversion can affect communication effectiveness, what other personality traits might have the same effect? There is enough previous evidence in other experiments and research to warrant the extended study of how similar characteristics between individuals in a communication event are related to communication outcomes. Many areas involving personality and its connection with BCF remain unexplored. The concept that more contextual cues encoded in an event leads to a better understanding between sender and receiver is significant in that it clearly identifies a major factor related to the potential for misunderstanding in human relationships.

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