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A TEST OF THE DEGREE OF ASSOCIATION AMONG
SELECTED COMMUNICATION CHARACTERISTICS
AND INNATE INNOVATIVENESS

THESIS

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by

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The present study used regression procedures to investigate the relationships between selected communication variables and innate innovativeness. The three general types of variables examined in this study were communication anxiety, communicator style, and self-disclosiveness.

Ten hypotheses were tested together with a descriptive model which was based on the communication variables and their ability to predict innate innovativeness. Results of the tests of the model were confirmed as were the ten hypothesized relationships.

The results of the regression analyses performed on the data indicated that receiver apprehension and honesty of self-disclosiveness were negatively and positively associated with innate innovativeness respectively, and were the variables which most significantly impacted the variance of innate innovativeness scores.

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CHAPTER I

INTRODUCTION

Communication and the process of social change are intimately linked on both a pragmatic and intellectual level. Vast amounts of time and energy have been devoted to the study of the relationship between the two processes in a variety of formal and informal contexts (c.f. Rogers & Shoemaker, 1971; Rogers & Rogers, 1976; Hurt, Joseph, & Cook, 1977).

The very nature of a relational study assumes some sort of commonality between the two variables that are examined. The relationship between the process of communication and the social change process, however, does not exist in the degree of commonality between communication and the act of social change, rather, it lies in the relationship between the communication process and the individuals who engage in the act of social change.

The overwhelming majority of existing research has failed to take into account the existence of an intervening variable between communication and the innovation process-- that is, the relationship that exists between communication and the willingness of individuals to change. These relationships are illustrated in Figure 1.

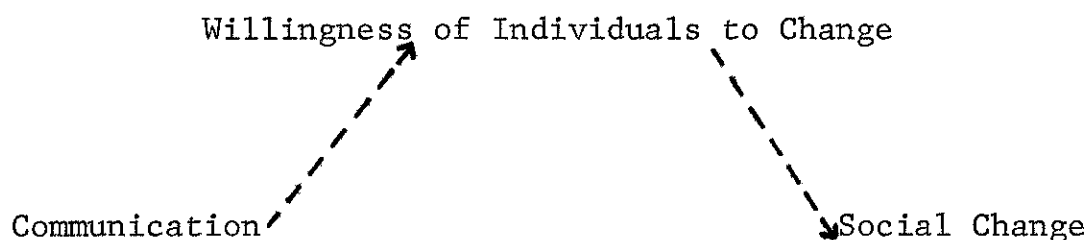


Fig. 1--The relationship between communication and the innovation Process

The broken line in the figure is representative of the variable which intervenes in the relationship between communication and the process of social change, and the solid line is indicative of the predominant way in which the relationship between communication and innovation has been examined in the past.

Defining Innovativeness

The concept of "innovativeness" is defined by Rogers and Shoemaker (1971, p. 27) as the degree to which an individual is relatively earlier in adopting an innovation than other members of his or her social system. Rogers (1976) indicates that this temporal conception of innovativeness prevails throughout much of the published research and, as a consequence, the predominant method for measuring innovativeness reflects the temporal orientation adhered to by most researchers. As a result, the most widely accepted conceptualization has been the "relative time of adoption" technique.

Within the framework of the relative time of adoption methodological approach, two basic techniques emerge as the prevalent conceptualizations of innovativeness. The first technique defines as innovators those individuals who constitute the first X percent of a given new product market.

The second technique is known as the "cross-sectional" method (Robertson & Myers, 1969). This procedure establishes innovativeness on the basis of how many of a subjectively prepared, prespecified list of new innovations an individual owns at the time of the survey. To date, few alternative conceptualizations have been presented in published literature.

Although the above conceptualizations have been well established by precedent, the philosophy of scientific inquiry enjoins scholars to transcend the boundaries of existing methods of study so that the scope and depth of knowledge about any given construct may be continually expanded and refined. In keeping with this philosophy, Midgley and Dowling (1978) have reexamined present conceptualizations of innovativeness and suggest an alternative way in which the construct of innovativeness may be viewed.

It is the contention of Midgley and Dowling that the concepts of innovativeness and time of adoption are not synonymous. A cursory examination of existing literature yields strong support for this contention.

Summers (1971) examined the relationship between change agents and innovativeness. In this study the author defined innovativeness in terms of the above mentioned cross-sectional method. His examination, however, ignored the issue of whether or not a given product was purchased or actively sought after. Instead, innovativeness scores were based on the number of products reportedly owned from lists included in the questionnaire. By omitting the stipulation that products must have been actively sought or purchased in order to be counted as indices of innovativeness, Summers could not control for product ownership as a result of receiving gifts. The significance of this flaw is magnified when one considers that Summers elected to include small appliances on the list of products surveyed. It is not unreasonable to suggest that many household appliances are not purchased by the owner; they are, instead, received as gifts. It is however, in such a case, unreasonable to equate time of adoption with innovativeness. Present literature is replete with examples of this basic conceptual error (c.f. Darden & Reynolds, 1974).

Green, Langeard, & Favell (1974) provide additional support for the contention of Midgley and Dowling. It is the position of the authors that the cross-sectional method has a propensity to define as innovators those who do not conform to the true definition of the term. The authors suggest that it is possible, by employing the cross-sectional

method, to classify as an innovator the individual who purchases large quantities of goods on the recommendation of others, when in fact, the individual who recommends the product is the actual innovator.

Based on the above discussion of the potential errors involved in employing the time of adoption technique when studying innovativeness, it is clear that present conceptualizations are far from exhaustive and sorely lack rigor in accurate identification.

Midgley and Dowling suggest further that the distinction between the concepts of innovativeness and time of adoption is couched in the assumption that innovativeness is a hypothetical construct whereas the time of adoption measure is "a low-level operational variable" (p. 237). Midgley and Dowling also suggest that there exists between the two concepts a system of intervening variables (i.e. interpersonal communication variables).

This system of intervening variables according to the authors significantly impacts the time it takes an individual to adopt a given innovation, and, if these variables are not considered, then the identification of an individual as innovative does not truly reflect that individual's position on the innovativeness continuum.

Midgley and Dowling indicate that trait innovativeness is an alternative conceptualization which allows a more exhaustive treatment of the overall concept of

innovativeness. Hurt, Joseph, & Cook (1977) explain the concept of trait innovativeness by stating that it is a uni-dimensional construct which is reflected by an individual's innate willingness to change. By utilizing this alternative conceptualization, researchers can potentially classify individuals as either innate innovators or innate noninnovators.

The Innovation Process

In order to fully understand the thesis proposed by Midgley and Dowling, it is necessary to first examine the process by which an individual decides whether to adopt or reject an innovation. Rogers and Shoemaker (1971) provide a descriptive model of this process which consists of four sequential functions.

The four functions included in the Rogers and Shoemaker model are: (1) Knowledge, (2) Persuasion, (3) Decision, and (4) Confirmation.

Knowledge Function

The initial function of the innovation process--knowledge--is the stage at which an individual becomes aware of the existence of an innovation and gains some degree of understanding with regard to its use.

Persuasion Function

The persuasion function of the innovation process is a very critical one in determining whether or not the innovation will eventually be adopted. It is at this stage that an individual develops either a favorable or unfavorable attitude toward the innovation.

Decision Function

The next function of the innovation process is the act of decision-making. It is at this point that an individual engages in activities which lead to the ultimate decision of whether to adopt or reject the innovation.

Confirmation Function

The confirmation function may also be referred to as the reinforcement period. This stage of the process begins after an individual has made an initial choice to adopt or reject the innovation. It is at this point that the individual seeks information that will provide support for the innovation decision which he/she has made. If the individual is exposed to information which is inconsistent with his/her initial choice, he/she may choose to alter the initial decision.

Communication and the Innovation Process

An examination of the process illustrated in the above sections makes it clear that information is a critical

element in the innovation process. The mere existence of information about an innovation, however, is of no use to an individual engaging in the functions of the innovation process. The information must, in some way, be communicated to that individual. Simply put, an individual cannot gain knowledge, or be persuaded, or make a decision about an innovation unless he/she receives information about that innovation.

It is communication, that process by which information is transmitted to an individual, that provides the impetus for the innovation process to take place.

Concomitant with the importance of communication in relation to the process of social change, Midgley and Dowling suggest that the theory of innovative behavior is built around certain social processes; a major one being interpersonal communication and its associated influence over the attitudes and behavior of individuals.

Rogers' and Shoemaker's (1971) text presents a series of empirical generalizations--25 percent of which are based upon factors relating to interpersonal communication. The importance that Rogers and Shoemaker assign to the concept of interpersonal communication is additional evidence of the way in which interpersonal communication and innovativeness interact to a significant degree.

It may be concluded therefore, that the diffusion of information about an innovation depends in large part upon

the process of interpersonal communication--the process by which individual experiences with innovations are spread throughout a given social system.

Midgley and Dowling observe that although the mass media serves as the primary channel for the flow of information at the knowledge function of the innovation process, it is primarily the favorable personal recommendations of a social contact which is thought to be of paramount importance in influencing an individual at the persuasion and decision functions of the innovation process. This proposition is supported by the research of Beal and Rogers (1957; 1960), Copp and others (1958), Deutschmann and Fals Borda (1962).

It should be noted, however, that none of the research cited above deals with the interpersonal communication characteristics of innate innovators and noninnovators, but rather with the frequency and type of both interpersonal and mediated communication experiences associated with these individuals. As a consequence, this study was designed to investigate these communication characteristics as antecedents to the variety of communication experiences potentially had by members of a social system. Such information can make possible the development of research models relating subsequent communication behavior to innate innovativeness, as well as providing valuable benchmarks for change agents concerned with facilitating the rapid acceleration of adoption curves.

Interpersonal Communication Characteristics of Innovativeness

The assumptions made by Midgley and Dowling and others strongly indicate the need for studying interpersonal communication variables in relation to the innovation process. The communication variables included for study in the present investigation were: (1) Communication Apprehension, (2) Communicator Style, and (3) Self-Disclosure.

Communication Apprehension

In a broad sense, communication apprehension may be defined as an individual's level of fear or anxiety associated with either real or anticipated communication with another person or persons (McCroskey, 1977). The primary manifestations of a high degree of communication apprehension are avoidance of, and withdrawal from communication (McCroskey, 1970).

Since communication is a process which encompasses both the transmission and reception of information, a high level of anxiety associated with either phase of the process can potentially have detrimental effects on the process as a whole.

Thus far, the present paper has argued that communication and the process of social change are linked in varying degrees according to an individual's position on a continuum of innate innovativeness or willingness to accept a given social change. Given the potential significance of the

interaction between these two variables it is clear that a greater understanding of the innovation process may be achieved through the examination of the reported communication characteristics of the individuals who engage in the process of social change. In addition, it is not unreasonable to suggest that an individual's level of anxiety associated with communication can potentially have a significant impact upon the way in which an individual communicates and receives information about a given innovation.

The anxiety variables associated with communication which will be studied in the present undertaking are: (1) Oral Communication Apprehension (OCA), (2) Writing Apprehension (WAT), (3) Reading Avoidance (RAM), and (4) Receiver Apprehension (RAT).

Oral Communication Apprehension. McCroskey (1970) reported that, in general, individuals possessing a high degree of oral communication apprehension tend to engage in fewer interactions than individuals with a low level of OCA. On the basis of this generalization it may be suggested that individuals possessing a high degree of OCA will, in effect, be isolated from communicating with other members of his/her social system. Similarly, Rogers and Shoemaker (1971) suggest that laggards (or noninnovators) also tend to be isolated from communication with members of their given social system.

Given the tendency to avoid communication attributable to both high OCA's and laggards, a case may be made to suggest that high levels of OCA will be a significant predictor of an individual's willingness to accept social change.

In addition, high levels of OCA have been found to covary significantly with dogmatism (McCroskey, 1977). Similarly, Jacoby (1971) found that dogmatism was negatively associated with innovativeness.

Once again the similarity between noninnovativeness and high levels of OCA suggests that the two concepts are closely related. Witteman (1976) found support for this assumption and reported a negative relationship ($r = -.45$) between OCA and innovativeness.

It may be concluded, therefore, that individuals possessing high levels of OCA will be more resistant to change than individuals with a low level of OCA.

Writing Apprehension. Writing Apprehension (WAT) is a form of anxiety associated with communicating through the written mode. Since writing is a form of communication, anxiety associated with writing is, in effect, a form of communication apprehension. McCroskey (1970) indicated that communication apprehension results in avoidance of the form of communication with which anxiety is associated. In addition, it is reasonable to assume that low levels of

skill in writing would yield a relatively high level of anxiety associated with engaging in that activity. It is also reasonable to suggest that, to some degree, low levels of education would result in a lack of skill in basic writing ability (Bernard, 1978).

With regard to innovativeness, Rogers and Shoemaker (1971) generalized that educational level and innovativeness are positively associated.

Given the assumption that low levels of education result in low levels of writing skills, and that low levels of skill yield high levels of anxiety associated with writing activities, it may be concluded that uneducated individuals will exhibit high levels of writing apprehension. If this assumption is correct, it may be argued that individuals with high levels of writing anxiety will be similar to the noninnovative individual in that they both have, for the most part, low levels of education. In the form of a generalization, it may be stated that WAT will be negatively associated with innovativeness.

Reading Avoidance. Reading Avoidance (RAM) is a variable which may be described as an anxiety associated with the reception of communication information in the written form (Powers & Hurt, 1978). Given the assumption that reading is a form of communication (the reception phase of communication), McCroskey's generalization, that

apprehension results in avoidance, applies to the RAM variable. Given the supposed tendency of individuals with a high level of anxiety associated with reading to avoid that activity, it is apparent that individuals with high levels of anxiety associated with reading will be limited in the amount of written information they seek and, consequently, receive.

Rogers and Shoemaker (1971) suggest that innovative individuals are more cosmopolite and, as a result, have more access to information than noninnovative individuals. Given the differences of access to information between innovators and high reading avoiders, it may be assumed that individuals with a high level of reading avoidance will be less innovative than individuals with low levels of reading avoidance.

Receiver Apprehension. Receiver Apprehension (RAT) is operationalized by behaviors which indicate high levels of anxiety associated with receiving communicated information (Wheless, 1975). It is intuitively obvious that individuals who possess a high level of anxiety about receiving information will seek to avoid such anxiety by avoiding information reception. If one considers the cosmopolite nature of innovators suggested by Rogers and Shoemaker, it is apparent that individuals with a high level of receiver apprehension will rarely be classified as innovative. It

may be argued, therefore, that RAT will be negatively related to innovativeness.

Communicator Style

At this point in the present paper, the importance of communication in the innovation process has been discussed, and relationships have been suggested between different types of anxiety associated with communication and differing degrees of innate innovativeness. It has been suggested that high levels of communication anxieties will be negatively related to the amount of information an individual will transmit and receive.

The present section will produce a rationale to suggest that different levels of interpersonal communication anxiety will result in different manifestations of reported communicator style. If this suggestion is confirmed, then communicator style can potentially serve as an indirect predictor of innate innovativeness.

Norton (1978) isolates nine variables of communicator style which constitute an individual's overall communicator image. These nine independent variables according to Norton are: dominance, dramatics, contentiousness, animation, impression leaving, relaxedness, attentiveness, openness, and friendliness.

Dominance

The dominant individual tends to take charge of social interactions (Norton, 1978). According to Norton, the dominant individual interacts frequently in most social situations. Frequent interaction with outside sources, according to Rogers and Shoemaker, is a characteristic of those individuals who tend to be more innovative than their peers. On the basis of the above information, the potential positive relationship between dominance and innovativeness is apparent.

In addition, the tendencies of the dominant individual to interact frequently in social situations are the same as those which characterize the individual possessing a low degree of oral communication apprehension. This high degree of similarity between the low oral communication apprehensive individual and the highly dominant individual lends support to the existence of a negative relationship between OCA and dominance. Witteman (1976) reported that OCA is also negatively associated with innovativeness. Given the concomitant negative relationships between OCA and innovativeness, and OCA and dominance, it may be argued that dominance will be positively associated with innovativeness.

Dramatic

Norton describes the dramatic individual as one who manipulates exaggerations, fantasies, stories, metaphors,

rhythm, voice and other stylistic communication devices to highlight or understate content. Norton posits that as a style of communication, dramatizing covaries with many important communicative phenomena; the most relevant of which is coping with anxiety (Cosper, 1959).

This finding is highly significant in view of the notion that any social change, because it deviates from normal procedure, must logically produce an increased level of risk. It is reasonable to suggest, therefore, that an individual who is better able to cope with anxiety would be better able to cope with the risk involved in adopting a given innovation. Given this assumption, it may be argued that innovators will exhibit more dramatic tendencies than noninnovators.

Beyond this basic reasoning, it may be suggested that dramatic individuals will be less inhibited than non-dramatic individuals. The willingness of dramatic individuals to vary their style of interaction in a number of ways suggests that these individuals would possess low levels of anxiety associated with communication in general. If this assumption is correct, then it may be argued on the basis of Witteman's finding that dramatic individuals, as a result of their low levels of anxiety associated with oral communication, may be more innovative than non-dramatic individuals.

Contentiousness

The contentious communicator, according to Norton, is generally viewed in a negative light because of his/her argumentative nature. On the basis of the test items used to determine contentiousness in Norton's communication style measure, it may be concluded that the contentious individual is generally unwilling to accept new ideas or concepts without some sort of documentation. Scholars studying the process of social change have reported similar tendencies associated with noninnovative individuals. Blake, Perloff, and Heslin (1970) indicate that those individuals who are classified as noninnovators are reluctant to accept new ideas without first seeing them put into practice by others.

It is plausible, then, to assume that a noninnovator would possess a higher degree of contentiousness than would an innovative individual. This speculation is supported by the assumption that noninnovators and individuals with a high degree of contentiousness both require documentation of the feasibility of a new product or concept before they will accept it (Blake, Perloff, & Heslin, 1970).

The description of the contentious individual which Norton provides corresponds very closely with the characteristics used to describe the dogmatic individual. Both the contentious individual and the dogmatic individual tend to adhere strongly to preconceived notions and are unwilling to change their beliefs unless they are exposed to

compelling evidence to the contrary. Given the similarities between the contentious individual and the dogmatic person, it is not unreasonable to suggest that the two concepts are positively related.

Given the assumed positive relationship between contentiousness and dogmatism, a case may be made to suggest a negative relationship between contentiousness and innovativeness on the basis of projected communication behaviors.

McCroskey, Daly, and Sorensen (1976) found that dogmatism was positively correlated with OCA. Given the similarities between dogmatism and contentiousness, it may be argued that contentiousness would also be positively associated with OCA.

If this relationship does exist, it may be concluded that contentious individuals will have a high level of anxiety associated with oral communication. Once again, on the basis of Witteman's finding that OCA and innovativeness will be negatively related, it is reasonable to suggest that contentiousness will be negatively associated with innovativeness.

Animated

Norton indicated that the animated individual is one who tends to use nonverbal cues to a large extent when interacting with other individuals. Norton's description of the animated individual suggests that the animated individual

usually possesses a high degree of extraversion. Given the extraverted tendencies of the animated communicator, it is reasonable to assume that a low level of oral communication apprehension would prevail among animated individuals. The negative relationship between communication apprehension and innovativeness has been reported in a previous section of this paper.

Given the potentially high degree of association between animatedness and low levels of communication apprehension and given the negative relationship between communication apprehension and innovativeness, it may be argued that animatedness will be positively associated with innovativeness.

Impression Leaving

The concept of impression leaving, according to Norton, is based upon whether the communicator is remembered on the basis of the communication stimuli that are projected: Impression leaving, according to recent empirical evidence, is related to total interactions in dyads (Berger & Calabrese, 1975).

It is logical to assume that a high degree of interaction in dyads would result in a high degree of access to information. Rogers and Shoemaker (1971) suggest that a high degree of access to information is a characteristic which is attributable to the innovative individual. Given

the similarity between innovators and communicators with a high level of impression leaving, a positive relationship between innovativeness and impression leaving seems apparent.

In addition, total interaction in dyads may be logically linked to an individual's level of communication apprehension since high levels of apprehension usually result in communication avoidance. If this assumption is correct, Witteman's suggestion of a negative relationship between communication apprehension and innovativeness would lend added support to the potential relationship between impression leaving and innovativeness.

Relaxed

Norton indicated that relaxed as a style variable is a crucial element of interpersonal relationships. The relaxed individual is one who experiences low levels of tension or anxiety when engaging in face-to-face interaction. The characteristics of the relaxed communicator are similar to those used in describing the low communication apprehensive individual (McCroskey, 1977). If the dimension of relaxedness is indicative of a low level of communication apprehension, it may be argued that relaxedness and innovativeness are positively related. This argument is once again supported by Witteman's (1976) thesis that OCA and innovativeness are inversely related.

Attentive

The attentive communicator is one who makes sure that the other person knows that he/she is being listened to. Most researchers, according to Norton, tend to equate attentive listening with empathy. It is Gibb's (1961) contention that communication which conveys empathy for the feelings of the individuals involved in the interaction is extremely supportive and defense reductive. Aside from the quality of enhancing communication climate, empathy can have a significant positive effect upon the accuracy with which messages are received. It seems clear that if an individual is able to set aside his/her own opinions or beliefs, then that individual will be able to receive information more accurately.

This ability to set aside preconceived notions about an idea or concept could potentially enable an individual to be more receptive of a given change. On this basis, it may be posited that attentiveness and innovativeness are positively related.

In addition, if attentiveness is examined in relation to communication anxiety, further support may be found for the suggested relationship between attentiveness and innovativeness. In a previous section of the present paper, it was suggested that receiver apprehension would be negatively related to innovativeness. It is intuitively obvious that an individual who possesses a high degree of receiver

apprehension would not be inclined to engage in the activity which is likely to stimulate those feelings of anxiety. It may be suggested, therefore, that attentiveness will be negatively related to receiver apprehension.

Given the relationship posited above which suggests that receiver apprehension will be negatively associated with innovativeness, and given the supposed negative relationship between receiver apprehension and attentiveness, it may be argued that the attentive individual will experience less anxiety associated with receiving communicated information, and that there will be a positive relationship between attentiveness and innovativeness.

Open

The open communicator is a frank, outspoken, extraverted individual who tends to welcome an opportunity to communicate with other individuals (Norton, 1978). This succinct description of the open communicator suggests that an individual who is classified as open would necessarily possess a low degree of communication apprehension. Given this suggestion, the findings reported by Witteman once again provide support for a potential relationship between a communicator style variable (openness) and innovativeness. On the basis of the relationship summarized above, one may hypothesize a positive relationship between openness and innovativeness.

Communicator Image

Communicator image is the dependent variable in the overall construct of communicator style. It is the variable which indicates the way in which an individual perceives his/her communicative ability. It is Norton's contention that an individual with a "good" communicator image finds it easy to communicate with others whether they are intimates, friends, acquaintances, or strangers. Norton's description of the individual with a good communicator image closely parallels the characteristics associated with individuals possessing low levels of oral communication apprehension. Given the similarities between the individual with a good communicator image and the individual possessing a low degree of oral communication apprehension, it may be argued that an individual's communicator image will be predictive of that individual's level of oral communication apprehension.

Given the assumption that OCA is negatively related to innovativeness, it may be argued that communicator image will serve as an indirect positive predictor of innovativeness.

Self Disclosiveness

In previous sections of this paper, a rationale has been presented to suggest that an individual's level of innate innovativeness can be predicted by testing that

individual's level of anxiety associated with communication. In addition, an individual's level of communication apprehension is reflected in the way in which that individual communicates, or, in his/her communicator style.

Given the concomitant relationships discussed in the above sections, it may be argued that the foundation of a predictive and descriptive model has been laid regarding a person's willingness to accept social change. The present section of this paper will provide an additional component of that model by examining self-disclosiveness in regard to the concomitant relationships of the concept of innate innovativeness.

There are several reasons why self-disclosiveness is an important communication characteristic to examine in relation to the model which is being constructed. Midgley and Dowling (1978) suggest that interpersonal information is an important element in the innovation decision process. It is certainly reasonable to suggest that interpersonal channels are necessary for the transmission of interpersonal information. Self-disclosiveness, or the generalized willingness to engage in the act of self-disclosure, provides a means by which interpersonal channels may be established and maintained and subsequently allows for the flow of interpersonal information to be maintained as well.

Johnson and Noonan (1972) found support for the thesis that self-disclosiveness is positively related to

interpersonal trust. It is important to note that trust is a necessary element of an interpersonal relationship and, without trust, the relationship is likely to be terminated (Rotter, 1971).

Further evidence of the importance of self-disclosive behavior in interpersonal relationships is provided by Berger and Calabrese (1975). The authors present a series of axioms and theorems, some of which suggest a positive relationship between self-disclosive behavior and relational solidarity. It is their contention that one factor which is of primary importance in determining the success of an interpersonal relationship is a reduction of uncertainty. Certainly, self-disclosiveness provides an avenue for the reduction of uncertainty since the receiver of the disclosure is gaining information about the sender. It is also important to note that self-disclosiveness not only reduces uncertainty for the receiver, but it also eventually reduces uncertainty for the initial sender. This suggestion is supported by the research of Jourard and Jaffe (1970). The results of the research indicate that self-disclosive behavior tends to evoke similar and reciprocal responses from the receiver of the initial disclosure.

Research by Wheelless (1976) revealed five independent dimensions of self-disclosiveness which are employed in the present study. The five dimensions of

self-disclosiveness are: (1) amount, (2) valence, (3) intent, (4) control, and (5) honesty.

Amount. On the basis of the items used to measure amount of self-disclosiveness in Wheelless' self-disclosiveness instrument, it is clear that amount refers to how much an individual is willing to disclose about him/herself. Since self-disclosiveness is an interpersonal communication variable, it is reasonable to suggest that in order to disclose information about one's self it is necessary to communicate with another person or group of persons. Given that interpersonal communication is a necessary element of self-disclosive behavior, it is also reasonable to assume that an individual who possesses a high degree of interpersonal communication apprehension would tend to disclose less than an individual with a low level of communication apprehension. This assumption is supported by the research of Wheelless (1976).

Given the negative relationship between communication apprehension and self-disclosiveness and the concomitant negative relationships between communication apprehension and certain dimensions of communicator style, it is necessary to examine the ways in which the elements of communicator style may serve as predictors of self-disclosive behavior.

On the basis of the relationships suggested above,

it may be argued that individuals who disclose large amounts of interpersonal information about themselves may be generally characterized as possessing low levels of interpersonal communication apprehension. In a previous section of this paper, it was suggested that low levels of interpersonal communication apprehension would be reflected by a person's use of certain communicator styles. It was suggested that an individual possessing a low level of communication apprehension would potentially score highest on the following style variables: dominance, dramaticness, animatedness, relaxedness, openness, friendliness, and communicator image.

Since individuals possessing an affinity for the communicator styles listed above may be expected to exhibit low levels of communication apprehension, and since individuals who tend to disclose large amounts of information about themselves also possess a low degree of communication apprehension, it may be argued that individuals who disclose large amounts of information will also score high on the style variables cited above.

It has been suggested in a previous section of the present paper that the above communicator style variables are positively associated with innate innovativeness. Given the suggested positive relationship between amount of self-disclosiveness and the aforementioned elements of communicator style, and given the positive relationship

between these elements of style and innate innovativeness, it may be argued that amount of self-disclosiveness will be positively associated with innate innovativeness.

Valence. The valence of an individual's self-disclosiveness describes the positiveness or negativeness of the information that an individual discloses about him/herself. On the basis of existing information regarding communication apprehension, there is no evidence to suggest that there would be a relationship between communication apprehension and the valence of an individual's self disclosures; a high apprehensive individual will potentially disclose amounts of positive and negative information that are proportionately equivalent to the disclosures of the low apprehensive individual.

There may, however, be a relationship between valence of disclosiveness and a certain communicator style variable; that variable being openness. In a previous section of this paper, it was suggested that the open individual was truthful and frank. If this assumption is correct, it may be suggested that the open individual will tend to be more willing to disclose negative things about him/herself. It may be argued, therefore, that if valence is considered to lie on a continuum of negative to positive, a negative relationship exists between openness and valence.

Since it has been suggested that openness is positively associated with innate innovativeness, it may be argued that valence will be negatively associated with innate innovativeness. More simply put, it may be suggested that innovative individuals will be more willing than noninnovative individuals to disclose negative information about themselves. This suggestion is consistent with the generalization posited by Rogers and Shoemaker (1971) regarding the social relations of innovative and noninnovative individuals. It is the contention of the authors that innovative individuals tend to be perceived as low potential opinion leaders by their peers. If the assumption that innovative individuals are more willing than noninnovative individuals to disclose negative information about themselves is correct, it would provide a potential explanation why innovators are considered to be low potential opinion leaders.

Intent. Wheelless suggests that an individual's intent to disclose information about him/herself is reflected by that individual's conscious decision to disclose such information. Given that self-disclosiveness, in general, is negatively related to communication apprehension, it is reasonable to suggest that individuals with a high degree of anxiety will disclose less information in general. It is, however, possible that since an individual with a high

degree of communication apprehension will disclose less information than an individual with a low degree of communication apprehension, that the high apprehensive's decision to disclose would be more carefully considered. If intent is viewed as a continuum ranging from low to high, it may be argued that intent to disclose will be positively related to communication apprehension.

Once again, given the posited relationships between communication apprehension and the style dimensions of dominance, dramaticness, animatedness, relaxedness, openness, friendliness, and communicator image, it may be suggested that intent to disclose will be negatively associated with these style variables.

Control. Wheelless suggests that an individual who scores high on the control dimension of self-disclosiveness is better able than the low control individual to regulate the depth and intimacy of his/her disclosures. Since the individual with a low level of communication apprehension tends to disclose more than the individual with a high level of apprehension, it is reasonable to suggest that as a result of his/her greater amounts of exposure to the act of self-disclosure, he/she would be better able to control the disclosures that he/she engages in. On the basis of this assumption, it may be argued that control of disclosure would be negatively related to an individual's level of

communication apprehension.

If this assumption is correct, it may also be argued that control of disclosure will be positively associated with those dimensions of communicator style that are negatively associated with the above communicator style variables, and since these style variables are positively associated with innate innovativeness, control will be positively associated with innate innovativeness.

Honesty. Honesty of disclosiveness, according to Wheelless, deals with the accuracy of the information which an individual discloses about him/herself. At the present time, there is no empirical evidence which suggests significant differences between an individual's level of communication apprehension and the honesty of that individual. In addition, there is no apparent rationale which would suggest such differences. The present paper, therefore, will not suggest any relationship between communication anxiety and honesty of self-disclosiveness.

There is, however, a rationale which suggests a potential relationship between honesty of disclosiveness and the openness dimension of communicator style. The description of the open communicator suggests that he/she is willing to make frank, honest statements when communicating with others. If this general tendency of the open communicator is applicable to his/her disclosive behavior,

it may be suggested that honesty of self-disclosiveness will be positively related to the openness variable of communicator style.

In addition, since openness has been suggested to be positively related to innate innovativeness, it may be suggested that honesty of disclosiveness will also be positively related to that construct.

Hypotheses and Model

Although the above sections have reviewed all possible relations among the communicator style and self-disclosiveness variables with the overall construct of innate innovativeness, the present study was restricted to an examination of a limited number of the variables presented. This approach is necessitated by several important factors. First, if all possible relations were examined, a self report measure for each variable in question would have to be obtained from each case. The list of questions required to obtain a reasonable measure of each variable would necessarily be extremely long. By increasing the number of questions asked of subjects, the risk of a fatigue factor influencing the reliability of the measures is increased substantially.

Consideration of time constraints was another factor which necessitated a limitation of the number of variables to be examined in the present study. Since the

questionnaires were to be administered in class, the present study limited the number of variables examined so that the respondents would be able to complete the questionnaires in the allotted time.

Variables included in the present investigation were chosen on the basis of a preliminary study which included all the variables discussed in previous sections of this paper. The preliminary study analyzed questionnaires containing measuring items for all variables discussed. Forty-three students enrolled in a basic communication course were allowed to take the questionnaires home to complete them. Allowing the students to complete the questionnaires at their own leisure minimized the potential effects of fatigue in the preliminary study, and also mitigated the concern over time constraints.

In order to determine the amount of variance contributed by each variable, correlation coefficients were obtained for all variables in relation to innate innovativeness. Those variables correlating with innate innovativeness below the .30 level were not examined in the final study.

It is important to note that the selective approach employed in the present study does not conceptually distort the subconstructs of a communicator style of self-disclosiveness which were examined. The construct of communicator style consists of ten independent subconstructs.

In the present study, each subconstruct was viewed as a total construct independent of the remaining subconstructs. The independence of the communicator style subconstructs is evidenced by Norton's (1979) examination of attentiveness independently of the remaining subconstructs of communicator style. In effect, it may be argued that the overall concept of communicator style is made up of ten orthogonal constructs and that these constructs may be treated independently.

The above analysis may also be applied to the separate dimensions of self-disclosiveness. Studies dealing with the subconstructs of self-disclosiveness have treated each construct as a separate and complete entity (c.f. Gilbert & Horensteen, 1975).

Since the relations between each specific dimension of the construct have been limited, and since each dimension has been dealt with separately in the rationale of the present study, an individual examination of the subconstructs follows.

Hypotheses

With the imposed limitations of the present study in mind, the following hypotheses were investigated.

- H1: There will be a negative linear relationship between oral communication apprehension and innate innovativeness.
- H2: There will be a negative linear relationship between writing apprehension and innate innovativeness.

- H3: There will be a negative linear relationship between reading avoidance and innate innovativeness.
- H4: There will be a negative linear relationship between attentiveness and innate innovativeness.
- H5: There will be a positive linear relationship between attentiveness and innate innovativeness.
- H6: There will be a positive linear relationship between openness and innate innovativeness.
- H7: There will be a positive linear relationship between friendliness and innate innovativeness.
- H8: There will be a positive linear relationship between amount of self-disclosiveness and innate innovativeness.
- H9: There will be a negative linear relationship between valence of self-disclosiveness and innate innovativeness.
- H10: There will be a positive linear relationship between honesty of self-disclosiveness and innate innovativeness.

Model

A synthesis of the conceptual relationship of the communication variables discussed in the hypotheses above suggests the potential for a model which may serve as a descriptive predictor of innate innovativeness scores.

The rationale presented in previous sections of this paper suggested that communication anxiety variables (OCA, WAT, RAT, RAM) are related in a linear fashion to, and are therefore predictive of, innate innovativeness scores. Likewise, an earlier discussion dealing with the constructs of self-disclosiveness and communicator style indicated that

these variables conceptually impact the variance of innate innovativeness scores. It should be pointed out, however, that only two of the communication anxiety measures (OCA, RAT) were conceptually linked to the communicator style and self-disclosiveness variables. There was no sound or compelling logical rationale which could be made at this time to justify positing a relationship between two relatively non-interpersonal anxieties (WAT, RAM) and a set of variables presumed to assess predispositions toward interpersonal behaviors.

Consequently, three links were considered which describe the potential contribution of the intervening variables as mediators of the direct relationship between OCA, RAT, and innate innovativeness. Ultimately, analyses should show which link(s) provide(s) for the most variance in innate innovativeness scores. Thus the model, shown in Figure 2, was designed to explore the possible linkages among selected communication variables and innate innovativeness.

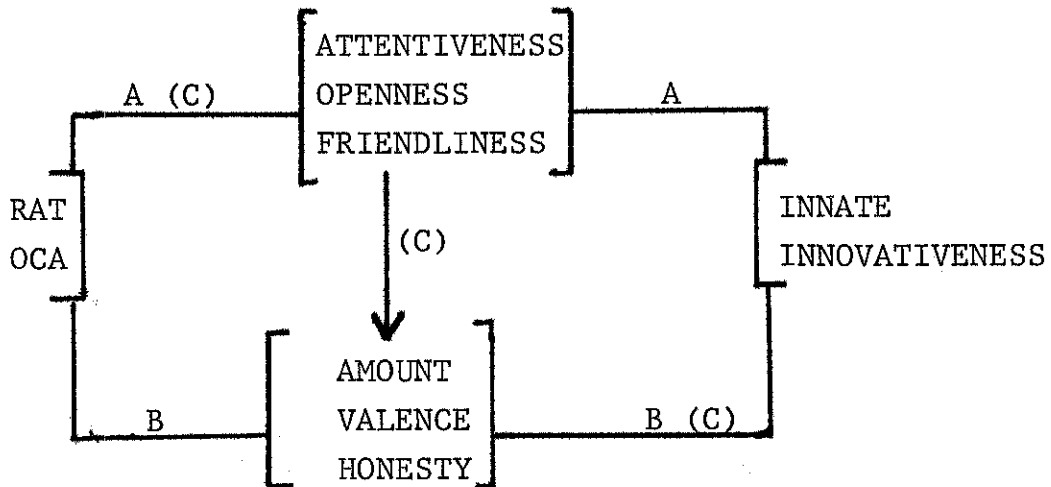


Figure 2--A predictive model of innate innovativeness based upon selected communication variables

The first link, A, in the proposed model is based upon the rationale which suggested a relationship between communicator anxieties and communicator style, and the subsequent link to innate innovativeness scores. The second link, B, provides an alternative route which predicts innate innovativeness scores on the basis of the relationships between communication anxiety variables and selected dimensions of self-disclosiveness. The third link, C, takes into account the potential contribution of all predictive variables in accounting for variance in innate innovativeness scores. More specifically, this link demonstrates the conceptual relationship among communication anxiety, communicator style, self-disclosiveness, and innate innovativeness scores.

It should be noted that links B and C assume the existence of intercorrelations among the predictor variables

of apprehension, style, and self-disclosiveness. The model is operative if and only if this assumption is correct.

CHAPTER II

METHODS

Subjects

The subjects were 213 students enrolled in an introductory speech communication course at North Texas State University. The subject pool consisted primarily of freshmen and sophomores.

Variables

The variables examined in the present study were Oral Communication Apprehension, Receiver Apprehension, Reading Avoidance, Writing Apprehension, Attentiveness, Openness, Friendliness, Amount of Self-Disclosiveness, Valence of Self-Disclosiveness, Honesty of Self-Disclosiveness, and Innate Innovativeness.

Variable Measurement

The variables were measured using standard self-report measures which were administered to all subjects. Seven-point scales were used on all Likert-type measures.

Innate Innovativeness. Willingness to engage in the process of social change was measured by subjects' scores on the twenty-item, Likert-type Innovativeness Scale. This instrument was developed by Hurt, Joseph, and Cook (1977)

and has yielded an internal reliability estimate of .94. In the present study, a split-half reliability of .93 was obtained.

Oral Communication Apprehension. Subjects completed the twenty-item, Likert-type, Personal Report of Communication Apprehension (PRCA) to assess their anxiety associated with oral communication (McCroskey, 1970). The PRCA has been utilized in numerous studies and has consistently shown internal reliabilities near or exceeding .90 (McCroskey, 1977). Reliability estimates for the current data yielded a split-half reliability correlation coefficient of .91.

Writing Apprehension. Anxiety associated with writing was measured by having all subjects complete Daly and Miller's (1975) Writing Apprehension Test (WAT). WAT is a twenty-item, Likert-type scale with a reported reliability estimate of .94 (Daly & Miller, 1975). The reliability obtained in the present study was .85.

Receiver Apprehension. Receiver Apprehension was measured by Wheelless' (1975) Receiver Apprehension Test (RAT). RAT is a twenty-item, Likert-type scale. Wheelless (1975) reported that the split-half reliability of the instrument was .91. The present study yielded a reliability coefficient of .83.

Reading Avoidance. Powers and Hurt's (1978) Reading Avoidance Measure (RAM) was used to obtain an index of subjects' anxiety associated with reading. This twenty-item, Likert-type scale has yielded reliability estimates above .91. RAM, in the present study, yielded a split-half reliability coefficient of .84.

Although RAM was originally defined as a two dimensional construct consisting of reading affect and reading anxiety, research by Powers and Hurt (1978) indicated that the relationship between the two oblique factors was $-.69$, suggesting that RAM could be used as a unidimensional construct measuring reading avoidance. Since this study was concerned only with the relationship between this broader construct and innate innovativeness, the unidimensional procedure was employed.

Communicator Style. The variables of attentiveness, openness, and friendliness were each measured using five, Likert-type items developed by Norton (1976). Split-half reliability for the variables in question as reported by Norton were .57, .69, and .70 respectively. Split-half reliability correlation coefficients obtained in the present study were: attentiveness, .73; openness, .81; friendliness, .72.

Self-Disclosiveness. In the present study, three of the five dimensions of the Wheelless self-disclosiveness construct (1976) were examined. The dimensions of amount, valence, and honesty were each measured using seven point, Likert-type items designed by Wheelless (1976). Split-half reliability estimates in the Wheelless study were .87 for honesty, .81 for valence, and .79 for amount. The present study revealed similar reliability scores of .76 for honesty, .81 for valence, and .79 for amount.

Procedures

Questionnaires containing items for variable measurement were administered to students in class. The questionnaires were preceded by a cover letter explaining the general purpose of the study and emphasizing that subjects' participation was not mandatory. The letter also stated that individual responses would be kept in confidence.

Following the administration of the questionnaires, all subjects were informed as to the specific purpose of the study. In addition, all subjects were allowed to review the results of the study and discuss its implications.

Statistical Analysis

Hypotheses 1-10 were tested by subjecting data to simple regression analyses. The overall predictive model was tested by using Hierarchical multiple regression

procedures. All standards of statistical significance were set at $ALPH = .05$.

CHAPTER III

RESULTS

Tests of the Hypotheses

Hypothesis 1 stated that there would be a negative linear relationship between oral communication apprehension and innate innovativeness. Results of the simple regression testing hypothesis 1 revealed a significant negative correlation between oral communication apprehension and innate innovativeness ($r = .21$; $r^2 = .04$; $F = 9.99$; $df = 1/211$; $p < .05$) which was consistent with, although smaller than, the results reported by Witteman (1976) and indicated that as innate innovativeness increased, oral communication apprehension increased correspondingly.

Hypothesis 2 stated that there would be a negative linear relationship between writing apprehension and innate innovativeness. The simple regression yielded results which confirm the hypothesis ($r = .28$; $r^2 = .08$; $F = 18.56$. $df = 1/211$; $p < .05$). The results indicate that individuals scoring high on a measure of writing apprehension should score low on an index of innate innovativeness.

The third hypothesis posited a negative linear relationship between reading avoidance and innate innovativeness. The results of the simple regression testing hypothesis 3 yielded the expected results ($r = .35$; $r^2 = .12$; $F = 28.69$; $df = 1/211$; $p < .05$). The results give statistical support to the suggestion that as innate innovativeness scores increase reading avoidance decreases.

It was stated in hypothesis 4 that there would be a negative linear relationship between receiver apprehension and innate innovativeness. The hypothesis was confirmed ($r = .43$; $r^2 = .19$; $F = 48.4$; $df = 1/211$; $p < .05$). These results indicate that individuals scoring low on innate innovativeness scales will probably report high levels of anxiety associated with receiving communicated information.

A positive linear relationship between attentiveness and innate innovativeness was posited by hypothesis 5. Results of the simple regression testing hypothesis 5 indicate support for the suggested relationship ($r = .21$; $r^2 = .04$; $F = 9.25$; $df = 1/211$; $p < .05$). These results support the suggestion that innate innovators may be expected to be attentive in interpersonal relationships.

Hypothesis 6 stated that there would be a positive linear relationship between openness and innate innovativeness. Results confirmed the hypothesis ($r = .29$; $r^2 = .08$; $F = 17.7$; $df = 1/211$; $p < .05$), indicating that

as an individual's reported openness increased, his/her innate innovativeness score also increased.

Hypothesis 7 stated that there would be a positive linear relationship between friendliness and innate innovativeness. Results of the simple regression confirmed hypothesis 7 and indicated that as friendliness of communicator style increased, so did willingness to innovate ($r = .26$; $r^2 = .07$; $F = 15.16$; $df = 1/211$; $p < .05$).

Hypothesis 8 stated that there would be a positive linear relationship between amount of self-disclosiveness and innate innovativeness. Results of the simple regression indicates that individuals who are willing to disclose relatively large amounts of information about themselves are more likely to report a greater willingness to adopt innovations ($r = .13$; $r^2 = .02$; $F = 3.56$; $df = 1/211$; $p < .05$).

It was stated in hypothesis 9 that there would be a negative linear relationship between valence and innate innovativeness. Results of the simple regression revealed a low, but significant negative relationship ($r = .16$; $r^2 = .03$; $F = 5.6$; $df = 1/211$; $p < .05$).

Hypothesis 10 posited a positive linear relationship between honesty and innate innovativeness. Results of the simple regression testing hypothesis 10 yielded strong support for the hypothesized systematic relationship ($r = .46$; $r^2 = .21$; $F = 55.2$; $df = 1/211$; $p < .05$).

Tests of the Model

Three hierarchical multiple regression analyses were performed to test each of the alternative links proposed in the model. The results of the analyses testing links A and B each revealed significant relationships between communication anxiety measures and innate innovativeness when mediated by communicator style and self-disclosiveness, respectively ($R_A = .49$; $R^2_A = .24$; $F = 12.91$; $df = 5/207$; $p < .05$); $R_B = .53$; $R^2_B = .29$; $F = 16.26$; $df = 5/207$; $p < .05$).

The test of the third link (C) exploring the relationship between communication anxiety measures and innate innovativeness scores when mediated by the linear combination of communicator style variables and self-disclosiveness resulted, as might be expected, in a larger multiple R ($R_C = .55$; $R^2_C = .30$; $F = 11.21$; $df = 8/204$; $p < .05$). The results of all three of these analyses are summarized in Table I.

TABLE I
 HIERARCHICAL ANALYSIS OF THE COMMUNICATION/INNOVATIVENESS MODEL

Predictor Variables	Test 1, Link A		Test 2, Link B		Test 3, Link C		
	Criteria Variables	Std. Beta	R ² Change	Std. Beta	R ² Change	Std. Beta	R ² Change
	ITOT	-.36	.19	-.25	.19	-.24	.19
	OCA	-.09	.10	-.10	.01	-.11	.01
	OPEN	.14	.02	****		.07	.02
	FRIEND	.14	.01	****		.14	.02
	ATTENT	-.06	.01	****		.10	.01
	AMNT	****		.06	.01	.03	.00
	VAL	****		.06	.00	-.06	.00
	HONEST	****		.33	.08	.32	.06

(R = .49; R² = .24; F = 12; df = 5/207; p < .05)

(R = .53; R² = .29; F = 16.26; df = 5/207; p < .05)

(R = .55; R² = .30; F = 11.21; df = 8/204; p < .05)

****Not used in analysis

Statistically significant relationships were found to exist among the predictor variables ($p < .05$) thus confirming the assumption upon which links B and C were predicated.

An examination of the standardized beta weights for the multiple regression analysis testing link C reveals that of the eight variables used to predict innate innovativeness, only RAT and honesty of self-disclosiveness made substantive contributions to the overall model. Interestingly, none of the communicator style variables had a significant impact in any of the appropriate analyses.

These results are discussed in greater detail in Chapter IV.

CHAPTER IV

DISCUSSION

The results of the analyses of the hypotheses and the model proposed in the study were encouraging. Although the effect size of several of the hypotheses was relatively small, all hypotheses were confirmed. Likewise each of the three links tested in the model resulted in significant but moderate effect sizes, with the largest being the test of Link C which incorporated all of the variables. As a result, this study provides a springboard for further research exploring the composite relationship among a variety of communication variables which may be presumed to be associated with innate innovativeness.

Communication Anxiety and Innate Innovativeness

The present study investigated the relationship between innate innovativeness and four communication anxiety variables (OCA, RAT, WAT, and RAM).

The results of the hypothesis indicating a negative relationship between OCA and innate innovativeness were confirmed thus partially replicating Witteman's (1976) finding.

Receiver apprehension proved to be a highly significant predictor of innate innovativeness scores ($r = -.43$).

The results of the present study provide a description of the tendencies of innate innovators which is consistent with the research findings of Rogers and Shoemaker who suggest that innate noninnovators tend to seek out less information about innovations than do innovators. The rationale in the present study suggested that anxiety about receiving communicated information might prevent individuals from seeking out information about innovations.

As was stated in Chapter I, WAT and RAM were not included in the design of the overall model because there is, at this time, no rationale to suggest that these relatively non-interpersonal communication anxieties could be conceptually linked to the interpersonal communication variables included in the model. It should be noted, however, that both WAT and RAM were moderately and negatively associated with innate innovativeness in the present study. The correlation coefficients for WAT and RAM in relation to innate innovativeness were respectively, ($r = -.28$; $r = -.35$). This moderate degree of association is sufficient to warrant future research investigating the potential existence of mediating non-interpersonal communication variables and their impact upon the variance of innate innovativeness scores as they relate to WAT and RAM (i.e. reading and writing type and frequency of reading and writing experiences, etc.)

Communicator Style and Innate Innovativeness

The correlation coefficients of the style variables in relation to innate innovativeness were surprisingly low as was their contribution to the overall model. The results were, however, encouraging for two basic reasons.

First, although the correlation coefficients were low, all three hypothesized relationships between the style variables and innate innovativeness were confirmed. Secondly, in spite of the relatively low degree of association between the style variables and innate innovativeness, the results are useful because they indicate another potential area of investigation.

Rogers and Shoemaker (1971) indicate that both innovators and noninnovators tend to be isolated from their social system, it is quite possible that this isolation may be brought about by these individuals' lack of sensitivity to their own communication behaviors and a corresponding lack of responsiveness to the norms of communicating with their given social system. If this assumption is correct, then a self-report measure of these individuals' communicator styles would not reflect the actual behavioral predispositions of the individuals in either group. Future research should, therefore, assess individuals' sensitivities to their own communication behaviors when attempting to relate these behaviors to individuals' willingness to innovate. An examination of

individuals' ability to self-monitor or the ability to assess one's own behaviors could provide the requisite information in this area.

Self-Disclosiveness and Innate Innovativeness

The links between the selected dimensions of self-disclosiveness and innate innovativeness were confirmed in the present study. Honesty was the dimension of self-disclosiveness which was most highly correlated with innate innovativeness, accounting for twenty-one percent of the variance. The high degree of association between honesty and innate innovativeness is conceptually consistent with results of previous research conducted in the area of innovativeness.

Results of numerous investigations conducted by Rogers and Shoemaker indicate that innate innovators tend to be relatively unconcerned with the social norms within their given social system. It is not unreasonable to suggest that innate innovators will score highly on the honesty dimension of self-disclosiveness because they are, in general, unconcerned about the potential ramifications of disclosing information honestly within their social system.

It should also be noted that the moderately high degree of association between honesty of self-disclosiveness and innate innovativeness which was found in the present study. Since innate innovators tend to be honest when

disclosing information about themselves, there is no reason to suggest that they will necessarily distinguish between positive and negative information when deciding what information they wish to disclose. As a consequence, the obtained absence of a clear definition between positive/negative disclosiveness would result in an inability to discriminate between innovative and noninnovative individuals, with the attendant reduction in effect size.

The third dimension of self-disclosiveness investigated in the present study was amount. Although the hypothesized positive relationship between amount of self-disclosiveness and innate innovativeness was confirmed, the correlation coefficient obtained in the present study was low ($r = .13$). A reexamination of the rationale for this relationship provides a tenable conceptual explanation for the results obtained in this paper.

It was suggested in Chapter I that since innate innovators tend to interact frequently within their given social system, they will be willing to disclose large amounts of information so that their communication channels may be maintained. The rationale suggested that communication channels would be maintained because disclosing information about one's self usually leads to reciprocal behaviors by the recipients of that information.

It is important to note, however, that the information exchanged in the hypothetical transaction described above

is primarily, and by definition, information about the individuals engaging in the interaction. Since the information in such an interaction deals with individuals and not innovations, there is no sound conceptual reason to suggest that innate innovators would engage in substantially larger amounts of self-disclosive behavior than would an innate noninnovator.

The Overall Model

Although the overall model accounted for thirty percent of the variance in innate innovativeness scores, the mediational impact of the intervening variables was relatively low. As was stated above, the variables of receiver apprehension and honesty of self-disclosiveness were the two largest contributors of variance in innate innovativeness scores. On the basis of the information provided in the present study it may be stated that the best descriptors on innate innovators are that they possess a low degree of receiver apprehension and they report that they are moderately more honest than noninnovators when engaging in self-disclosive behavior. Nevertheless, the three tests of the model do indicate that future research investigating the communication characteristics associated with innate innovativeness might best be served by analyzing these variables in a systematic, ordered, and composite manner in order to begin to establish causal models.

Limitations

Although the above sections have attempted to offer conceptual explanations for the low to moderate effect sizes obtained, several limitations in the present study must be considered in order to more thoroughly understand the reasons for the reduction in effect sizes.

First, it must still be remembered that several of the subconstructs associated with communicator style and self-disclosiveness were not included in the present study. Although their contribution to innate innovativeness is not known, it is nevertheless possible that their absence minimized the systemic impact of communicator style and self-disclosiveness. Future research is needed to investigate this possibility.

Second, although the distribution of innate innovativeness scores obtained in the present study was normal, the range of the scores was restricted. The obtained mean of the distribution was 99.4 as compared to a theoretical midpoint of 80. The obtained range was 68-130 as opposed to a potential range of 20-140. This restriction in the variability of innate innovativeness scores has the potential to spuriously restrict subsequent relational estimates, such as those obtained from the types of regression analyses used.

A third limitation, and one which could have also contributed to the restricted range of innate

innovativeness scores, was the homogeneous nature of the subjects sampled. All of the subjects were underclassmen enrolled in a basic speech communication course at the same university. Previous research by Hurt, Joseph, and Cook (1977) reported that university undergraduates tend to be more innovative than samples which are more heterogeneous and from a larger population. In addition, this homogeneity tends to limit the ability of the innovativeness scales to discriminate between innate innovators and noninnovators. As a consequence, future research employing the innovativeness scales should be addressed to the issue of obtaining more representative segments of the populations under investigation.

Finally, the issue of the reliability of the communicator style measures must be considered. In the present study, reliability estimates of openness, attentiveness, and friendliness were, at best, in the moderate range. These results are not inconsistent with reliability estimates reported by Norton (1978). Obviously, reductions in scale reliability will result in increased amounts of residual variance in regression analyses.

Given the limitations to the present study the results obtained from the analyses of the hypotheses and the model nonetheless augur well for the power of the conceptual framework employed. Clearly, future research is needed which will account not only for these limitations but will

also begin to more systematically define the relationships among interpersonal communication variables and the significant and sensitive processes of social change.

APPENDIX

Dear Speech Student:

The following packet contains a number of questionnaires which provide useful information regarding instructional practices used in the basic Speech Communication course. Consequently, your honest responses to all the items help us to better adopt the course to your particular communication needs. We are therefore asking that you complete the questionnaire as honestly and quickly as possible.

You will note that this packet contains some items to which you have previously responded. The reason for this is that additional administration helps us to check the reliability of these items which we use to assess your communication needs.

We are also requesting that you supply us with your social security number. THESE WILL NEVER BE USED TO IDENTIFY YOU SPECIFICALLY, BUT ONLY FOR PURPOSES OF MATCHING QUESTIONNAIRE ITEMS.

Thank you for assisting us in our efforts to better meet your needs in the classroom. Your cooperation is invaluable. If you have any questions, please do not hesitate to contact us. We will be happy to discuss the results of this survey with you when they are available.

Steven C. Judice
Graduate Assistant

H. Thomas Hurt
Associate Professor

YOUR SOCIAL SECURITY NUMBER _____
(1-9)

YOUR AGE _____ (in years)
(10-11)

YOUR SEX: M=1; F=2 (Circle the appropriate number)
(12)

CLASSIFICATION: FRESH=1; SOPH=2; JR=3; SR=4 (Circle the appropriate number)
(13)

COURSE NUMBER: _____ SECTION NUMBER: _____
(14-16) (17-19)

The following questionnaire should be answered in the space provided with one response based upon the seven-point scale given below. The questions should be answered according to the way you personally perceive yourself in the situations given below.

- (1) Very Strongly Agree
- (2) Strongly Agree
- (3) Mildly Agree
- (4) Neutral
- (5) Mildly Disagree
- (6) Strongly Disagree
- (7) Very Strongly Disagree

Place the number of the most representative response of your reaction in the space provided below.

- (20) _____ 1. I can always repeat back to a person exactly what he said.
- (21) _____ 2. I always show that I am very empathic with people.
- (22) _____ 3. I am an extremely attentive communicator.
- (23) _____ 4. I really like to listen very carefully to people.
- (24) _____ 5. I deliberately react in such a way that people know that I am listening to them.
- (25) _____ 6. I readily reveal personal things about myself.
- (26) _____ 7. I am an extremely open communicator.
- (27) _____ 8. Usually I do not tell people very much about myself until I get to know them quite well.
- (28) _____ 9. As a rule, I openly express my feelings or emotions.

- (29) _____ 10. I would rather be open and honest with a person than to be closed and dishonest even if it is painful for that person.
- (30) _____ 11. I always prefer to be tactful.
- (31) _____ 12. Most of the time, I tend to be very encouraging to people.
- (32) _____ 13. Often I express admiration for a person even if I do not feel it.
- (33) _____ 14. I am an extremely friendly communicator.
- (34) _____ 15. I habitually acknowledge verbally other's communication.
-
- (35) _____ 1. While participating in a conversation with a new acquaintance I feel very nervous.
- (36) _____ 2. I have no fear of facing an audience.
- (37) _____ 3. I look forward to expressing my opinion at meetings.
- (38) _____ 4. I look forward to an opportunity to speak in public.
- (39) _____ 5. I find the prospect of speaking mildly pleasant.
- (40) _____ 6. When communicating, my posture feels strained and unnatural.
- (41) _____ 7. I am tense and nervous while participating in group discussions.
- (42) _____ 8. Although I talk fluently with friends, I am at a loss for words on the platform
- (43) _____ 9. My hands tremble when I try to handle objects on the platform.
- (44) _____ 10. I always avoid speaking in public if possible.
- (45) _____ 11. I feel that I am more fluent when talking to people than most other people are.
- (46) _____ 12. I am fearful and tense all the while I am speaking before a group of people.
- (47) _____ 13. My thoughts become confused and jumbled when I speak before an audience.
- (48) _____ 14. Although I am nervous just before getting up, I soon forget my fears and enjoy the experience.
- (49) _____ 15. Conversing with people who hold positions of authority causes me to be fearful and tense.
- (50) _____ 16. I dislike to use my body and voice expressively.
- (51) _____ 17. I feel relaxed and comfortable while speaking.
- (52) _____ 18. I feel self-conscious when called upon to answer a question or give an opinion in class.

- (53) _____ 19. I face the prospect of making a speech with complete confidence.
- (54) _____ 20. I would enjoy presenting a speech on a local television show.
- (55) _____ 1. I feel comfortable when listening to others on the phone.
- (56) _____ 2. It is often difficult for me to concentrate on what others are saying.
- (57) _____ 3. When listening to members of the opposite sex, I find it easy to concentrate on what is being said.
- (58) _____ 4. I have no fear of being a listener as a member of an audience.
- (59) _____ 5. I feel relaxed when listening to new ideas.
- (60) _____ 6. I would rather not have to listen to other people at all.
- (61) _____ 7. I am generally overexcited and rattled when others are speaking to me.
- (62) _____ 8. I often feel uncomfortable when listening to others.
- (63) _____ 9. My thoughts become confused and jumbled when reading important information.
- (64) _____ 10. I often have difficulty concentrating on what others are saying.
- (65) _____ 11. Receiving new information makes me feel restless.
- (66) _____ 12. Watching television makes me nervous.
- (67) _____ 13. When on a date, I find myself tense and self-conscious when listening to my date.
- (68) _____ 14. I enjoy being a good listener.
- (69) _____ 15. I generally find it easy to concentrate on what is being said.
- (70) _____ 16. I seek the opportunity to listen to new ideas.
- (71) _____ 17. I have difficulty concentrating on instructions other give me.
- (72) _____ 18. It is hard to listen to or concentrate on what others are saying unless I know them well.
- (73) _____ 19. I feel tense when listening to a member of a social gathering.
- (74) _____ 20. Television programs that attempt to change my mind about something make me nervous.
- (75) 2
- (10) _____ 1. I avoid reading.
- (11) _____ 2. I have no fear of reading.
- (12) _____ 3. I look forward to reading.
- (13) _____ 4. I am afraid to read.

- (14) _____ 5. I like to read.
 (15) _____ 6. I am nervous about reading.
 (16) _____ 7. I enjoy reading.
 (17) _____ 8. Reading is a lot of fun.
 (18) _____ 9. I put off reading until last among the things I have to do.
 (19) _____ 10. Knowing I have to read makes me worry.
 (20) _____ 11. Reading is upsetting to me.
 (21) _____ 12. It is pleasant to read.
 (22) _____ 13. Reading is frightening.
 (23) _____ 14. I read a lot in my spare time
 (24) _____ 15. I always avoid reading whenever possible.
 (25) _____ 16. I never feel uptight when I read.
 (26) _____ 17. Whenever possible, I avoid reading.
 (27) _____ 18. If I did not have to read, I would not read at all.
 (28) _____ 19. I only read when I must.
 (29) _____ 20. Reading alone is a very relaxing thing to do.
 (30) _____ 21. I have no fear of reading.
 (31) _____ 22. I am tense and nervous when reading.
 (32) _____ 23. I face the prospect of reading with complete confidence.
 (33) _____ 24. I am generally overexcited and rattled when reading.
 (34) _____ 25. I think it is good to read.
 (35) _____ 26. When I have time, I enjoy reading.
 (36) _____ 27. Nothing could be better than to have a chance to read.
 (37) _____ 28. If I didn't have to read, I wouldn't.
- (38) _____ 1. I avoid writing.
 (39) _____ 2. I have no fear of my writing being evaluated.
 (40) _____ 3. I look forward to writing down my ideas.
 (41) _____ 4. My mind seems to go blank when I start to work on a composition.
 (42) _____ 5. Expressing ideas through writing seems to be a waste of time.
 (43) _____ 6. I would enjoy submitting my writings to magazines for evaluation and publication.
 (44) _____ 7. I like to write my ideas down.
 (45) _____ 8. I feel confident in my ability to clearly express my ideas in writing.
 (46) _____ 9. I like to have my friends read what I have written.
 (47) _____ 10. I am nervous about writing.
 (48) _____ 11. People seem to enjoy what I write.
 (49) _____ 12. I enjoy writing.
 (50) _____ 13. I never seem to be able to clearly write down my ideas.
 (51) _____ 14. Writing is a lot of fun.

- (52) _____ 15. I like seeing my thoughts on paper.
 (53) _____ 16. Discussing my writing with others is an enjoyable experience.
 (54) _____ 17. It is easy for me to write good compositions.
 (55) _____ 18. I don't think I write as well as other people.
 (56) _____ 19. I don't like my compositions to be evaluated.
 (57) _____ 20. I'm no good at writing.

(58) 2

- (10) _____ 1. I do not often talk about myself.
 (11) _____ 2. My statements of my feelings are usually brief.
 (12) _____ 3. I usually talk about myself for long periods of time.
 (13) _____ 4. My conversation lasts the least time when I am discussing myself.
 (14) _____ 5. I often talk about myself.
 (15) _____ 6. I often discuss my feelings about myself.
 (16) _____ 7. Only occasionally do I express my personal beliefs and opinions.
 (17) _____ 8. I usually disclose positive things about myself.
 (18) _____ 9. On the whole, my disclosures about myself are more negative than positive.
 (19) _____ 10. I normally reveal bad feelings about myself.
 (20) _____ 11. I normally express good feelings about myself.
 (21) _____ 12. I often reveal more undesirable things about myself than desirable things.
 (22) _____ 13. I usually disclose negative things about myself.
 (23) _____ 14. I cannot reveal myself when I want to, because I do not know myself thoroughly enough.
 (24) _____ 15. I am often not confident that my expressions of my own feelings, emotions, and experiences are true reflections of myself.
 (25) _____ 16. I am always completely sincere when I reveal my own feelings and experiences.
 (26) _____ 17. My self-disclosures are always accurate reflections of who I really am.
 (27) _____ 18. I am not always honest in my self-disclosure.
 (28) _____ 19. My statements about my feelings, emotions, and experiences are always accurate self-perceptions.
 (29) _____ 20. I am always honest in my self-disclosures.
 (30) _____ 21. I do not always feel completely sincere when I reveal my own feelings, emotions, behaviors, or experiences.

- (31) _____ 1. My peers often ask me for advice and information.
- (32) _____ 2. I enjoy trying out new ideas.
- (33) _____ 3. I seek out new ways to do things.
- (34) _____ 4. I am generally cautious about accepting new ideas.
- (35) _____ 5. I frequently improvise methods for solving problems when an answer is not apparent.
- (36) _____ 6. I am suspicious of new inventions and new ways of doing things.
- (37) _____ 7. I rarely trust new ideas until I can see whether the vast majority of people around me accept them.
- (38) _____ 8. I feel that I am an influential member of my peer group.
- (39) _____ 9. I consider myself to be creative and original in my thinking and behavior.
- (40) _____ 10. I am aware that I am usually the last one of the people in my group to accept something new.
- (41) _____ 11. I am an inventive kind of person.
- (42) _____ 12. I enjoy taking part in the leadership responsibilities of the group I belong to.
- (43) _____ 13. I am reluctant about adopting new ways of doing things until I see them working for the people around me.
- (44) _____ 14. I find it stimulating to be original in my thinking and behavior.
- (45) _____ 15. I tend to feel that the old way of living and doing things is the best way.
- (46) _____ 16. I am challenged by ambiguities and unsolved problems.
- (47) _____ 17. I must see other people using new innovations before I will consider them.
- (48) _____ 18. I am receptive to new ideas.
- (49) _____ 19. I am challenged by unanswered questions.
- (50) _____ 20. I often find myself skeptical of new ideas.

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