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A COMPARATIVE STUDY OF THE LANGUAGE OF AGING AS A FUNCTION OF SOCIAL ISOLATION AND ANOMIA

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CHAPTER I

RATIONALE AND REVIEW OF THE LITERATURE

Until recently the study of aged individuals and their environments was the domain of sociologists and psychologists. However, during the past five years, communication scholars have recognized the need for their expertise in identifying and coping with the problems faced by the segment of society labeled "aged".

One reason for the current concern is the realization that the social-psychological problems of the aged (i.e., social isolation, loss of social power, sensory losses, youth-oriented societies) pose crucial communication questions. The need to communicate the availablilty of services, to forestall premature and unnecessary social isolation, and to assist older members of society in communicating their needs, desires, opinions and aspirations are specific areas of concern for communication research.

A logical question is "Why now"? It appears that this concern has emerged almost overnight. One possible explanation is the aging of our society. Currently, eleven percent (27.5 million people) of our population is over 65. Some researchers (Eisele, 1974) suggest that this percentage will climb to over twenty percent (50 million people) in the next century. This vast increase creates an immediate need for the accumulation of knowledge in order to understand adequately and to cope with the emerging social-psychological needs.

Research in the area of aging has centered on the individual's perception of his/her role in the environment as well as reactions to that perception. These concepts have been approached in terms of various psychological and sociological variables operating in that perceptual process. Gitelson (1949) focused on six psychological patterns of older individuals: (1) Decrease in memory for recent events; (2) sharpened memory for past events; (3) increased self-assertiveness; (4) depression as a result of isolation; (5) introvertism and paranoia, and (6) free-floating anxiety. Given these psychological changes, one might expect a corresponding change in the verbal behavior of the aging. Osgood (1959) suggests that language reflects both environmental and psychological states. A significant task of the communication researcher is to identify these

characteristics in order to be able to more adequately describe and predict the behavior of older individuals.

In addition to the description of psychological patterns, generalizations regarding the language behavior of older adults are abundant. Older persons often are characterized as presenting egocentric associations, indicating frequent references to the past and showing an inability to focus on the mainstream of the conversation. Many of these generalizations have been presented by Klaus Riegel (1968) in his attempt to more objectively describe language changes with advanced age. He found that on a word association test, older subjects gave wider ranges of responses to specific words than younger subjects. He further suggested that older people rely more on semantic than grammatic values because past associations have an impact on word choice. He extended his findings in subsequent research (Riegel, 1973) which indicated that although language remains reportedly stable with advancing age, cognitive decrements would be reflected in language output.

Another psychological variable that has been related to age is intelligence. Some aspects of intellectual functioning seem to deteriorate with age. Jones (1959) specifically suggests that abstract intellectual functioning becomes increasingly difficult for older persons. Given this apparent deterioration of intellectual functioning, a logical expectation

would be that there will be a change in message content and complexity.

All of these researchers share a common bond. They all suggest a relationship between certain psychological components, age and language behavior. However, with the exception of Riegel, the process has stopped at the suggestion stage in the establishment of that link. Therefore, it is to that end that this study proposes to answer the following questions: (1) Is there a relationship between social isolation and anomia (alienation)? (2) are older people more isolated/anomic than younger peeple? (3) what characteristics of language predict social isolation, anomia, and/or age?

Three areas of previous research converge to formulate the rationale for this endeavor. First, Elaine Cumming and William Henry (1961) cite social withdrawal as the primary response to perceptions of the environment by older people. This notion has been expanded and modified in subsequent research. Second, the concept of anomia or alienation also deals with the individual's reaction to the perceived environmental forces. If, indeed, this formulation of the anomia concept is true, one might ask what relationship exists between anomia and advancing age. Finally, the generalizations offered by previous researchers indicate the necessity for investigating the relationship between language and age. If

the aged do, in fact, differ from younger people in terms of social isolation and anomia, language should reflect those differences (Osgood, 1959).

This chapter will examine the relevant gerontological literature as well as the research in the area of anomia. In addition, it will cite measuring instruments designed to tap social isolation and anomia in light of available information regarding their unidimensionality, reliability, and validity. Finally, it will examine the area of language along with a tool for the study of that language. Later in this chapter, a discussion of the tool for language analysis will be discussed. That tool is Sytactic Language Computer Analysis (SLCA-II) developed by Cummings and Renshaw (1976).

Social Isolation

Scholars in the field of gerontology, when describing or explaining the process of aging, have often turned their attention to social isolation. It emerges repeatedly either as a central focus for concern, or as a major behavioral manifestation of a psychological construct. Social isolation appears to be a universal concern in attempts to more adequately understand the aging process.

The use of the term social isolation appears to fall into one of two categories. First, a behavioral type of isolation which is simply physical isolation from communication interaction with others; and second, psychological/perceptual isolation which is best defined as an internalization of

isolation. The concern of this study centers on the relationship, if any, between social isolation, anomia, age and language behavior.

Probably the most widely studied notion regarding the aging process is Disengagement Theory. Disengagement Theory offered the first behavioral approach to the aging process. Cumming and Henry (1961) espoused Disengagement Theory as ". . . an inevitable process in which many of the relationships between a person and other members of society are severed and those remaining are altered in quality" (p. 211).

Obviously, social isolation plays a key role in this formulation. The notion of disengagement centers on relative frequencies of interactions by individuals across time. The major focus is the loss of instrumental roles and interpersonal contact, thereby leading to the physical isolation of the individual from those around him.

The notion of inevitability espoused by Cumming and Henry quickly came under attack. Neugarten and Gutmann (1958) and Havinghurst, Neugarten, and Tobin (1968) suggested that the isolation of the individual from society cannot be fully understood without attention to sociological/environmental factors. That is, the withdrawal/isolation is not solely a result of physical aging but is also dependent on the sociological factors influencing the individual. Later, Maddox (1964) and Atchley (1971) rejected disengagement theory for its lack of attention to personality variables which may

predispose an individual to become more or less isolated from society.

In 1963, Cumming offered a reformulation of disengagement theory suggesting that societal forces were no longer sufficient conditions for withdrawal to occur. She did, however, cling to the inevitability notion that this withdrawal and subsequent social isolation is an inherent part of the aging process. Her formulation still remained a behavioral one in that her primary concern was the behavioral manifestation of physical isolation from other members of society. Henry (1965) redirected his concern by shifting to a developmental paradigm emphasizing the biological/psychological processes of the organism.

In response to the controversy over disengagement theory, activity theory emerged. Activity theorists attempted to describe the aging process as one in which the individual strives for activities in order to replace role relationship losses by death, retirement and family breakdown. Activity theory emphasizes the involvement of the individual as opposed to the emphasis on non-involvement of disengagement theory.

Blau (1973), Havinghurst, et al., (1968) and Palmore (1970) attempted to carry the notions of activity theory a step further in establishing a relationship between level of activity and morale or life satisfaction. While the majority of this research indicates a positive relationship between life satisfaction and levels of activity, this relationship

is in no way clearly established. Cumming and Henry (1961), for example, suggest the opposite. Specifically, they indicate marked increases in life satisfaction and morale because of complete withdrawal. Such contradictory predictions represent significant and as yet unresolved issues.

Two additional trends emerged. First, the ecological approach (Bruhn, 1976) suggests that the values and beliefs inherent in a given situation exert an influence over the individual by which he tests his ability to change and exert reciprocal influence. In this instance, social isolation may or may not occur as the individual perceives his adaptability in the social system. A second but closely related perspective is the exchange focus. Emerson (1972) suggests that the shrinking social interaction networks are manifestations of changes in personal relationships brought about by perception of decreased control over the environment.

Similarly, Gutmann (1964) indicates a shift from what he terms "active" to a "passive mastery". He suggests that older people perceive themselves as conforming to pressures of the outside world while young people more often perceive themselves as being capable of coping with and mastering the pressures and challenges of the environment. Neugarten and Gutmann (1958) report differences in the view of older people on the nature of the external world. Older people see the external world as more complex and as manipulative of them rather than their acting as manipulator of the outside world.

Specifically, they report a marked increase in social isolation and introvertism as a result of this perceptual shift. Havinghurst, Neurgarten and Tobin (1968) report an increase as a function of age in the preoccupation with "self" and a decrease in investment in persons and things in the environment (social isolation).

In these perspectives, social isolation is seen as a consequence of and an adaptation to environmental forces operating on the individual. These foci are a step forward in attempting to understand the aging process. This focus is no longer a classification of behavior in terms of withdrawal or increased activity. Instead, the focus has shifted to an emphasis upon the communication processes of the aging individual who adapts to the social environment.

In addition to the behaviorally and sociologically oriented perspectives on aging, developmental psychologists have attempted to explain the aging process. In essence, these scholars assume the processes explicated in the sociological perspective and turn toward a study of the psychological consequences of social conditions. Havinghurst, Neugarten and Tobin (1968) suggest that "Disengagement is, at least in some respects, a developmental process" (p. 167).

The developmental psychologist is not willing to generalize to the extent that such perceptual shifts are universals

in the aged population. Havinghurst, Neugarten and Tobin (1963) suggest:

> ". . . there is no sharp discontinuity of personality with age, but instead an increasing consisistency. Those characteristics which have been central to the personality seem to become even more clearly delineated, and those values the individual has been cherishing become even more salient" (p. 171).

Such a perspective argues that differences which occur in isolation of the individual in late life are the result of coping mechanisms established in earlier life.

Birren (1964) and Havinghurst (1963) support this position. They each suggest that one's adaptation/coping mechanisms are evolutionary in nature and deeply rooted in past experience. Reichard, Livson and Peterson (1962) delineated five personality types in aged men and found little variation from earlier life. Neugarten et al., (1964, 1968) and Neugarten (1972) delineated only four personality types and suggested these characteristics were extensions of coping mechanisms of middle life.

Thus, the developmental psychologist's perspective on aging concentrates on the individual's adaptation processes as consequences of personality characteristics shaped by perceptions of the environment. Social isolation is important in such a perspective in that it is an overt manifestation of the psychological predispositions of the individual.

In an attempt to mesh previous gerontological research into a cohesive framework, Riley (1971) and Foner (1975)

developed a notion they term age stratification theory. They suggest that researchers must view aging as partly dependent upon individual personality characteristics, and also dependent upon sociological and biological factors. Such a perspective is an expansion of the work of Frenkel-Brunswik (1968) in the development of life phases which correspond to the biological and psychological stages of life. Other life-span developmental psychologists (Erikson, 1963; Peck, 1968; Gould, 1975) provide foundations upon which to formulate a notion of age stratification as an explanation of the aging process.

The importance of social isolation to an age stratification notion is stipulated by Riley, Johnson, and Foner (1972) and is a key in understanding the aging process. The degree of isolation experienced by the individual in later life is a composite of all that has gone on before. Like the developmental psychologist, age stratification theorists attempt to approach the study of aging holistically. While the developmental psychologist concentrates on the development of psychological and personality characteristics, the age stratification theorist approaches the study from the changing sociological/environmental conditions of aging. Both offer a broader based foundation for understanding the aging process than earlier theories. The process of aging must be viewed in its holistic sense as a complex interaction of psychological and environmental forces operating on the individual.

Regardless of the theoretic position assumed, each researcher is concerned with the isolation of the individual from society and the resultant decrease in communication interaction. In examining the foregoing results regarding shifts in orientation and the subsequent social isolation, a construct that appears to be related to this perception of control but never directly addressed by previous research is anomia. Perceptions of complexity of the outside world and lack of control over that world are some of the key issues with which anomia research deals.

Anomia

The development of the notion of anomia has its roots in the work of philosophers. The recent work of scholars in the field of anomia can be traced primarily to Marx and Durkheim. Marx's formulation dealt with labor's alienation from the means of production thereby creating a sense of powerlessness and estrangement. Durkheim, on the other hand, approached anomia from the perspective of societal norms. He suggested that an individual cannot survive without knowledge of these societal norms or expectations. These norms provide the framework for one's role in life. Without them, the individual experiences a feeling of normlessness and lack of self-worth and isolation.

Given these historical roots, Melvin Seeman (1954) attempted to operationalize the concept of anomia. He noted

five dimensions--powerlessness, normlessness, meaninglessness, isolation and self-estrangement--which he believed to be the essense of the concept called anomia.

Leo Srole defined anomia in more general terms. He asserts the notion that anomia is unidimensional in nature as opposed to being composed of the five dimensions noted by Seeman. Srole addresses these issues in defining anomia:

> More concretely, this variable is conceived as referring to the individual's generalized pervasive sense of self-to-others belongingness at one extreme compared with self-to-others distance at the other pole of the continuum. (p. 711)

These feelings of lack of involvement in the world and powerlessness to cope with that world have received attention by scholars other than Srole. In much the same vein as the Marxian view of anomia, Robert Angell (1962) studied the relationship between professional status of the worker and concommitant feelings of integration/isolation from the environment. His findings suggested an inverse relationship between feelings of anomia and professional work status. However, Angell did not report correlations to support these assertations.

Bell (1957) examined the relationship between social class, social isolation, and anomia. He reported an increase in anomia scores with age. He indicated that while this trend holds true for both high and low socio-ecomonic classes, it is slightly more predominant in the lower socio-economic

level ($p < .001$) than in the higher level ($p < .01$). These conclusions were based solely on the reporting of mean scores for three age groups. Although his findings are stated from a sample of men only, he reports that those who are relatively isolated (i.e., lower frequency of social interaction) have higher anomia scores than men who are not isolated.

These findings suggest two notions. First, although Bell's data is based on a male sample, it seems logical to assert that the same findings would hold true for women. If a woman has participated in similar instrumental roles, the results of her withdrawal from those instrumental roles might be expected to parallel that of her male counterpart. Second one explanation of differences between professional (generally higher socio-economic classes) and unskilled laborers (generally lower socio-economic classes) reported by Angell might be explained by the availability of roles of the professional individual in younger life. These roles which are already established are carried into and expanded in advanced age thereby decreasing the social isolation. These play roles may not be as readily available to the unskilled laborer. Thus, given Bell's findings of the relationship between anomia and social isolation, the professional individual might be less anomic than the blue collar worker. If these findings hold, one would expect a decrease in social interaction and the corresponding social isolation and anomia to be more prevalent among individuals who are blue-collar workers than among professionals.

In light of findings relating social isolation, anomia and the posited relationship with advanced age, further research is in order to verify and/or clarify those relationships. Research previously cited (i.e., Gitelson, Riegel, Osgood) posited a relationship between language and socio/psychological phenomena operating within the individual. To that end, this study will also attempt to examine language and its relationship with social isolation, anomia, and advanced age.

Language

When approaching the study of language and its changes as a function of the aging process, one general trend emerges vividly: Our knowledge regarding the effect of the normal aging process on the production of language is severely limited. The information available is, for the most part, subjective in nature based on inferences from psychological and intelligence data. Neurological pathologies as a contributing factor to language changes have received more attention by communication scholars. The necessity for a shift from this focus is suggested by Hutchinson and Beasley (1976):

> This research is particularly critical with reference to the normal aging process. . . further investigations should be aimed at defining 'normal' functioning with cognizance of the frequent disparity between chronological age and biological activity (p. 117).

As a result of the relative unavailability of research findings, but mindful of the need for such research, a rationale for such study necessarily must be gleaned from a synthesis of related research reports. This section will first review related literature. Second, it will examine recommendations for research approaches and finally, it will present an evaluative tool for expanding our current reservoir of knowledge.

Little disagreement exists that language is a medium by which psychological processes are expressed. The research cited previously by Gitelson, Riegel, and Jones reflected an interest in the relationship between language behavior and psychological processes. Riegel made some preliminary attempts at a more direct relationship in his word association studies. However, extensions of this line of research more fruitfully might be pursued by means of a more thorough and complete analysis of language behavior. One such piece of research currently exists. Although the findings are not directly related to the older population, they are potentially applicable to that segment of society. Cummings and Wright (1976) present a regression equation composed of 23 variables which significantly predict age (R=.64). The Cummings and Wright study is based on spontaneous language samples of college students with an age range of 17-45. In similar research, Gorcyca, Kennan and Stich (1976) correctly classified 91% of the cases of college and middle aged subjects based on language

samples. Therefore, the assumption can be made that language would necessarily reflect any psychological changes associated with the aging individual.

The particular tool chosen for analysis was SLCA-II, a computerized program of analysis developed by H. Wayland Cummings and Steven L. Renshaw (1976). The categories were originally developed by Cummings (1970) in an effort to categorize complex characteristics of verbal behavior. It is this same technique for language analysis which might prove useful for this study. In order to operationalize the social isolation and anomia concepts, two measurement tools will be discussed. The Social Life Space Measure developed by Cumming and Henry has been used extensively to tap the notion of isolation from society. The Srole anomia scale will also be examined. These tools, along with SLCA-II, a tool for language analysis will be discussed in their relationship to this study.

Measurement

Social Isolation

Techniques for measuring social isolation are few. Cumming and Henry developed their Social Life Space Measure (See Appendix A) to indicate the number of interactions in which an individual is involved. The scores on this measure are produced by summing the responses on a 9-item, open-ended questionairre. Issues surrounding their data analysis as well

as the related assumption of a probability distribution warrants attention. Three problems emerge in relation to these issues. First, no rationale is provided for the summated scores procedure. Second, unidimensionality is assumed, not determined. Third, no rationale is presented for the conclusion that the data appears to be in the form of a Poisson distribution. The restrictions on a Poisson distribution set out by Hoel (1971) suggest caution in acceptance of Cumming and Henry's conclusions. Hoel outlines conditions on which the conculsion of a Poisson distribution may be reached. Specifically, Hoel notes that (1) When the sample size is small ($N \leq 5$) and the expected proportion is less than .10 or greater than .90, the binomial distribution applies. (2) When the sample size is large but the expected proportion is less than .10 or greater than .90, the Poisson distribution is appropriate. (3) If the sample size is large and the expected proportion is greater than .10 but less than .90, the normal distribution applies. Cumming and Henry do not offer such a rationale for their conclusion nor do they specify the conditions under which they based those conclusions.

Other researchers (Bell, 1957; Havinghurst, Neugarten and Tobin, 1968; Lowenthall, 1964; Lipman and Smith, 1968; Tissue, 1968; Talmer and Kutner, 1969) have used the Cumming and Henry scale, or modifications of it. Generally each has assumed the face validity of the measure in that they assume that it does indeed tap a phenomenon called social isolation.

Despite this assumption, no attempt has been made to cope with the notion of whether the measure does, in fact, tap such a phenomenon. This is one question on which this study should shed some light. Until some validity can be established, the process toward an understanding of social isolation in the aging is severely hampered. Specifically, only after the dimensionality and reliability questions regarding the scale are answered, can this study provide evidence for the validity of the measure.

Anomia

Several attempts have been made to measure the notion of anomia. Little reliability and validity information exists. The scale developed by Leo Srole (1956) has been subjected to more evaluation than any of the others and more closely approximates the conceptual formulation of anomia in this study.

Srole developed an attitude-type scale based on "eunomia" and "anomia". By Srole's definition, "the former originally denoted a well-ordered condition in a society or state; the latter its opposite" (p. 710). An unspecified type of latent structure analysis was used to justify the conclusion that the items met the criteria of unidimensionality.

Struening and Richardson (1965) dealt with the issue of unidimensionality in Srole's scale. By means of a principal components solution using an oblique rotation based on

Carrol's biquartimin procedure (Harman, 1976), they concluded that all of Srole's items loaded on a single factor with factor loadings ranging from .54 to .64. As a result, they concluded that Srole's scale was, in fact, a unidimensional one. An internal reliability coefficient of .86 was reported using the Spearman-Brown.

A third attempt at examination of Srole's scale was pursued by Miller and Butler (1966). Using two separate samples (city and suburban), they examined two areas related to Srole's scale--unidimensionality and scalability. Common factor analysis produced an indeterminant solution with attendant problems in generalizability and assessment of error. A Guttmann scale analysis indicated a coefficient of reproducibility of .88 for one sample and .86 for the other. Since the coefficient did not meet the minimum of .90, the scale was considered less than desirable. Many researchers would argue that a .90 criterion is unnecessarily rigorous. They concluded:

> Srole's items form a definitely unidimensional set and are clearly suitable for various forms of scale analysis. On the other hand, it is possible that too much fractionation of the scale has been assumed by some investigators, and that categorization of respondents into anomic and eunomic would be more suitable (p. 504).

These findings suggest that the scale is a valuable one if seen as a dichotomous measure. Scalability as a continuous variable, however, was questioned.

James (1963) also dealt with the unidimensionality issue by means of factor analysis with similar results. However,

Neal and Rettig (1963) included the items in a large array and concluded by means of an unspecified factor analysis type that the items form a single dimension.

SLCA-II

In order to facilitate the establishment of a common ground, the purpose of and terms used in SLCA-II need specification. SLCA-II affords an efficient means by which to examine language characteristics as they might be reflective of sociological and psychological processes. Cummings and Renshaw delineate the main thrust of the technique:

> The operational categories for SLCA, therefore attempt within limits to reflect, the broad scholarly concern of communication scholars regardless of the approach they use. SLCA is primarily a descriptive theory of signs, omitting theoretic concerns about what influences or is influenced by the identified language characteristics (p. 11).

Thus, SLCA-II can provide a description of the language of an individual in terms of behavioral categories. Language is composed of a set of rules for linking of the more basic units of language. Different approaches have been offered for the description of these rules. Some have focused on deep structure in language as a means of analysis. SLCA-II, however, adopts a language-in-use orientation in that it is concerned with the surface structure of the verbal behavior of the organism.

In addition to the sign-sign relationships described by the system, the notion of sign-object relationship is approached. In SLCA-II, the sign-object relationship takes

two forms (1) afferent and (2) efferent. Cummings and Renshaw define each:

> Afferent signs indicate that the object to which it refers in isolation i.e., without contextual information, can be seen, tasted, smelled, touched, or heard. Efferent signs refer to objects which in isolation cannot be seen, tasted, smelled, touched, or heard (p. 12).

There are three major classifications of signs utilized in SLCA-II: (1) subject signs (2) connector signs (3) limiter signs.

Subject signs. Subject signs are nouns or pronouns that function as the subject or object of a verb. SLCA-II makes 17 distinctions in subjects signs (See appendix B for listing of these distinctions).

Connector signs. Verbs and/or verb phrases make up the set of connector signs which includes the words that indicate a descriptive relation or action. In addition, tense, voice, mood and assertion (as defined by Osgood, 1959) are categorized (See appendix B for listing of the classifications).

Limiters. Limiters, more commonly referred to as adjectives, adverbs, and objects of prepositions, are broken into two types: (1) limiters of subject signs and (2) limiters of connector signs. In cataloging limiters of subject signs, the afferent/efferent distinction of subject signs is also applied to limiters. Further, negation as utilized in SLCA-II differs from traditional grammatical approaches. "Not" is not considered an adverb but forms a new class of negation inherent

in each of the three main categories. There are nine classifications of limiters in SLCA-II (See appendix B for listing).

Word Index. One final notion deserves attention. The word index (Cummings, 1970) is a kind of "syntactic" type-token ratio computed as follows:

$$WI = \frac{f(x)}{(SL + L + Cl)}$$

Where WI = word index
f(x) = any category distinction in SLCA-II
Sl = subject signs
L = limiter signs
Cl = connector signs

Cummings (1970) indicates that the correlation between the denominator in the word index (TOT3) score and the total number of words in a message regardless of their syntactic predictor (TOTl) is above .90. Further, he indicates that the correlation between TOT-3 and TOT-1 less the sum of the frequence of conjunctions, demonstrative pronouns and interrogative pronouns (TOT-2) also had a correlation above .90. These findings have been replicated in a study by Cummings and Wright (1976). These findings suggest that there is a linear relationship between the variables. TOT3 was chosen because of the fact that it is the denominator in the word index score and therefore was determined to be more theoretically sound.

This brief explanation of the focus, categories, and capabilities of SLCA-II points to its usefulness as an analytical tool in the study of language behavior. Ultimately, however, it affords a plausible means by which to expand, verify and/or reject the limited reservoir of previous research

findings. While speculations are abundant regarding the effect of psychological variables on language behavior, specific research is indicated in order to establish direct links between social isolation, anomia, advanced age and the language characteristics indicative of those variables. Specific attention to the empirical expectations will clarify this relationship.

The notion of isolation specified earlier suggests that as an individual grows older he/she withdraws from associations and interactions with the environment. As this withdrawal occurs, the individual begins to experience feelings of powerlessness to cope with the environment in which he/she lives. Therefore, one would expect an inverse relationship between the amount of interaction engaged in by an individual and feelings of estrangement from society. Therefore, the first empirical expectation is offered:

> There will be a significant negative correlation between social isolation and anomia.

Previous research has also indicated that as one grows older, one begins to experience less and less interaction with others. Decreases in instrumental, work roles, losses by death of relatives and friends all contribute to the shrinking social world of the individual. As a result, the second empirical expectation is offered.

> There will be a significant positive correlation between social isolation and age.

The third empirical expectation deals with the relationship between anomia and age. If the individual does experience a decrease in his/her social world and as a result experiences feelings of powerlessness to cope with that world, then one would expect to be able to tap those feelings. Previous research suggests that there is a relationship between alienation and age. Thus, the third empirical expectation is offered.

> There will be a significant positive correlation between anomia and age.

Some of the language variables alone or in combination would seem to predict age as indicated by previous research and consequently might predict anomia and social isolation. Based on the social isolation notions posited by Cumming and Henry, one might expect a relationship between age and the total number of words. Also, given Jones' findings of a decrease in abstract intellectual functioning a relationship may exist between abstract language (efferent) and age. Further the area of past action language (use of past tense verbs) might be related to age. Previous research (Gitelson) indicates that older persons exhibit an increase in orientation to past events. Finally, one might expect a relationship between self-referent language (source-specific) and age. Thus, the fourth empirical expectation is offered:

> There will be a significant relationship between language characteristics and age, social isolation, and anomia.

It is, therefore, the primary focus of this study to determine what language characteristics will correlate with social isolation, anomia, and age. The method of answering this question is the primary concern of Chapter 2.

CHAPTER II

DESIGN

At the beginning of this study three research questions were outlined: (1) Is there a relationship between social isolation and anomia? (2) are older people more socially isolated/anomic than young people? (3) what characteristics of language predict social isolation, anomia, and/or age? Answers to these questions require, however, reassessment of the scales said to measure social isolation and anomia. Two problem areas are evident when answering these research questions. The first of these problems centers on unidimensionality. Some research casts doubt on the unidimensionality of the Srole Anomia Scale. Moreover, no information is available on the unidimensionality of the Cumming and Henry Life Space Measure. Since unidimensionality is an essential concept in determining validity, reassessment of these scales is required.

The second problem area is the reliability of both the isolation and anomia measures. Reliability is a necessary condition for determining validity. In the absence of adequate reliability data, this condition requires analysis.

In order to answer these questions, a random sample of 250 subjects was selected from students enrolled in Speech

Communication 1113 for the Spring, 1977, semester at the University of Oklahoma. The social isolation and anomia scales were administered at two consecutive time periods, three weeks apart. A principal components solution with varimax rotation was performed on the five-item anomia scale to determine if one dimension emerged. The same procedure was performed on the nine-item social isolation measure to determine its unidimensionality or non-unidimensionality. A test-retest reliability (3-weeks apart) and a split-half reliability were performed. A test-retest reliability based on the Pearson Product Moment Correlation was conducted. In addition, a split-half reliability using the Kuder-Richardson 20 and 21 Formulae was done.

These procedures described thus far served a preliminary function. The findings were necessary prerequisites for answering the three research questions articulated earlier.

Variables

Social Isolation

Conceptually for the purposes of this study, social isolation deals with the degree of interaction engaged in by an individual. Operationally, social isolation was measured by a modification of the Social Life Space Measure. This measure is a nine-item questionnaire asking for numbers of interpersonal contacts with others during given time periods. (See appendix A for scale).

Anomia

As conceived by Srole, anomia relates to an individual's generalized sense of social malintegration or "self-to-others alienation" as opposed to "self-to-others belongingness". Operationally, this concept was measured by the scale developed by Leo Srole (See appendix A for scale). The anomia scale was initially a 5-item Likert-type scale with three response alternatives. For the purposes of this study, five response alternatives were offered with the addition of "strongly agree" and "strongly disagree" options. Justification is based on the belief that Likert's argument for a 5-alternative scale holds most precedence, while Srole offered no justification for reducing the five alternatives to three.

SLCA-II

The original formulation of SLCA (Cummings, 1970) contained 102 categories. Subsequent research (Cummings and Wright, 1976), however, has reduced the number of variables to twenty-four. The following are the identified variables (See appendix B for other category descriptions).

Actor-Action Language	(C1P+ACTC1+C1+PRIM+PC1+S1)
Limiters and Connector Limiters	(LC1E+L)
Total Words	(TOT3)
Afferent Language	(S1A+G-0+AFF)
Efferent Language	(S1E+EFF)
Reflexive Language	(IR+RC1)
Subjunctive Language	(SPR+SC1+C1PR)
Defined Actor Language	(S1D+DEFD)
Past Connectors	(C1PA)
Afferent Subject Limiters	(LS1A)
Defined Connectors	(C1D)
Efferent Subject Limiters	(LS1A)
Negative Connectors and other Words	(OTH,NC1)

Future Connectors	(ClFU)
Articles	(ART)
Primitive Subject Signs	(SlP)
Afferent Connector Limiters	(LClA)
Indicative Present Tense Connectors	(IPR)
Transitive, Indicative Action Connectors	(IT)
Source Specific Language	(SS)
Comparison Connectors	(COMP)
Total Indicative Connectors	(ICl)
Total Transitive Connectors	(TCl)

The later nine variables are residual variables not loading adequately on any factor. Argument for retention is offered by Cummings and Wright.

Language Samples

At the time the second social isolation and anomia scales were administered to the college age group, language samples were also gathered from the 250 subjects. Subjects were instructed that they would be shown a picture of four people. This picture, a TAT type photograph, was originally drawn for a study conducted by Neugarten and Gutmann (1958) and subsequently utilized in research by Gorcyca, Kennan, and Stich (1976). It depicts four individuals, an older man, an older woman, a younger man and a younger woman. Subjects were instructed to write a story with a beginning, middle and end about what is happening in the picture. They were instructed that they will have a maximum of 20 minutes in which to write their responses. These language samples were subjected to analysis in terms of the variables in SLCA-II previously defined.

Design and Data Analysis

The first step in data analysis was to obtain the best predictor equation of social isolation and anomia based on language categories. Thus, the variables (based on time 2 data) were subjected to a step-wise multiple regression analysis with the twenty-four SLCA-II variables as predictors and social isolation and anomia as the two criterion variables. A predictor equation was identified for each criterion variable, and a second step of data analysis was pursued.

A second group of voluntary subjects composed of members of the Norman Chapter of the American Association of Retired Persons (AARP) was used. The AARP is a voluntary organization composed of individuals age 65 or over. Membership in the organization is open to any individual who meets the age criterion regardless of previous occupational status.

Each subject responded to social isolation and anomia measures, subject to conditions described earlier in this chapter. In addition, they were asked to write responses to the same stimulus as the younger group. They were given the same instructions and operated under the same time restrictions. The predictor equation generated from the younger group data was applied to the language data of the older group in order to determine its predictive ability for the second group.

Based on the data collected from each of the two groups (older and younger), answers to each of the three research

questions were generated. In order to answer the first research question, a Pearson Product Moment Correlation was calculated for social isolation and anomia for each of the two samples. An alpha level of $p < .05$ was utilized. The answer to the second research question was determined by the calculation of a t-test for each of the two variables (social isolation and anomia) to determine if differences do emerge between the two age groups.

The third question was partially answered by the regression model mentioned previously. That is, the social isolation and anomia components were dealt with. The age question, however, remained unanswered. In order to answer this question, a step-wise multiple discriminant analysis (MDA) for two groups was performed to determine which language variables significantly predict age differences (Overall and Klett, 1973). In the MDA, a Rao's V criterion was utilized for calculating the significance of the discriminant function.

The data analysis explained in this Chapter was designed to answer the three research quesitons as well as questions regarding methodological problems existing in the measuring tools. Chapter 3 will delineate the results of the study.

CHAPTER III

RESULTS

As indicated previously, two methodological issues were of concern in this study--the unidimensionality issue was answered using a principal components solution. Reliability formulae were used to deal with the question of internal and test-retest reliability. Validity concerns were primarily dealt with in the analysis of the empirical expectations.

Social Isolation

In the time one data, four factors meeting the criterion (Eigen value$\geq$1.00) emerged. These four factors explained 71.8% of the variance. The communality (.54 to .83) indicated moderate validity of the factor solution. However, the descriptive statistics indicated a violation of the homogeneity of variance assumption underlying any correlational statistic (See Table 1). In order to compensate for this violation, a square root transformation was performed on the social isolation measure. This procedure sufficiently reduced the variance ratio to an acceptable level (less than 4:1). This transformed data again produced a factor solution (Eigen value$\geq$1.000)

TABLE I

Descriptive Statistics

Time 1

Social Isolation	N=235				
Mean	95.889	Std Error	8.028	Std Dev	123.061
Variance	15144.027	Kurtosis	46.442	Skewness	6.185
Range	1201.000	Minimum	16.000	Maximum	1217.000
Anomia	N=235				
Mean	12.715	Std Error	0.198	Std Dev	3.038
Variance	9.230	Kurtosis	-0.000	Skewness	0.416
Range	16.000	Minimum	6.000	Maximum	22.000

Time 2

Social Isolation	N=232				
Mean	92.966	Std Error	5.661	Std Dev	86.220
Variance	7433.895	Kurtosis	25.646	Skewness	4.407
Range	722.000	Minimum	17.000	Maximum	739.000
Anomia	N=232				
Mean	12.504	Std Error	0.196	Std Dev	2.991
Variance	8.944	Kurtosis	0.235	Skewness	0.499
Range	17.000	Minimum	6.000	Maximum	23.000

which explained 64.6% of the variance. The communality (Range=.48 to .80) again produced a moderately valid factor solution (See Table 2).

Because of the violation of the homogeneity of variance assumption, transformed data was used in the reliability analysis. The test-retest reliability produced a Pearson Product Moment Correlation Coefficient of .68 ($p < .001$). The time one data produced a split-half correlation of .18 ($p < .006$) while the time two split-half correlation was .18 ($p < .006$). The odd even correlation for time 1 data was .58 ($p < .001$) and for time two was .54 ($p < .001$).

For time one data, the Horst correction formula for odd items was .31 and the Spearman-Brown reliability formula was .31. The Kuder-Richardson 20 formula produced a coefficient of .48 and the Kuder-Richardson 21 formula produced a coefficient of .51 for time one data.

Anomia

The anomia scale also proved to be multi-dimensional. Two factors emerged which met the criterion explaining 55% of the variance. The communality (range .38 to .81) indicated moderate validity of the factor structure (See Table 3). No data transformation was indicated by the descriptive statistics (See Table 1).

The test-retest reliability for anomia using the Pearson Product Moment Correlation was .70 ($p < .001$). The split-half reliability for time one data produced a correlation of .28

TABLE II

Social Isolation

Factor Analysis

Factor Matrix-Varimax Rotation

	Factor 1	Factor 2	Factor 3	Factor 4	Communality
Item 1	-.14973	.49281	-.00947	-.53353	.55003
Item 2	-.0742	.14208	.79945	.20630	.70736
Item 3	-.07540	.10260	.02594	.75818	.59172
Item 4	.21832	-.09507	.70106	-.18587	.58273
Item 5	.51676	.15515	-.04670	.42996	.47816
Item 6	.20754	.76841	-.16717	.15089	.68425
Item 7	.84156	.28171	.06902	-.09256	.80091
Item 8	.84343	.03045	.11220	.00748	.72496
Item 9	.23370	.74916	.27776	.00113	.69301
Eigenvalue	2.37748	1.20443	1.19215	1.03904	
Pct. of Var	26.4	13.4	13.2	11.5	
Cum Pct	26.4	39.8	53.0	64.6	

TABLE III

Anomia

Factor Analysis

Factor Matrix-Varimax Rotation

	Factor 1	Factor 2	Communality
Item 1	.77551	.67120	.60592
Item 2	.61671	-.01225	.38048
Item 3	.40880	.59652	.52296
Item 4	-.17818	.88308	.81158
Item 5	.50859	.44751	.45893
Eigenvalue	1.75192	1.02795	
Pct. of Var.	35.0	20.6	
Cum. Pct.	35.0	55.6	

($p < .001$) while time two data also produced a split-half correlation of .28. The odd-even correlation for time one data was .28 ($p < .001$) and for time two was .44 ($p < .001$).

In time one data, the Horst Correction formula produced a .46 reliability coefficient. The Spearman-Brown coefficient was .49. The Kuder-Richardson 20 was .51 while the Kuder-Richardson 21 was .57.

At time two, the anomia scale provided a .46 correlation coefficient when utilizing the Horst Correction formula. The Spearman-Brown coefficient was .61 and the Kuder-Richardson was .55. The Kuder-Richardson 21 produced a reliability coefficient of .57.

The findings regarding the four empirical expectations become somewhat moot when examining the findings on scale unidimensionality and reliability. Because of these findings, a simple summated-scores procedure utilizing z-scores and factor score coefficients was used in order to deal with the empirical expectations. Such a procedure was performed in order to determine if one of the factors might conform to the empirical expectations. This procedure circumvents the problems with unidimensionality and reliability inherent in utilizing complete scales.

In order to discuss the notion of validity, let us turn to the empirical expectations.

Empirical Expectations

The first empirical expectation posited a significant negative correlation between social isolation and anomia. This hypothesis was not supported. The correlation between social isolation and anomia at time one (using transformed social isolation scores) was -.15 ($p<.02$). At time two, the correlation between the two variables was -.12 ($p<.06$). At best, the two variables hold less than .4% variance in common.

The second empirical expectation suggested a correlation between age and social isolation. The t-test (df=1,54) produced a significant difference ($p<.0001$) between young and old subjects on the social isolation variable (Table 4).

The third empirical expectation was not supported. The t-test for two groups on the anomia scale did not produce a significant difference between young and old (df-1,54; $p<.4555$).

The final empirical expectation suggested a relationship between identified language variables and social isolation, anomia and age. Using only time two data, a stepwise multiple regression analysis was performed with the SLCA categories listed in Chapter 2 as predictors of Social Isolation (transformed, and weighted) as the criterion variable. A non-significant multiple correlation of .32 was obtained ($F=1.11$, df=21,209).

TABLE IV

t-test

Social Isolation	N	$\bar{X}$	St. Dev.	Pooled Variance Est		
Group 1	56	79.9286	40.185	3.59	110	.000
Group 2	56	52.6071	40.261			
Anomia						
Group 1	56	13.1071	2.927	-.75	110	.455
Group 2	56	13.5714	3.597			

The predictor equation generated from the college population was applied to the older population to determine the predictive validity of the language variables. The Pearson Product Moment Correlation between actual score and predicted score was -.3437 ($p < .034$). While significant, it is doubtful these results are meaningful. No regression analysis could be performed with anomia as the criterion and the SLCA categories as predictors due to insufficient F-value. As a result, no predictive validity could be calculated for anomia. In order to test the age portion of the hypothesis, Multiple Discrimination Analysis was computed for 2 groups, with 85.77% of the cases classified correctly (See Table 5).

TABLE V

Multiple Discriminant Analysis

Discriminant	Eigenvalue	Cannonical Correlation	Wilk's Lambda	x^2	df	Significance
1	.42231	.545	.7031	88.424	14	.0001

Group Centroids		Standaridized Discriminant Function Coefficients	
Group 1	.19637	Limiters	-.19026
		Total Words	.62817
Group 2	-1.5056	Afferent Language	-.87225
		Defined Actor Language	.29544
		Afferent Subject Limiters	.01763
		Defined Connectors	.15715
		Negative Connectors/otherwords	-.88382
		Primitive Subject Sighs	.31097
		Afferent Connector Limiters	.02526
		Ind. Pres. Tense Connectors	.11860
		Tr. Ind. Action Connectors	.20671
		Prepositions	.25213
		Comparison Connectors	-.68849
		Indicative Connectors	-.43722

CHAPTER IV

DISCUSSION AND FUTURE RESEARCH

In Chapter 1, certain theoretic concerns regarding the relationship between social isolation, anomia, age and language were articulated. Although these concerns were the focal point of this study, certain methodological considerations need attention prior to focusing on the primary thrust of this study. This chapter will offer first, discussion of the results described in Chapter three and second, speculation regarding those findings in terms of current positions in research on communication and aging and questions generated for future research.

Given the problems raised regarding current measuring tools, the logical question is "Why pursue such a course of study?" Several reasons exist. First the study of the elderly segment of the population is still in its infancy. The appropriate tools for such a study are minimal. In order to move forward, evaluation of currently available measures and ideas is necessary. Second, the work of Cumming and Henry has had a pervasive impact on the study of the aging process. Most researchers have accepted the reliability and validity of

their measuring instrument without question. If, however, the study of social isolation of the elderly individual is to move in any meaningful direction, development of appropriate tools is necessary. The initial step in the process is evaluation of current resources.

Third, the scale developed by Srole has been utilized many times to measure the often elusive variable anomia. Because of its conceptual similarity to that of the rationale of this study, it was chosen as being the best available instrument from which to begin research on aging and communication. Finally, language was determined to be a valuable means of studying internal psychological states of the individual. In addition, SLCA-II was chosen as a tool to identify the appropriate language variables.

In essence, then, despite the problems existing with available tools, this study was seen as necessary to define those specific problems and to serve as a stepping stone to further research in the study of aging. From a communication perspective, language study was seen as the most viable means to study the communication behavior of the elderly and its relationship to social isolation and anomia.

Social Isolation

The second empirical expectation dealt with the degree to which each group (older and younger) experienced social isolation. This expectation was supported. The older population was significantly more isolated than the younger

population. This particular finding has significance in future research in determining the need areas for the elderly individual.

However, the social isolation scale, as expected, did not prove to be unidimensional. Four factors emerged in the analysis. Two of these factors seemed to have a conceptual basis as well as a statistical one. The first factor, composed of Item 2 and Item 4 seemed to point to a notion of intimacy. These two items deal with relationships with relatives and close friends. When one examines these findings in connection with those of the t-test, a logical conclusion is that younger people experience more intimate relationships and interactions with friends and relatives than older people. This finding is in line with the notions espoused by Cumming and Henry regarding the decrease in interaction as a result of loss of close relationships and friends, and family members by death. Caution is needed, however, to avoid the inevitability trap into which Cumming and Henry fell. The ideas of the developmental psychologists and the age stratification theorists regarding the relationship between isolation and prior experience must be an area of concern for the gerontological communication scholar. In addition, the warnings of Maddox and Atchley articulated in Chapter 1 regarding the importance of personality variables in isolation of the aged individual must be heeded. It is dangerous, at this stage in the research to suggest that social isolation is an inevitable process which necessarily occurs as a

function of the aging process. All of the prior experiences of the individual must be taken into account.

The second factor, composed of Items 6 and 9, focused on a general contact with others. Specifically, these items deal with the people one communicates with daily (i.e., bus drivers, sales clerks) and the casual conversations and pleasantries exchanged in the course of a day. Again, taken with the results of the t-test, these findings suggest a relationship between the age of the individual and the degree of isolation experienced by that individual in his communication behavior. This particular factor is especially useful for the communication scholar because it focuses specifically on the communication in which one engages on a daily basis. The decrease in the general communication dimension of social isolation noted in this study supports previous findings by Gutmann and Neugarten and Gutmann. They suggested that the decrease in involvement with the outside world in general is a result of shifting perceptions of control over the outside world. If this is indeed the case, the logical conclusion is that the individual would withdraw to remove himself or herself from the anxiety experienced as a result of this lack of control. Again, however, Havinghurst, Neugarten, and Tobin remind us that these perceptual shifts are not universal but a result of previous experiences.

Given this notion, one would expect those who have been fairly successful in coping with the sociological forces

around them to be less isolated in old age. Perhaps, the more socially adept individual (i.e., most successful professionally, socially, and economically) would be less isolated. Given the sample (members of the AARP), this phenomenon takes on new perspective. Generally, these people were more successful in their earlier lives. Most were career people and all but three had at least one college degree. It is very possible that these subjects do not reflect the older population. However, if they are at the top end of the spectrum in integration in later life, the findings would probably be even more relevant to the individual who was not as successful at coping with the environmental pressures in earlier life. Further research is needed dealing with the relationship between previous station in life and social isolation in later life. This is one question with which this study did not deal directly. However, it is one which is of utmost importance before a complete understanding of the isolation experienced by the older individual can be achieved.

These two separate conceptual units offer insight into possible appropriate areas for defining social isolation in terms of communication behavior in the elderly population. They also point to the fact that the isolation experienced by the older person may in fact not be unidimensional and cannot be naively treated as such.

Because of the unidimensionality problems, reliability suffers. The findings of this study would seem to suggest that social isolation is a multi-dimensional concept. Perhaps the

most appropriate place to begin in scale construction is with the two conceptual factors identified earlier. The findings of this study offer a rationale for at least using these factors as a point of departure. Since reliability is a necessary condition for validity, determination of the predictive cross-validity of an equation in an older population is at best premature.

Anomia

The anomia scale produced two factors which were not as conceptually distinct as those for social isolation. Factor one composed of Items 1, 2, and 3 dealt with social issues (i.e., public official's attitudes, the lot of the average person and necessity of living for today).

The second factor composed of Items 4 and 5 seemed to focus on personal problems (i.e., bring children into the world and having other individuals to rely on). The non-significant findings of the t-test in conjunction with the emergence of two factors in the anomia scale suggest a similarity in the feelings of alienation of the individuals in both groups.

The third empirical expectation was not supported. The means of the two groups were exceptionally similar and the curve formed by the scores was almost normal (Kurtosis= -0.000; Std Error=0.198; Skewness=0.416). These findings suggest several possibilities. First, the scale may not be tapping the concept it proposes. This issue of validity offers

reason for concern over the wide-spread use of the Srole anomia scale to measure the concept. If it is not tapping anomia, then what concept is it measuring? Perhaps, it deals with the older notion of life satisfaction discussed by Blau and Havinghurst, et. al. Perhaps, anomia is a multidimensional concept which cannot be tapped by utilizing the somewhat simplistic formulation of Srole. In either case, it is evident that considerable re-formulation is necessary before the notion of anomia is pursued with any real thrust.

Secondly, the normality of the curve suggests that one cannot make statements regarding the existence of anomia in any significantly different way, as currently formulated, in either the older or the younger population. The similarity of social class between the two groups might account for the similarity in light of Bell's findings. He suggested that anomia existed to lesser degrees in the higher social classes of society (i.e., professional individuals). The findings of this study would seem to suggest that this is indeed the case. The college students and the members of the AARP are both in higher social classes at least in terms of professional priorities. Perhaps they do not experience anomia to the extent that other members of society do. Further study is necessary in order to deal with the questions raised.

Third, anomia may in fact be a pervasive force in all segments of society. This is not to say that the influence of anomia is the same in all segments. It is entirely possible,

however, that each segment of society experiences anomia as a result of different influences. The older person may be anomic as a result of a feeling of not being able to exercise control over the situation. That is, the individual is no longer a "productive" member of society in terms of instrumental work roles and as a result, experiences a feeling of not being able to exert influence over the social, economic, and environmental forces which control existence. The young person, on the other hand, may experience anomia as a result of the changing environment in which young people live. The sample of college students would experience this, probably to a greater extent than individuals of similar age who are already in the working world. The college student still has many adjustments to make before entering the mainstream of society. The problems associated with getting a degree and ultimately assuming a position in the working world may well prove to be a source of some consternation and anxiety resulting in a feeling of not being able to exert any pressure or control over one's destiny. In essence, then, the bases of anomia may be different for each group. These different bases are not identifiable by current measuring techniques.

The measurement problems cited previously fared somewhat better in relationship to anomia. The test-retest reliability was .71. These reliability figures might prove acceptable if the notion of anomia can be couched in some theoretic framework which will allow some specific explanation of the concept.

Unfortunately, no meaningful specification of what anomia is is available at the present time.

Relationship Between Social Isolation and Anomia

The first empirical expectation which dealt with the relationship between social isolation and anomia was not supported. Although there was an inverse relationship as expected* the relationship was extremely small. Two possible reasons for this might be suggested. First, the problems with the measuring instruments cited previously most probably contributed to the low correlation. Secondly, however, and more importantly in terms of future research, it indicated that the relationship between physical isolation and an anomic state may not be as strong as suspected. This is true, at least, with respect to current conceptualization of anomia and available tools with which to tap it. As stated previously, the notion of anomia is at best elusive. While Blau and Havinghurst, et. al. suggested the relationship between isolation and life satisfaction and Bell suggested a relationship between social isolation and anomia, perhaps this relationship is not as strong as was once thought to be the case. Given the dimensions of social isolation articulated and the dimensions of anomia along with the possibility of differing bases of anomia, one would begin to question a naive statement that social isolation and anomia

*The Cumming and Henry Life Space Measure is constructed so as to indicate the number of interactions. Such a procedure taps an integration level, the opposite of which is isolation.

are directly related in their current form. Perhaps there is a relationship between one of anomia's dimensions (i.e., social issues) and one of social isolation's dimensions (i.e., general communication). Both of these factors deal with communication outside the confines of intimate social relationships and therefore may be found to be related. In addition, the similarity in concept between the personal dimension of anomia and the intimacy dimensions of social isolation might be another starting point for investigating the relationship between the two variables. The point emerges quite significantly, however, that simply espousing a relationship between social isolation and anomia in their current forms is not only naive but a detriment to the study of these concepts.

Language

The final empirical expectation suggested a relationship between language variables and social isolation, anomia, and age. This hypothesis was partially supported. The Multiple Discriminant Analysis produced a 85% correct classification rate of age groups with language variables as predictors. This finding points to the fact that language differences do exist between young and old individuals.

As specified in the empirical expectations, certain variables could be isolated as discriminating between age groups. The first variable entered on step one of the analysis was the total number of words encoded by the individual. Thus,

it appears that differences can be assumed in the amount of language encoded by older and younger persons. An interesting question for further research is the relationship between social isolation scores and the total number of words encoded by the individual. In other words, does isolation from society have an effect on the amount of language one uses? Does a learning process occur whereby one learns to communicate less? The opposite is also plausible. Does one learn to communicate less, either because of anxiety about communication or some other reason thereby resulting in isolation from society? These seem to be logical explanations generated by these findings.

In addition, the afferent/efferent distinction appeared to discriminate between the two groups (i.e., afferent language, efferent language, afferent subject limiters and efferent subject limiters). Thus, one can assume that the use of traditionally concrete and/or abstract language can be used to discriminate between younger and older individuals. Similar questions emerge with respect to the afferent/efferent distinction. Given the significance of these categories, how do they operate in the language of the two groups. Previous research by Neugarten and Gutmann would suggest that the afferent language would be more pervasive in the language behavior of the older individual. However, this is a question for future research.

In order to answer the second portion of the question raised by the fourth empirical expectation, a Multiple Regression

Analysis was performed using Factor 1 (the intimacy dimension) of the social isolation scale as the criterion variable. A second Multiple Regression Analysis utilized Factor 2 (the general communication dimension). Similar combinations of variables contributed to the prediction of both factors.

As was expected, the verbosity index contributed to the prediction. This might possibly be explained by the relationship between language use and increased or decreased isolation from others. The potential questions for research have been covered previously in the discussion of the Multiple Discriminant Analysis.

The afferent/efferent distinction again emerged as a significant factor in the prediction of social isolation. Neugarten and Gutmann would explain such a phenomenon as attributable to the shift from active to passive mastery of the individual in relation to his outside world. Because of the kind of analysis used, this quesiton cannot be directly answered by this study. However, because of the significance of this distinction in the generation of a predictor equation, further research to specify the relationship between social isolation and the use of afferent/efferent words is certainly warranted.

The use of verbs and other action language emerged frequently in the language analysis. Actor-action language, past connectors, future connectors, comparison connectors, indicative present tense connectors, indicative connectors, transitive connectors, and defined action language all contributed

to the equation. One might speculate that the tense, mood, and frequency of verbs in the language of the individual is related to his/her view of the world. If this view of the world is shaped by the sociological influences operating on the individual then isolation from others in society should be manifest in the choice of verbs, their tense, mood, and voice. Again, this particular question is a subject for future research.

Source-specific language also contributed to the prediction equation. Logic would dictate that the more isolated an individual is, the more self-referent language would be in his/her language. Given this notion, the rationale for the emergence of source-specific language as a predictor seems acceptable. Future research might approach the subject more closely in order to determine the specific relationship between source specific language and the isolation of the individual.

Summary

One need only study population trends to observe that ours is an aging society. In order to be prepared for that society, scholars must know more about the older person's needs, desires, hopes. Given this rationale, the communication scholar has a great deal to offer in the attainment of that goal.

The study of language is one of the most valuable tools available for identifying the psychological and sociological states of the individual. This study has indicated that language variables have a degree of validity in predicting social isolation,

anomia and age classifications. Much more scale development is required to sufficiently answer the questions facing the communication scholar.

Social isolation is a valuable and crucial communication variable. The losses by the elderly person of friends, work associates, family members and spouses gradually decreases the social world in which one lives. This decrease necessarily reduces the communication potential. Not only will such study contribute to our understanding of the aged person but also will offer insight into the communication behavior of individuals throughout the life span.

While this study focused primarily on the elderly population, the scholar must realize that one does not suddenly become old. One grows old in the context of society and experiences different life phases. Aging is a developmental process. As a result, the most fruitful communication research would look at the language and cognitive development of the organism in the process of growing old.

The questions answered by this study are few. The questions generated are many. It is up to the communication scholar to contribute knowledge and expertise in order that the current understanding of the aging process developes to full maturity.

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APPENDIX A

Instructions: Fill in the Blanks with a check mark or number whichever is appropriate. Please attempt to answer each question even if it is only an approximation.

1. How many people do you live with? _____

2. How many relatives do you feel close to? _____

3. How often do you get together with these relatives? (Check one)

   a. every day _____
   b. at least once a week _____
   c. a few time a month _____
   d. about once a month _____
   e. a few times a year _____
   f. about once a year _____
   g. almost never--haven't seen in years _____

4. How many prople that you know do you consider close friends--that is, people you can confide in and talk over personal matters? _____

5. Now take the friends you're closest to--about how often do you get together with any of them? (Check one) _____

6. Now, take the people you see for specific purposes--like storekeepers, bus drivers, waiters, salespeople, ans so on. About how many of these do you see fairly regularly, would you say? _____

7. How many neighbors do you know well? _____

8. How often do you get together with these neighbors? (Check one)

   a. every day _____
   b. at least once a week _____
   c. a few times a month _____
   d. about once a month _____
   e. anything less _____

9. In the course of a day's work, about how many people do you see and talk to? _____

Instructions: Place a check mark in the blank that best indicates the way you feel about the statement.

1. Most public officials (people in public offices) are not realy interested in the problems of the average person.

Strongly Agree	Agree	Don't Know	Disagree	Strongly Disagree

2. Nowadays a person has to live pretty much for today and let tomorrow take care of itself.

Strongly Agree	Agree	Don't Know	Disagree	Strongly Disagree

3. In spite of what some people say, the lot of the agerage man is getting worse, not better.

Strongly Agree	Agree	Don't Know	Disagree	Strongly Disagree

4. It's hardly fair to bring children into the world with the way things look for the future.

Strongly Agree	Agree	Don't Know	Disagree	Strongly Disagree

5. These days a person doesn't really know whom he can count on.

Strongly Agree	Agree	Don't Know	Disagree	Strongly Disagree

APPENDIX B

This represents a list of all variables used in the program, other variables may be added, the reader who wishes to do so should consult the instruction manual for use of the program, detailed information concerning the variables used in this analysis may be found in Cummings, H. Wayland (1970) Specified Cognitive Structures and Their Effects on Language Encoding Behavior, unpublished Ph.D. dissertation, Michigan State University.

100	TOT-1	TOTAL WORDS ENCODED
1	S1P	TOTAL SUBJECT WORDS WHICH HAVE NO MODIFIERS
2	S1D	TOTAL SUBJECT WORDS WHICH HAVE ONE OR MORE MODIFIERS
3	C1P	TOTAL CONNECTORS WHICH HAVE NO MODIFIERS
4	C1D	TOTAL CONNECTORS WHICH HAVE ONE OR MORE MODIFIERS
5	S1-A	TOTAL SUBJECT WORDS WHICH ARE JUDGED AFFERENT
6	S1-E	TOTAL SUBJECT WORDS WHICH ARE JUDGED EFFERENT
7	LS1-A	TOTAL MODIFIERS OF SUBJECT WORDS WHICH ARE JUDGED AFFERENT
8	LS1-E	TOTAL MODIFIERS OF SUBJECT WORDS WHICH ARE JUDGED EFFERENT
9	LC1-A	TOTAL MODIFIERS OF CONNECTORS WHICH ARE JUDGED AFFERENT
10	LC1-E	TOTAL MODIFIERS OF CONNECTORS WHICH ARE JUDGED EFFERENT
11	IPA	TOTAL CONNECTORS WHICH ARE INDICATIVE, PAST TENSE
12	IPR	TOTAL CONNECTORS WHICH ARE INDICATIVE, PRESENT TENSE
13	IFU	TOTAL CONNECTORS WHICH ARE INDICATIVE, FUTURE TENSE
14	ICE	TOTAL COMPARISON-EQUIVALENCE CONNECTORS
15	ICM	TOTAL COMPARISON-MORE/THAN CONNECTORS
16	ICS	TOTAL COMPARISON SUBSET CONNECTORS
17	ICP	TOTAL COMPARISON SPATIAL CONNECTORS
18	ICT	TOTAL COMPARISON TIME CONNECTORS
19	IADJ	TOTAL CONNECTORS ASSOCIATING SUBJECT SIGN WITH ADJECTIVE
20	IEXT	TOTAL CONNECTORS ASSOCIATING SUBJECT SIGN WITH DEMONSTRATIVES

21	IT	TOTAL ACTION CONNECTORS WHICH ARE TRANSITIVE, INDICATIVE
22	IR	TOTAL ACTION CONNECTORS WHICH ARE INTRANSITIVE, INDICATIVE
23	SPA	TOTAL CONNECTORS WHICH ARE SUBJUNCTIVE, PAST TENSE
24	SPR	TOTAL CONNECTORS WHICH ARE SUBJUNCTIVE, PRESENT TENSE
25	SFU	TOTAL CONNECTORS WHICH ARE SUBJUNCTIVE, FUTURE TENSE
26	SCE	TOTAL CONNECTORS WHICH ARE SUBJUNCTIVE, COMPARISON EQUIVALENCE
27	SCM	TOTAL CONNECTORS WHICH ARE SUBJUNCTIVE, COMPARISON MORE/THAN
28	SC3	TOTAL CONNECTORS WHICH ARE SUBJUNCTIVE, COMPARISON SUBSET
29	SCP	TOTAL CONNECTORS WHICH ARE SUBJUNCTIVE, COMPARISON SPATIAL
30	SCT	TOTAL CONNECTORS WHICH ARE SUBJUNCTIVE, COMPARISON TIME
31	SADJ	TOTAL CONNECTORS WHICH ARE SUBJUNCTIVE, ASSOCIATING A SUBJECT SIGN WITH AN ADJECTIVE
32	SEXT	TOTAL CONNECTORS WHICH ARE SUBJUNCTIVE, ASSOCIATING A SUBJECT SIGN WITH A DEMONSTRATIVE
33	ST	TOTAL CONNECTORS WHICH ARE SUBJUNCTIVE, TRANSITIVE
34	SR	TOTAL CONNECTORS WHICH ARE SUBJUNCTIVE, INTRANSITIVE
35	NS1P	TOTAL PRIMITIVE SUBJECT WORDS NEGATED
36	NS1D	TOTAL DEFINED SUBJECT WORDS NEGATED
37	NIPA	TOTAL NEGATED CONNECTORS WHICH ARE INDICATIVE, PAST TENSE
38	NIPR	TOTAL NEGATED CONNECTORS WHICH ARE INDICATIVE, PRESENT TENSE
39	NIFU	TOTAL NEGATED CONNECTORS WHICH ARE INDICATIVE, FUTURE TENSE
40	NICE	TOTAL NEGATED COMPARISON CONNECTORS WHICH ARE INDICATIVE, EQUATING
41	NICM	TOTAL NEGATED COMPARISON CONNECTORS WHICH ARE INDICATIVE, MORE/THAN
42	NICS	TOTAL NEGATED COMPARISON CONNECTORS WHICH ARE INDICATIVE, SUBSET
43	NICP	TOTAL NEGATED COMPARISON CONNECTORS WHICH ARE INDICATIVE, SPATIAL
44	NICT	TOTAL NEGATED COMPARISON CONNECTORS WHICH ARE INDICATIVE, TIME
45	NIADJ	TOTAL NEGATED INDICATIVE CONNECTORS WHICH ASSOCIATE A UNIT SIGN WITH AN ADJECTIVE
46	NISXT	TOTAL NEGATED INDICATIVE CONNECTORS WHICH ASSOCIATE A UNIT SIGN WITH A DEMONSTRATIVE PRONOUN
47	NIT	TOTAL NEGATED ACTION CONNECTORS WHICH ARE TRANSITIVE
48	NIR	TOTAL NEGATED ACTION CONNECTORS WHICH ARE INTRANSITIVE
49	NSPA	TOTAL NEGATED PAST TENSE CONNECTORS WHICH ARE SUBJUNCTIVE
50	NSPR	TOTAL NEGATED PRESENT TENSE CONNECTORS WHICH ARE SUBJUNCTIVE
51	NSFU	TOTAL NEGATED FUTURE TENSE CONNECTORS WHICH ARE SUBJUNCTIVE
52	NSCE	TOTAL NEGATED COMPARISON CONNECTORS WHICH ARE SUBJUNCTIVE, EQUATING
53	NSCM	TOTAL NEGATED COMPARISON CONNECTORS WHICH ARE SUBJUNCTIVE, MORE/THAN
54	NSCS	TOTAL NEGATED COMPARISON CONNECTORS WHICH ARE SUBJUNCTIVE, SUBSET

55	NSCP	TOTAL NEGATED COMPARISON CONNECTORS WHICH ARE SUBJUNCTIVE, SPATIAL
56	NSCT	TOTAL NEGATED COMPARISON CONNECTORS WHICH ARE SUBJUNCTIVE, TIME
57	NSADJ	TOTAL NEGATED SUBJUNCTIVE CONNECTORS WHICH ASSOCIATE A UNIT SIGN WITH AN ADJECTIVE
58	NSEXT	TOTAL NEGATED SUBJUNCTIVE CONNECTORS WHICH ASSOCIATE A UNIT SIGN WITH A DEMONSTRATIVE PRONOUN
59	NST	TOTAL NEGATED CONNECTORS WHICH ARE SUBJUNCTIVE, TRANSITIVE
60	NSR	TOTAL NEGATED CONNECTORS WHICH ARE SUBJUNCTIVE, INTRANSITIVE
61	NSl-A	TOTAL NEGATED SUBJECT WORDS WHICH ARE AFFERENT
62	NSl-E	TOTAL NEGATED SUBJECT WORDS WHICH ARE EFFERENT
63	NClP	TOTAL NEGATED CONNECTORS WHICH ARE PRIMITIVE
64	NClD	TOTAL NEGATED CONNECTORS WHICH ARE DEFINED
65	NLSl-A	TOTAL NEGATED SUBJECT WORD LIMITERS WHICH ARE AFFERENT
66	NLSl-E	TOTAL NEGATED SUBJECT WORD LIMITERS WHICH ARE EFFERENT
67	NLCl-A	TOTAL NEGATED CONNECTOR LIMITERS WHICH ARE AFFERENT
68	NLCl-E	TOTAL NEGATED CONNECTOR LIMITERS WHICH ARE EFFERENT
69	AO	TOTAL SUBJECT WORDS WHICH REFER TO A SPECIFIC PERSON OR GROUP
70	GO	TOTAL SUBJECT WORDS WHICH REFER TO UNSPECIFIC PERSONS OR GROUPS, I.E., THIRD PERSON PERSONAL PRONOUNS
71	S-S	TOTAL SUBJECT WORDS WHICH REFER TO THE SOURCE, I.E., FIRST PERSON PERSONAL PRONOUNS
72	T-O	TOTAL SUBJECT WORDS WHICH REFER TO THE RECEIVER, I.E., SECOND PERSON PERSONAL PRONOUNS
73	NAO	TOTAL NEGATED SUBJECT WORDS WHICH REFER TO A SPECIFIC PERSON OR GROUP
74	NGO	TOTAL NEGATED SUBJECT WORDS WHICH REFER TO UNSPECIFIC PERSONS, GROUPS, I.E., THIRD PERSON PERSONAL PRONOUNS
75	NS-S	TOTAL NEGATED SUBJECT WORDS WHICH REFER TO THE SOURCE, I.E., FIRST PERSON PERSONAL PRONOUNS
76	NT-O	TOTAL NEGATED SUBJECT WORDS WHICH REFER TO THE RECEIVER, I.E., SECOND PERSON PERSONAL PRONOUNS
77	ART	TOTAL ARTICLES
78	PREP	TOTAL PREPOSITIONS
79	OTH	TOTAL OTHER
80	COMP	TOTAL FREQUENCY OF COMPARISON CONNECTORS
81	ACTCl	TOTAL FREQUENCY OF ACTION CONNECTORS
82	ICl	TOTAL FREQUENCY OF INDICATIVE CONNECTORS
83	SCl	TOTAL FREQUENCY OF SUBJUNCTIVE CONNECTORS
84	TCl	TOTAL FREQUENCY OF TRANSITIVE CONNECTORS
85	RCl	TOTAL FREQUENCY OF INTRANSITIVE CONNECTORS

86	NC1	TOTAL FREQUENCY OF NEGATIVE CONNECTORS
87	AFF	TOTAL FREQUENCY OF AFFERENT SUBJECT WORDS AND LIMITERS
88	EFF	TOTAL FREQUENCY OF EFFERENT SUBJECT WORDS AND LIMITERS
89	L	TOTAL FREQUENCY OF LIMITERS
90	S1	TOTAL FREQUENCY OF SUBJECT WORDS
91	C1PA	TOTAL FREQUENCY OF PAST TENSE CONNECTORS
92	C1PR	TOTAL FREQUENCY OF PRESENT TENSE CONNECTORS
93	C1FU	TOTAL FREQUENCY OF FUTURE TENSE CONNECTORS
94	PRIM	TOTAL FREQUENCY OF PRIMITIVE SUBJECT WORDS AND CONNECTORS
95	DEFD	TOTAL FREQUENCY OF DEFINED SUBJECT WORDS AND CONNECTORS
96	PC1	TOTAL FREQUENCY OF POSITIVE (NON-NEGATIVE) CONNECTORS
97	C1	TOTAL FREQUENCY OF POSITIVE AND NEGATIVE CONNECTORS
98	DEM	DEMONSTRATIVES
99	COLL	COLLECTIVES
101	TOT-2	TOTAL WORDS ENCODED LESS THE SUM OF ARTICLES, PREPOSITIONS, AND OTHER
102	TOT-3	TOTAL FREQUENCY OF SUBJECT WORDS, LIMITERS, AND CONNECTORS