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Martin B. Brodsky

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**A SURVEY OF INFLUENCES IN THE DECISION-MAKING PROCESS FOR
PROFESSIONS IN COMMUNICATION DISORDERS**

By

Martin B. Brodsky

A THESIS

**Submitted to
Michigan State University
in partial fulfillment of the requirements
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ABSTRACT

A SURVEY OF INFLUENCES IN THE DECISION-MAKING PROCESS FOR PROFESSIONS IN COMMUNICATION DISORDERS

By

Martin B. Brodsky

The present study was designed with two purposes: (1) to determine factors influencing career decisions within and between speech-language pathology and audiology and (2) to determine whether persons who choose the different professions exhibit differences in personal style. A total of 297 surveys were received from students and professionals in communication disorders. Decision-making factors were similar in both professions, with personal factors being the most influential. Employment and education factors were also critical in making professional decisions, especially course work within the major.

The Keirsey Temperament Sorter identified 9 different styles from 4 dichotomies of personality traits. These styles were similar for both speech-language pathology and audiology. Over 90% of all respondents had a judging quality compared to a perceiving quality. Differences between the two disciplines involved the speech-language pathologists' intuition trait and the audiologists' practical trait.

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DEDICATION

This work is dedicated to all those students who are wandering aimlessly in this incessantly changing world. May their life's decisions bring them happiness and success.

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To Dr. Paul Cooke, for your immeasurable devotion, patience, expertise, and support to the students and to the field of speech-language pathology. You have the ability to make the aspirations of others become attainable goals they once thought never possible. For all your guidance through academia and this research project, I will be forever in your debt.

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INTRODUCTION

Young adults in a professional track are required to make a number of decisions regarding their career choices. Students who find it difficult to resolve these career decisions are led in many directions to find guidance. Some look to parents and relatives, others seek advice from friends and peers, whereas others seek professional advice. This professional advice may come from people who work in the various fields, educators, psychologists, and from career counselors. Of course, many individuals utilize a combination of the above resources.

Besides the decision to major in communication disorders, students are required to make yet another choice. They must choose between speech-language pathology and audiology early in their academic careers and prior to graduate work. This decision is often made without the influence of senior level course work, as many colleges and universities offer the more career relevant courses toward the end of their undergraduate programs.

Determining factors that influence these decisions would affect career guidance counselors and academic advisors, colleges and universities, and students in many

ways. Kennedy and Laramore (1993) suggested that, realistically, there are far too many students for a counselor to interview individually. In lieu of the lengthy interview process, counselors choose to test for aptitudes, interests, and personal styles. Many students expect this type of testing as they interact with a counselor. Once results are obtained from any testing that is completed, it is the counselor's role to interpret them. Career guidance counselors need more and current information to better equip themselves in handling questions about the careers of speech-language pathologists and audiologists.

Colleges and universities would also be assisted by such career decision-making information. The strength of a college or university program is partly dependent on academic reputation, reputation of the university, and the types of courses offered (Rockwood & Madison, 1993). There needs to be a more heightened awareness of content areas that are not offered to students during their academic programs but that are needed for the professional work environment. Educational programs and institutions of higher learning should consider all aspects of the professional environment to give students the edge they need for success upon graduation. In this capacity, professionals in each field can serve as adequate guides. Programs fulfilling these needs could emerge with better reputations, which may lead to more and/or better

prospective students. Finally, such programming would allow the college or university to be more selective in its choice of students for admission, thus building a stronger program.

Ultimately, it should be the students who profit in numerous ways. They should receive career counseling and departmental advising based on current information about speech-language pathology and audiology. Another possible advantage could be college and university curricula based on what is needed for the professional work environment, in addition to the theory courses. For example, courses on professional ethics are not often available, though they may be the subject of one or two lectures during one's graduate program. Finally, students could have more specific information about professions in communication disorders.

The need arises, therefore, to address the relationship between the educational process and the decision to become a speech-language pathologist or an audiologist. In this study, career decision theory will be used as a guide to probe students' and professionals' influences and perspectives on personal, educational, employment, and personal style issues.

COUNSELING STUDENTS INTO PROFESSIONAL TRACKS

THEORY

There are many theories and thoughts pertaining to the construction of a career development model (Pinkney, 1983;

Hazler & Roberts, 1984; Holland, 1985; Lynch, 1985; Gati, 1986; Johnston, Buescher, & Heppner, 1988; Blustein, Devenis, & Kidney, 1989; Gati & Tikotzki, 1989; Terry, 1989; Gati, 1990). For example, career development can be viewed as a *process* that must be self-directed and ongoing (Kennedy & Laramore, 1993; Steele & Morgan, 1991). Calling upon several sources, Hazler and Roberts (1984) stated:

Theorists, both inside and outside of the vocational area, have developed a wide variety of terms and characterizations to explain and define further the decision-making process. Emphasis on several phases is common to all established decision-making theories. These phases are:

1. An exploration of many alternatives;
2. A compilation of information dealing with possible outcomes that allow for limiting of alternatives;
3. A selection based on desired outcomes;
4. Reality testing;
5. Information-processing styles; and
6. Further decisions based on the evaluation of previous decision results. (p.409)

Many of these career decision-making theories have their roots in the trait-and-factor model. As reported by Chartrand (1991), the trait-and-factor model has origins that can be traced to Parsons' 1909 "proposition that vocational choice involves the individual (self-knowledge), the work environment (occupational knowledge), and an understanding of the relationship between the two" (p. 518).

Crites (1981), as cited in Chartrand (1991), criticized this model as being "atheoretical, analytical, and atomistic in orientation" (p. 519). It matches measurements such as interest inventories and aptitude assessments to statistical

predictions for career choice. As cited by Chartrand (1991), other investigators (Herr & Cramer, 1984; Jones, Steffler, & Stewart, 1970; Miller, 1974; Zunker, 1986) have criticized this model to be of the belief that "occupational choice is a single event, that a single type of person works in each job, that there is a single right goal for every career decision maker, and that occupational choice is available to everyone" (p. 519).

In recent years, the trait-and-factor model has been adapted to form the person $\times$ environment ($P \times E$) fit approach. This approach makes three basic assumptions which have been derived from the trait-and-factor model. Chartrand (1991) feels that these assumptions include the necessity to view people as capable of making reasonable decisions. Secondly, "People and work environments differ in reliable, meaningful, and consistent ways....[This] implies that important patterns can be identified and used to organize both people and environments" (p. 520). Third, Chartrand (as stated by Holland, 1985) said the greater the agreement between personal characteristics and job requirements, the greater the outcome is more likely to be successful. Briefly, the $P \times E$ fit approach assumes that there is a reciprocal process between individuals and the environment. The environment influences the individual while the individual shapes the environment (Chartrand, 1991).

Blustein, Devenis, and Kidney (1989) concluded that "Individuals who are engaged in environmental and self-exploration also tend to be involved in a broader process of seeking out information relating to the various dimensions of their identities" (p. 200). Their study further implies that while counseling psychologists have typically given assistance to secure vocational identities, there is a need to explore other aspects of adolescent development. This could be a reason why personality assessments (e.g., Myers-Briggs Type Indicator) and interest inventories (e.g., Strong-Campbell Interest Inventory) are commonplace in career counseling offices.

One of the leading theories in vocational theory of the $P \times E$ fit is Holland's (1985) occupational theme model. Chartrand (1991) states "According to Holland, the environment is determined primarily by the people who work within that environment" (p. 520). Although applicable to a wide range of ages and uses, this model is appropriate because of its relevance to highly educated and professional track people. Holland (1985) states "Because the theory's origins were in career assistance, its applicability is best understood in that area" (p. 152). The six occupational themes--realistic, investigative, artistic, social, enterprising, and conventional--are based on the psychological relations among personality types and environments.

HOLLAND'S OCCUPATIONAL THEMES

The realistic theme focuses on working with things on technical tasks. The tasks include skilled working with hands, tools, machine building, fixing, or maintaining something. This type is seen to work with the concrete rather than the abstract. These individuals have the need for a hands-on experience and like to solve problems by doing. The realistics prefer working with things rather than people. They often exhibit simple, direct, and natural coping methods. This theme gains satisfaction in seeing the results of their labors. Examples include airplane mechanics, electricians, cooks, wait staff, dry cleaners, and farmers.

The investigative theme focuses on work with data leading to ideas. These people tend to be curious about things and people. Whereas the realistic theme prefers to work in order to solve problems, the investigative people solve problems through thinking rather than acting them out. They enjoy solving puzzles and are confident in their analytic and scholarly abilities. Always curious, reserved, and independent, the investigative theme needs the freedom and opportunity to seek new ways. Examples include psychologists, college professors, engineers, and physicians.

People in the artistic theme enjoy self-expression through working with objects. Problems are generally solved

by creating something new through self-expression and artistic media. They like to work in free environments that allow for imagination, impulsiveness, introspection, and independence. The artistic individual finds rewards in creating new things and from being around other creative people. Such occupations in this theme include authors, playwrights, drama coaches, and musical arrangers.

The social theme focuses on working with people through service. They work through problems by discussions and rearranging relationships. These people typically engage in discussions answering philosophical questions. People in the social theme are typically concerned with others, cheerful, popular, cooperative, friendly, generous, and idealistic. Their biggest rewards stem from the good feeling that comes from helping people either solve problems or improve themselves. Among the occupations in this theme are speech-language pathologists, teachers, counselors, and ministers.

The next theme is enterprising. These types also focus on working with people, but their emphasis is business contact and persuasion. They prefer ambiguous social tasks, acting out problems, and solve their problems through risk. The enterprising individual is typically competitive, adventuresome, ambitious, and domineering. Their sense of achievement comes from making things happen and being where the action is. Occupations include sports promoters,

salespersons, realtors, and business executives.

The sixth and final theme is conventional. Contrasted with the investigative theme, the conventional people like to work with detailed data rather than data-producing ideas. Tasks include details such as organizing and planning highly structured activities. They are most efficient when tasks are well defined. Typically this theme is conforming, conscientious, efficient, practical, calm, and persistent. These individuals solve problems by following rules. They reap rewards through seeing offices and organizations run smoothly in addition to knowing how people contributed to making them work. Examples of this occupational theme include police officers, bank examiners, accountants, and court stenographers.

PERSONALITY TESTING AND TYPING

Another avenue of career decision theory lies in personality testing and typing. Pinkney (1983) explained that "The extent to which one will enjoy various careers and settings is determined to some degree by the type of person one is" (p. 174). Pinkney also suggested that "Who and what type of person the client is becomes the starting point for determining possible careers" (p. 175). Therefore, it is necessary to allow a portion of career guidance to address self-awareness. This will permit interpersonal challenges of self and preferences to take place, ultimately resulting

in better self-understanding (Pinkney, 1983).

Bergin and Lambert (1978)--as cited by Schacht, Howe, and Berman (1989)--suggest that "Therapist personality factors are among the most important determinants of therapeutic change, second only to client variables, but more important than therapeutic technique" (p. 475).

Referring to previous research, Schacht, Howe, and Berman further explained that:

Of the many therapist personality factors studied, the facilitative conditions of unconditional positive regard, empathy, and congruence emerge as the factors most consistently related to positive client outcome. (p. 475)

Once the client enrolls in therapy, Molyneaux and Lane (1990) say that one of the key motivators for continued therapy is a "pleasant, productive, and satisfying" (p. 57) relationship with the clinician. In addition to agreeing with the above findings, they suggest that one way positive regard and empathy can be gained is through active listening. The characteristics of active listening are:

1. Attentiveness to the speaker,
 2. Desire to understand the speaker's viewpoint,
 3. Willingness to suspend judgment or evaluation of the ideas or feelings expressed by the speaker, and
 4. Willingness to check your understanding by putting into words what you feel the speaker has conveyed.
- (p. 58)

Almost a half century ago, Isabel Myers reviewed the psychological types set by C. G. Jung. Together with her mother Katharine Briggs, Myers created "a tool for

identifying sixteen different patterns of action" (Keirsey & Bates, 1984, p. 4). Published in 1956, this appraisal of personality was called the Myers-Briggs Type Indicator (MBTI). The patterns named in the MBTI are divided into 4 dichotomies. Each person is then placed into one category for each pair.

Keirsey and Bates are quick to point out several cautions. First, Jung emphasized varying degrees of each characteristic rather than strictly one or the other.

Secondly, they emphasized that:

Jung did not say that one doesn't change in the extent of preference for one or another of the four differences. As time passes one's preference may strengthen or weaken. Of course, it is not at all clear what Jung meant by "preference" other than that, for one reason or another, a person chooses one way of doing or being over another.
(p. 14)

Finally, there remains the unanswered question of whether these qualities are innate or whether they are learned and developed through infancy and childhood. Jung seemed to have believed, though his position is unclear, that these qualities are innate (Keirsey & Bates, 1984).

The four pairs of characteristics are referred to by their single letter identifier in parentheses. They are (1) associations with the outer world defined as either (E)xtraversion or (I)ntroversion, (2) classes of perceiving called (S)ensation or i(N)tuition, (3) ways of exercising judgment or making decisions referred to as (T)hinking or

(F)eeling, and (4) ways of dealing with the world called (P)erceiving or (J)udging. Lynch (1985, p. 105) described each of these types. The extrovert is one who "focuses on the outer world of people and things whereas an introvert's main interests are in the world of concepts and ideas." Sensing types use their five senses to become aware of associations or ideas, whereas the intuitors make use of hunches and "just knowing." Thinkers employ a "logical, analytical process" often resulting in impersonal decisions. Contrastingly, feelers make equally rational decisions though they use a more personal and subjective process. Finally, there are those who prefer order in their lives (judgers) rather than those who prefer to live spontaneous and flexible lives (perceivers). One's personal style is considered to be the highest scoring trait from each of the dichotomies, yielding a four letter identifier (e.g., ENFP, ISTJ).

According to Macdaid, McCaulley, and Kainz (1986), a composite of practitioners in speech-language pathology ($N = 122$) shows the greatest occurrence of the 16 types to be classified as the ENFP personality type ($N = 18, 14.75\%$). Keirsey and Bates (1984) say that this type makes up only about 5% of the general population and can be described as:

...keen and penetrating observers and are capable of intense concentration on another individual while aware of what is going on about them. Their attention is never passive or casual, never wandering, but always directed....They are typically enthusiastic and this is contagious....

ENFPs constantly find themselves surrounded by others who look toward the ENFP for wisdom, inspiration, courage, leadership, and so on....They enjoy inventing new ways of doing things, and their projects tend to become a cause, quickly becoming personalized. (p. 173-174)

In addition, Macdaid and colleagues reported the most salient characteristic among speech-language pathologists is "(F)eeling." This characteristic is present in 64.75% of the responses ($N = 79$). Keirsey and Bates (1984) reported that "feelers" make up approximately 50% of the population and can be described as people who prefer the subjective, values, intimacy, humanity, sympathy, and devotion. In contrast, the thinker prefers the objective, principles, criterion, justice, analysis, and allocation.

In an attempt to describe the four temperaments of Hippocrates, Keirsey and Bates (1984) pieced together the works of Jung, Kretschmer, Freud, Adler, Sullivan, and Maslow, "recognizing the insight of each at the same time that [they kept] them from canceling each other out" (p. 27). Yet, the definition of temperament remains somewhat mysterious. According to Keirsey and Bates (1984), American psychology has not pondered this question extensively and, therefore, has no voice toward its uses. Keirsey and Bates did, however, give a working definition for temperament:

Temperament can denote a moderation or unification of otherwise disparate forces, a tempering or concession of opposing influences, an overall coloration or tuning, a kind of thematization of the whole, a uniformity of the diverse. One's temperament is that which places a signature or

thumbprint on each of one's actions, making it recognizably one's own. (p. 27)

The four temperaments are derived from a set of two traits that describe a person's behavior: the Dionysian Temperament (SPs), the Epimethean Temperament (SJJs), the Promethean Temperament (NTs), and the Apollonian Temperament (NFs).

The Dionysian Temperament consists of the personal styles with "SP" in their four letter identifiers. They are ISTP, ESTP, ISFP, and ESFP. People with this temperament "are, in essence, impulsive" (Keirsey and Bates, 1994). The SP thinks about now rather than later. They "live for the moment." The SPs do have goals, though they are tentative and few. "If the ties become too numerous or too binding, then the SP is likely to become restless and perhaps experience the urge to take off for 'somewhere else'" (p. 31). Keirsey and Bates further explain the SPs' work styles:

SPs can easily become bored with the status quo. They like to vary their work patterns each day....In a sense, the SP does not work, for work implies production, completion, and accomplishment. The SP has no such desire for closure, completion, finishing....The SP gravitates toward jobs where action is involved. (pp. 33-37)

The next temperament, the Epimethean Temperament (SJJs), includes all people with the types of ISFJ, ESFJ, ISTJ, and ESTJ. According to Keirsey and Bates (1984), The SJJs

comprise approximately 38 percent of the United States' population; and "they exist primarily to be useful to the social units they belong to" (p. 39). Additionally, "the SJ feels guilty for his dependency as if derelict in his duty and negligent of his obligations. Moreover, he must be the giver not the receiver; the caretaker, not the cared for" (p. 40). The SJ's feeling of belonging is vital. This type "creates and fosters the continuity of social units: the family, the church, the service club, the municipality, and the corporation" (p. 42).

Employment, as Keirse and Bates explain, has no mystery for the SJ temperament:

The institutions call him and he comes to them to establish them, nurture them, and maintain their continuity and perpetuity. Teaching, preaching, accounting, banking, clerking, medicating, rehabilitating, securing, insuring, managing, selling (providing)--note in all of these a single strand of desire: to conserve. The SJ is the conservator no matter where he does or who he's with or what he does. He saves one way or another, sooner or later. The SJ is the foundation, cornerstone, flywheel, and stabilizer of society, and we might well rejoice at his presence. (p. 43)

The conservationist, SJ, may adopt an attitude of "'If I don't do it, who will?' and worries, 'there'll be loss'" (p. 43). Unfortunately, the SJ's willingness to take on undue responsibility may not always give him the appreciation deserved. This type generally does not express feelings of thanklessness easily, "since he is after all indebted and obligated by his very nature" (p. 43).

The third of the four temperaments, the Promethean Temperament, reflects all the NTs (INTP, ENTP, INTJ, ENTJ). This type is somewhat scarce, only encompassing about 12 percent of the population (Keirsey and Bates, 1984). Keirsey and Bates have described the NT as "wanting to be competent" (p. 48). These types thrive on the quest for new knowledge. The need to improve and be more competent is always done with the greatest of urgency. In a sense, these are the scientists. Typical occupations include mathematics, philosophy, architecture, and engineering.

The NT is the most self-critical of all the styles. He badgers himself about his errors, taxes himself with the resolve to improve, and ruthlessly monitors his own progress....And the more extreme the NT style, the more exacting and stringent the demand placed by the NT on himself in acquisition of skill and knowledge. (p. 49)

Being involved in so much detail, the NT "can be quite oblivious to the emotional responses of others and may not always be sensitive to the complexities of interpersonal relations" (p. 56). In the company of an NT, some people have felt that they are nonexistent. Reactions to this behavior by some people have been antagonistic comments. The NTs typically reacts with bewilderment, though they rarely have retorts. When the NT does choose to react, however, he is quite "capable of biting sarcasm that can be devastating to the person at whom it is directed" (p. 57).

Finally, the fourth temperament is the Apollonian Temperament. These are the NFs and are INFJ, ENFJ, INFP,

and ENFP. As Keirsey and Bates (1984) explain, the three other temperaments (SPs, SJs, and NTs) have distinct goals. "The NFs 'truest' self is the self in search of itself, or in other words, his purpose in life is to have a purpose in life" (p. 58). They further explain that everything the NF does in life, whether it's how time or relationships are structured, has to have a meaning. This is the only way the NF feels they are an individual and not just "following the crowd."

Like the NTs, the NFs also constitute about 12 percent of the population, the difference being the NFs massive influence over the population at large. Largely, these are the writers of society and include novelists, dramatists, television writers, playwrights, journalists, poets, and biographers.

As NFs well know, the pen is mightier than the sword. But the impact of the NF is not limited to the written word. NFs heavily populate the professions of psychiatry, clinical and counseling psychology, the ministry, and teaching. More than any other group NFs can speak and write fluently, often with poetic flair. (p. 61)

NFs easily get caught up in causes, though this may not last very long. This temperament, according to Keirsey and Bates (1984), must feel the "deep, lasting significance, with opportunity to better the conditions of people in the world" (p. 60).

Their hunger is not centered on *things* but on *people*. They are not content with *abstractions*; they seek *relationships*. Their need does not

ground to action; it vibrates with *interaction*.
(p. 66)

CURRENT RESEARCH

Attempts to answer the questions of when and how people start thinking about careers and career decision are abundant in the literature (Trice & Gilbert, 1990; Trice, 1991a; Trice, 1991b; Trice & Tillapaugh, 1991c; Trice & Knapp, 1992; Westbrook & Sanford, 1993). Concerns span the entire career counseling profession. Topics studied include personality and interest assessment, age-related factors such as aspirations, the views children have of their parents, the actual steps in the career decision making process, computerized career information and guidance systems, and correlations between any and all of the above.

In a retrospective study of middle-aged adults, Trice (1991a) reported that although exact matches with current occupations are rare, the matching of a child's career aspirations with their father's increases with the age of the child. Additionally, subjects whose early career aspirations matched the same theme (defined by Holland, 1985) as their fathers' occupations were more likely to remain within the same theme than those who did not match their fathers' occupations.

Trice and Tillapaugh (1991c) asked 319 third and fifth grade children to rate their parents' job satisfaction. They then compared the surveys to those of the parents. It

was concluded that children who perceived their parents to be satisfied with their jobs were more likely to aspire to their parents' occupations than those who perceived their parents to be less satisfied. Trice and Tillapaugh suggested that their study implied that career aspirations "begin 'at home' and that forces within the home--for example, perceptions of job dissatisfaction--influence change from those early aspirations" (p. 65).

The effect of persuasive communication on career development is yet another concern. People communicate with the purpose of exchanging information. From this, it can be assumed that individuals influence others. Strader and Katz (1990) studied the effects of persuasive communication directed toward male and female unclassified college students. Their intentions during this study were to influence the beliefs, attitudes, intentions, and behavior toward signing up for a career as a registered nurse. Ajzen and Fishbein (1980), as cited in Strader and Katz (1990), "postulate that any persuasive attempt to change beliefs, attitudes, intentions, or behaviors must be directed at one or more of the person's individual beliefs" (p. 142). Of the five change variables of behavioral beliefs, attitude, normative beliefs, subjective norm, and behavioral intention, the only two to show significant correlations with signing up for a career as a registered nurse were attitude ($r = -.36$, $p < .05$) and change in behavioral

intention ($r = -.70, p < .001$). The negative correlation values reflect favorable outcomes in the two variables resulting in a higher likelihood of signing up for a career in nursing. They concluded that persuasiveness was no different for male than for female students. Additionally, Strader and Katz were intrigued by this finding because of the stereotyped role of registered nurses in America being female.

The issue of gender differences in career decision-making has been explored by several investigators. Westbrook and Sanford (1993) hypothesized that expected scores on the Career Maturity Inventory (CMI) Self Appraisal subtest from ninth grade male and female students are significantly correlated with scores on appropriateness of career choices. This hypothesis was based on Parsons' theory, at the turn of the twentieth century, that suggests there is a relationship between self-knowledge/self-appraisal and appropriateness of career choice (as cited in Westbrook & Sanford, 1993). Their study showed that there is a weak statistically significant correlation among the female population between the ability to appraise the career-relevant capability of others and their ability to make their own career choices. No such significance occurred with the male subjects. Westbrook and Sanford's results also suggest the usefulness to reexamine not only the psychometric properties of measures of career maturity

but also the theoretical models of career maturity as well.

The issue of gender bias is prevalent in some current career testing protocols. Computerized counseling systems have recently become popular, with most career centers now having at least one (Johnston et al., 1988). While most systems' manufacturers would argue that gender biased language has been eliminated, suggestions by the computer for possible occupations to either of the genders is a concern. Through their research, Hansen and Campbell (1985), as cited by Johnston et al. (1988), reported that:

The producers of the Strong-Campbell Interest Inventory still find significant differences in the way sex affects occupation and interests and have thus found it necessary to maintain separate analyses between the sexes. (p. 39)

Typically these systems have no way of giving information based on differences between the genders, especially when the computer programs do not require the user to enter gender information (Johnston et al., 1988).

TECHNOLOGICAL ADVANCES--PRO OR CON?

A viable option in career counseling is employing the use of a computerized guidance system in conjunction with a counselor. Some computer programs allow the user to access information, whereas other programs assist with the assessment process, and still other programs do both. All of this information is available at the touch of the computer's keyboard, yet reliability and validity issues

remain under close scrutiny.

According to Johnston et al. (1988), the psychometric aspects of computer guidance have received little attention. Issues of concurrent and predictive validity are common in this area, and many of the current systems do not give normative information. Possibilities exist that the user will perceive these systems as games or simply speed through the program, thus invalidating any outcome.

Since it has already been decided that career counseling is a *process*, reliability issues emerge. Counseling takes place over time. With time there are likely to be changes along the way. Most computer programs do not foster the notion of the development *process*, resulting in possibilities for clients to be misled on their self-guided search for a career choice. Johnston et al. (1988) suggest that programs not giving information on reliability should be considered "experimental and introduced to the client as such" (p. 40).

In summary, counseling professionals have responsibilities to the client when considering computerized guidance systems. It cannot be overstated that the client comes first. A number of validity and reliability issues already noted makes for serious concern when using these systems. Section C.1 of the Ethical Standards of the American Association for Counseling and Development (AACD, 1981), cited by Johnston et al. (1988), states that:

[The counselor] must provide specific orientation of information to the examinees prior to and following the test administration so that the results of testing may be placed in proper perspective with other relevant factors. (p. 41)

Therefore, a breach of ethics occurs when the counselor sits the client at a computer for guidance without explanation and interpretation of the results. A breach of ethics may also occur when the counselor is present only to troubleshoot technical problems.

AN INTEREST TO RESEARCH

The aforementioned research focused on the individual and on the development of theories and programs. Drawing from this research, a need for information affecting students' decisions in careers surfaces. Thus far, there has been no issue raised concerning the degree to which students, specifically in the fields of speech-language pathology and audiology, are influenced by the educational system in making their career decisions. One study explored expectations of prospective graduate students and graduate level students in communication disorders (Rockwood & Madison, 1993). Another study that focuses on communication disorders concerned itself with the career development and satisfaction of speech-language pathologists working 25 years after receiving their Master's degree (Lass, Middleton, Pannbacker, & Marks, 1993).

Rockwood and Madison (1993) stated that the Council of

Graduate Programs in Communication Sciences and Disorders (CGPCSD) reports a decline in the number of graduates entering the field. Among the primary goals of the Council is to obtain periodic information from the programs in communication disorders. Cooper, Mann, Helmick, Newberry, and Riplich (1988) and the CGPCSD (1989) reported a decreased total number of students in communication disorder programs by 8.2% from 1986-87 to 1988-89. Master's level degrees declined by 7.1% during the time from 1985-86 to 1987-88. In addition to the student decline, 255 faculty positions were lost from 1982 to 1989 (as cited by Rockwood & Madison, 1993).

A modest increase in the number of undergraduates, 4.7%, did occur from 1986-87 to 1988-89 (Cooper et al., 1988; CGPCSD, 1989, as cited by Rockwood & Madison, 1993). Of the respondents in their survey (92.5% female, 7.5% male), Rockwood and Madison (1993) stated the majority reported planning a career in communication disorders during their undergraduate education. Based on their findings, they suggested there is a need to distribute information in places other than college campuses in an effort to bring larger numbers of potential students to this field.

With these changes in demographics, Herer (1989), as cited in Rockwood & Madison (1993), foresaw a shortage of speech and hearing professionals. The American Hospital Association ("Alarming Shortages," 1989, as cited in

Rockwood & Madison, 1993) predicted 10% vacancy rates among speech-language pathologists employed by hospitals. The need for faculty, when considered with the decrease in student enrollment in communication disorders programs, demands increased awareness and effective recruitment of quality students (Rockwood & Madison, 1993).

Rockwood and Madison (1993) surveyed 263 enrolled and potential graduate students in a communication disorders program. Their findings suggest that most students first learn about communication disorders during their undergraduate education. They reported that most people consider family members, friends, experience with a communication disorder--either themselves or someone close, and contact with individuals--either in the profession or in education--as appreciable influences on their career decision. Rockwood and Madison further indicated that all influences are the result of "direct or indirect contact with the profession or professionals in the field" (p. 95). However, while their investigation focused on issues related to communicative disorders as a whole, no study has examined why individuals choose one area (speech-language pathology or audiology) over the other area.

Further, the Rockwood and Madison study (1993) did not address the professional population. Holland (1985) stated that work environment characteristics are determined by the people who work within that environment. Further, if the

individual does shape the environment while the environment influences the individual, as stated in the $P \times E$ fit approach (Chartrand, 1991), this brings to question the personal style of the individual in each environment--academic and professional. Therefore, it is necessary to compare and contrast the influences and personal styles of *both* students and professionals.

Lass and colleagues (1993) surveyed 205 speech-language pathologists 25 years post-Master's degree. Their results indicated good job satisfaction over a large percentage (86.8%) of the respondents. However, their results also indicated that 52.2% of the respondents would not choose a career in speech-language pathology "knowing what [they] know now" (p. 99). Lass and colleagues explained this finding to be largely influenced by the professionals' amount of experience. They explain that the respondents might have considered it neither practical nor wise to leave their field and their positions.

PURPOSE OF THIS STUDY

The present study was designed to replicate and extend several aspects of the studies by Rockwood and Madison (1993) and Lass and colleagues (1993), by focusing on the individual decision-making process toward speech-language pathology or audiology. Emphasis was placed on personal influences, educational influences, employment influences,

and personal style. The study was designed specifically to determine (1) factors influencing career decisions to become speech-language pathologists or audiologists and (2) to determine whether there are differences in personal style between speech-language pathologists and audiologists.

METHODS

SUBJECTS

A total of 586 surveys were distributed among students who made career decisions and professionals in the field of communication disorders. A total of 407 undergraduates and graduate students were given the survey form. To obtain an adequate number of students in audiology, individuals from five Michigan programs were asked to participate. A total of 179 professionals with American Speech-Language-Hearing Association (ASHA) certification were also asked to participate--110 speech-language pathologists and 69 audiologists.

Certain groups were excluded from this investigation. Undecided undergraduates did not participate because the focus of the study was to examine factors that influenced decisions which have already occurred. Professionals holding and students working on doctoral degrees in communication disorders and persons pursuing other advanced degrees were also excluded from this study. Because doctoral and advanced degree candidates contribute 5.6% to the professional population (Slater, 1992), eliminating them from this study attempted to isolate clinical experiences

from educational factors. Additionally, all dually certified clinicians were excluded from this study, effectively eliminating those with more educational experience and allowing for a more distinct identification of the two respective professional categories. Keeping these factors constant strengthened the criterion validity of the study.

SURVEY DESIGN

This study employed the guidelines of The Total Design Method for mail surveys set forth by Dillman (1978).

Mailing lists were obtained from the Department of Audiology and Speech Sciences at Michigan State University. Surveys were sent with cover letters explaining the purpose of the survey, on what groups the survey focused, approximately how long it would take to complete the survey, a return date, and the proper postage and envelopes for return of the survey (refer to Appendix A).

The survey (see Appendix B) was divided into four portions. The first portion focused on demographic data such as gender, age, years of education/experience, and school(s) attended. Individual confidentiality was assured by omitting names and other personal identifying information.

In part two of the survey, respondents were asked to rate the influences of their career decision using five-

point Likert scales with values from "0" to "4." Only scores of 1-4 were used for computation in this data set. A value of "0" was not considered in computing the statistics, since a "0" reflected that a specific item had no influence on a respondent's decision to become a speech-language pathologist or audiologist. The emphasis in this portion of the survey was on 3 influencing factors--personal, educational, and employment. The section on personal influences included 7 items focusing on such items as the family, other relatives, and friends; personal experiences with communication disorders; and impressions from exposure to the fields of speech-language pathology and audiology. Educational issues consisted of 13 items considering the educational community. They included such influences as counselors, educators, supervisors, and other professionals in the field. Additionally, curriculum interest areas were explored in this section. Lastly, 10 employment influences affecting career decisions were included. They encompassed such items as employment influences affecting career decisions including questions such as income, job availability, work setting, personal rewards, daily duties, and caseload. Opportunities were also given to include additional individual influences for each of the three main factors.

The third portion of the survey asked the respondent to answer 70 multiple-choice questions regarding personal

attitudes. This section was a reflection of the Myers-Briggs Type Indicator (MBTI) called the Keirsey Temperament Sorter, as outlined by Keirsey and Bates (1984). The MBTI is a tool used by psychologists and career counselors "for identifying sixteen different patterns of action" (Keirsey & Bates, 1984, p.4).

These patterns are formed from 4 dichotomous pairs of 8 traits: (E)xtroversion/(I)ntroversion, (S)ensing/i(N)tuition, (T)hinking/(F)eeling, and (P)erceiving/(J)udging. Analysis of these data determined a personal style comprised of 1 trait from each of the 4 dichotomies (e.g., ISTJ, ENFP). Further, Keirsey and Bates subdivided the styles into 4 different temperaments derived from 2 traits. These temperaments are "a signature or thumbprint on each of one's own actions, making it recognizably one's own" (p. 27). They are the Epimethean Temperament (SJ), the Apollonian Temperament (NF), the Promethean Temperament (NT), and the Dionysian Temperament (SP).

The fourth and final part of the survey asked miscellaneous questions associated with professional satisfaction and perceptions toward each of the professions. Questions that did not apply to the student population were placed on an additional page for only the professionals to answer. In all cases, respondents were given opportunities to record answers not given previously in the survey.

RESULTS

DISTRIBUTION OF THE SURVEYS

A total of 586 surveys were distributed. This included 407 undergraduates and graduate students in communication disorders programs at five Michigan universities and 179 professionals collected from an alumni list in the Department of Audiology and Speech Sciences at Michigan State University. The surveys were returned by mail or collected by the researchers involved in this study. Instructions specified that only those students who had made a definite decision to enter either speech-language pathology or audiology were to complete and return the survey. Additionally, the professionals holding or working toward a degree beyond their Master's in communication disorders were excluded from this study.

Of the 407 surveys distributed to students and 179 surveys to professionals, a total of 209 and 102 were returned for data collection, respectively. Three of the returned surveys from students and 11 surveys from professionals were not included in the data because they were incompletely filled out. As a result, a total of 206 surveys from the students and 91 from the professionals were

used for analysis. This yielded a 51% effective rate of return from both students and professionals.

DEMOGRAPHICS

There were 168 speech-language pathology students and 38 audiology students who completed the survey. Speech-language pathology students consisted of 164 females (98%) and 4 males (2%), with audiology students being 35 females (92%) and 3 males (8%). The average age of the speech-language pathology students was 22.77 years ($SD = 4.38$), whereas the average age for audiology students was 22.34 years ($SD = 1.94$).

There were 66 speech-language pathology professionals and 25 audiology professionals who completed the survey. The speech-language pathology professionals were comprised of 64 females (97%) and 2 males (3%). The audiology professionals consisted of 19 females (76%), 5 males (20%), and 1 (4%) with no response. The average age of the speech-language pathology professionals was 35.33 years ($SD = 8.91$), whereas professionals in audiology had an average age of 33.40 years ($SD = 6.99$). The results of the survey distribution according to demographics are summarized in Table 1.

There were a total of 61 American Speech-Language-Hearing Association (ASHA) certified clinicians in speech-language pathology (92%), 1 was a clinical fellow

Table 1. Distribution of surveyed respondents.

	SPEECH-LANGUAGE PATHOLOGY	AUDIOLOGY
Students	<i>N</i> = 168	<i>N</i> = 38
Professionals	<i>N</i> = 66	<i>N</i> = 25
TOTAL	<i>N</i> = 234	<i>N</i> = 63

(2%), and 4 did not specify certification (6%). They had an average of 8.87 years (*SD* = 7.43) in their present work setting and an average of 11.31 years of service (*SD* = 7.71) in the field. The 25 audiology professionals were all ASHA certified. They had an average of 4.76 years (*SD* = 4.12) in their current work setting, with an average of 8.72 years (*SD* = 7.43) in the profession.

FACTORS INFLUENCING PROFESSIONAL CAREER DECISION

Three areas of influence (personal, employment, and educational) were used to determine why individuals decided on their chosen career in communication disorders. The respondent was required to rate each of the questions on a 5-point Likert scale with values from 0 to 4. A "0" represented "Not an Influence," while a "4" represented a "Considerable Influence." Only scores of 1-4 were considered in the data set, since a "0" reflected that a specific item had no influence on a respondent's career decision. All four subject groups rated personal factors the highest compared to employment and educational

influences. Speech-language pathology students and professionals and audiology students rated employment influences second and educational influences least important. Audiology professionals, however, rated educational items second highest, followed by employment influences. Table 2 shows the mean scores for the different subject groups. Statistics were computed using a 2×3 mixed ANOVA design for each profession.

Table 2. Means and standard deviations (in parentheses) of factors in career decision-making.

	INFLUENCES			Grand Means
	Personal	Employment	Educational	
SPEECH- LANGUAGE PATHOLOGY	3.08 (1.07)	2.88 (0.96)	2.61 (1.01)	2.82 (1.01)
STUDENTS N = 168	3.06 (1.10)	2.89 (0.94)	2.60 (1.01)	2.82 (1.02)
PROFESSIONALS N = 66	3.13 (0.95)	2.83 (1.00)	2.66 (0.99)	2.82 (1.02)
AUDIOLOGY	2.96 (1.05)	2.59 (0.90)	2.63 (1.03)	2.68 (0.99)
STUDENTS N = 38	3.03 (1.04)	2.70 (0.85)	2.59 (1.02)	2.73 (0.97)
PROFESSIONALS N = 25	2.80 (1.04)	2.38 (0.96)	2.70 (1.05)	2.58 (1.02)
GRAND MEANS N = 297	3.05 (1.05)	2.82 (1.01)	2.62 (0.95)	2.79 (1.01)

For speech-language pathology, personal factors were significantly greater than educational factors ($p < .01$), whereas employment and educational factors were significant at the $p < .05$ level. No differences existed between students and professionals across the 3 decision-making factors. For audiology, personal factors were significantly different from employment factors and for educational factors ($p < .01$). Additionally, there was a significant interaction between the students and professionals and decision-making influences ($p < .01$). This was created by the lower employment rating by audiology professionals (mean = 2.38) compared to the other means within audiology.

A descriptive analysis of individual items was also performed. Items with a response rate greater than 75% and with a mean greater than 2.75 were selected as being the greatest influences. Table 3 shows the summarized data for the profession of speech-language pathology. The items are listed by the mean rating earned for each factor, starting with the most influential factors in their professional decision. Lists of all items on the survey, with percentage of response and mean, are contained in Appendices C (speech-language pathology) and D (audiology).

The students in speech-language pathology named 13 influences, whereas the professionals named 11. Yet, all 11 of the influences named by the professionals were also named by the students. The 3 highest ranked influences for both

Table 3. Comparison of highly rated individual influences among speech-language pathology students and professionals.

STUDENTS N = 168				PROFESSIONALS N = 66			
Item	% Reply	Mean	SD	Item	% Reply	Mean	SD
4	98.21	3.72	0.62	5	95.45	3.53	0.69
5	99.40	3.70	0.57	4	96.97	3.45	0.66
26	95.83	3.52	0.69	26	90.91	3.38	0.90
24	96.43	3.49	0.63	11	75.76	3.18	0.82
25	96.43	3.22	0.75	27	87.88	3.13	0.92
19	91.07	3.06	0.88	12	77.27	3.13	0.91
18	92.26	3.04	0.86	24	86.36	3.12	0.81
11	83.93	2.96	0.88	29	81.82	3.10	0.80
29	91.07	2.86	0.92	25	81.82	2.94	0.92
28	91.07	2.81	0.97	18	86.36	2.85	0.81
27	85.12	2.80	0.99	19	83.33	2.84	0.85
12	79.76	2.78	0.98				
32	82.14	2.77	0.88				

Note. Shaded areas refer to additional items included by the students.

groups were the desire to work in a "helping profession" (item 4), the desire to work with people (item 5), and the diversity of professional work settings (item 26). The additions, named by the students, occurred as employment influences. The students rated "opportunities for professional advancement" (item 28) and "age of caseload" (item 32) highly, whereas the professionals did not rate these items as strongly. The shaded rows indicate these additional factors that were included by the students.

A similar analysis was completed with the data from respondents in audiology, as presented in Table 4. Students named 9 top influences whereas the professionals named 5. Yet, all 5 of the influences named by the professionals were the top 5 named by the students. They included the desire to work in a "helping profession" (item 4), the desire to work with people (item 5), courses emphasizing hearing (item 20), course content in undergraduate education (item 11), and the diversity of professional work settings (item 26). As with the speech-language pathology students, the additions named by the audiology students were primarily employment influences. They included job availability (item 24), job security (item 25), and opportunities for professional advancement (item 28). Shaded rows indicate the additions made by the students compared to the professionals. Please refer to Appendices C and D for all data points.

Several influences were named across the two professions. Not only did the influences remain consistent within both fields of communication disorders, they were consistent between groups of respondents within each discipline. There were 2 such influences that were rated toward the top for all 4 groups of respondents. They are the desire to work in a "helping profession" (item 4) and the desire to work with people (item 5). Other highly rated influences that were common between the groups were the

Table 4. Comparison of highly rated individual influences among audiology students and professionals.

STUDENTS N = 38				PROFESSIONALS N = 25			
Item	% Reply	Mean	SD	Item	% Reply	Mean	SD
4	100.00	3.68	0.58	20	87.50	3.73	0.55
5	100.00	3.66	0.47	11	83.33	3.29	0.72
20	100.00	3.66	0.63	5	87.50	3.21	0.90
11	92.11	3.26	0.82	4	87.50	3.20	0.93
26	100.00	3.24	0.75	26	79.17	2.85	0.93
24	100.00	3.00	0.77				
12	84.21	2.91	0.78				
25	97.37	2.84	0.73				
28	94.74	2.83	0.91				

Note. Shaded areas refer to additional items included by the students.

diversity of professional work settings (item 26) and job availability (item 24).

When the factors are compared between the disciplines, one factor remained as the major difference--course work. The speech-language pathology students and professionals rated courses emphasizing speech (item 18) and language (item 19) as prominent influences. The students had means of 3.04 and 3.06, whereas the professionals had means of 2.85 and 2.84 for speech and language courses, respectively. Both groups rated courses emphasizing hearing (item 20) to a lesser degree (means: students = 2.17, professionals = 2.18). Conversely, hearing was named as an outstanding

influence for the audiology respondents (means: students = 3.66, professionals = 3.73). Yet, speech (means: students = 2.14, professionals = 2.18) and language courses (means: students = 2.25, professionals = 2.08) for the audiology respondents had less influence. Additionally, students in both fields rated a larger number of influences higher than their professional counterparts. However, all of the professionals' influences were named by the students within that discipline.

PERSONAL STYLES

The Keirsey Temperament Sorter was used to define the personal styles most often used by the group of respondents. There are four pairs of dichotomous traits which lead to a total of 16 possible personality types. However, when the traits in a dichotomous pair have an equal number of responses, that set becomes undecided. For example, there are 10 questions that address the dichotomy of (E)xtraversion and (I)ntroversion. If a respondent answered the questions pertaining to these types with an even split of 5 for each of the two traits, no dominant trait would exist for the pair. This pair is subsequently referred to as "mixed." The notation of "X," instead of "E" or "I," is then used to signify the "mixed" trait.

The eight traits representing the four dichotomies are: Extraversion/Introversion (E/I); Sensing/iNtuition (S/N);

Feeling/Thinking (F/T); and Judging/Perceiving (J/P). They were described by Noring (1993). The E/I dichotomy reflects the way a person is energized. Whereas the "E" will take energy from the outside world of people, activities, or things, the "I" will draw from one's internal world of thoughts, emotion, and impressions. The S/N dichotomy describes to what a person pays attention. The "S" prefers to use their senses to notice what is real; the "N" looks beyond the five senses to interpret what is possible. A person's way of deciding is described as either "T" or "F". A "T" will organize information and decide logically and objectively, whereas an "F" will still organize information, but it will be decided in a more personal/value-oriented manner. Finally, the "J" opposes "P" where one's lifestyle is concerned. The "J" prefers the planned and organized life, while the "P" lives a more flexible, spontaneous life.

Of the 297 respondents, 79 (27%) had mixed styles and could not be classified within the 16 pure types. There were 43 of the 168 speech-language pathology students (26%), 21 of the 66 speech-language pathology professionals (32%), 9 from the 38 audiology students (24%), and 6 of the 25 audiology professionals (24%) which have at least one of the dichotomous pairs as undecided.

The results from the remaining 218 respondents were separated into each of the 16 pure personal styles, as displayed in Table 5. Since the results from the students

and professionals were similar in both disciplines, their data were combined. The distribution placed the majority of the respondents (99%) in 9 of the 16 pure personal styles. Those styles were ISTJ, ISFJ, INFJ, INTJ, ESTJ, ESFJ, ENFJ, ENFP, and ENTJ. The remaining 7 styles, shaded in Table 5, had a minimal number of individuals. The ENFJ and ESFJ cells were the predominant personal styles of the 16 possible. The professions of speech-language pathology and audiology had 48% and 42% of their respondents, respectively, fall into these two styles. In addition, it should be noted that 91% of the respondents had one of the eight personal styles containing the "J" trait.

The second manner of analysis compared each of the eight traits represented by the Keirsey Temperament Sorter. They are denoted by the capital letter in parentheses as follows: (E)xtraversion, (I)ntroversion, (S)ensing, i(N)tuition, (T)hinking, (F)eeling, (P)erceiving, and (J)udging. There are a total of 70 questions in the Keirsey Temperament Sorter, 10 questions addressing the dichotomy of (E)xtraversion and (I)ntroversion, while the remaining three dichotomous pairs have 20 questions each. Questions representing each of the traits are interspersed throughout the sorter. The mean and the standard deviation for each of the 8 traits, listed in dichotomies with alternate shading, are seen in Table 6.

Table 5. Matrix of personal style profiles for all respondents with pure personal styles.

n = 170 Speech-Language Pathology
n = 48 Audiology

		(S)ensing		i(N)tuition	
		(T)hinking	(F)eeling	(F)eeling	(T)hinking
(I)ntroversion	(J)udgment	ISTJ	ISFJ	INFJ	INTJ
		n SLP = 12 AUD = 4	n SLP = 17 AUD = 7	n SLP = 11 AUD = 3	n SLP = 3 AUD = 1
	(P)erceiving	% SLP = 7.06 AUD = 8.33	% SLP = 10.00 AUD = 14.58	% SLP = 6.47 AUD = 6.25	% SLP = 1.76 AUD = 2.08
		ISTP	ISFP	INFP	INTP
(E)xtraversion	(P)erceiving	n SLP = 0 AUD = 0	n SLP = 0 AUD = 0	n SLP = 2 AUD = 0	n SLP = 0 AUD = 0
		% SLP = 0.00 AUD = 0.00	% SLP = 0.00 AUD = 0.00	% SLP = 1.18 AUD = 0.00	% SLP = 0.00 AUD = 0.00
	(J)udgment	ESTP	ESFP	ENFP	ENTP
		n SLP = 0 AUD = 0	n SLP = 1 AUD = 0	n SLP = 15 AUD = 2	n SLP = 0 AUD = 0
(E)xtraversion	(P)erceiving	% SLP = 0.00 AUD = 0.00	% SLP = 0.59 AUD = 0.00	% SLP = 8.82 AUD = 4.17	% SLP = 0.00 AUD = 0.00
		ESTJ	ESFJ	ENFJ	ENTJ
	(J)udgment	n SLP = 21 AUD = 7	n SLP = 36 AUD = 12	n SLP = 46 AUD = 8	n SLP = 6 AUD = 4
		% SLP = 12.35 AUD = 14.58	% SLP = 21.18 AUD = 25.00	% SLP = 27.06 AUD = 16.67	% SLP = 3.53 AUD = 8.33

Note. Shaded areas depict minimal response to those styles

Table 6. Means and standard deviations (in parenthesis) for each of the personal style traits.

	Speech-Language Pathology			Audiology		
	Stu (168)	Pro (65)	All SLP (233)	Stu (38)	Pro (24)	All AUD (62)
E	6.33 (2.25)	6.02 (2.50)	6.24 (2.32)	6.42 (2.40)	5.48 (2.10)	6.05 (2.32)
I	3.61 (2.27)	3.83 (2.50)	3.68 (2.33)	3.53 (2.42)	4.52 (2.10)	3.92 (2.34)
S	9.96 (3.60)	9.73 (3.69)	9.89 (3.62)	10.53 (3.98)	10.20 (3.39)	10.40 (3.73)
N	9.90 (3.64)	9.94 (3.74)	9.91 (3.66)	9.37 (3.91)	9.56 (3.20)	9.44 (3.62)
T	7.10 (3.66)	8.21 (4.14)	7.41 (3.82)	8.71 (3.94)	8.44 (3.92)	8.60 (3.90)
F	12.77 (3.72)	11.52 (4.31)	12.42 (3.93)	11.18 (3.97)	11.32 (3.84)	11.24 (3.88)
P	5.65 (3.68)	4.77 (2.94)	5.41 (3.50)	4.68 (3.07)	5.72 (3.58)	5.10 (3.29)
J	14.27 (3.68)	15.08 (2.92)	14.50 (3.49)	15.29 (3.09)	14.04 (3.61)	14.79 (3.34)

Note. Alternate shaded areas depict the trait dichotomies.

Students and professionals from both speech-language pathology and audiology had similar scores on these 8 traits. The (P)erceiving/(J)udging dichotomy had the largest representation for all 4 groups of respondents with an average difference of 9.47 between the means. In addition, the (S)ensing/ i(N)tuition dichotomy was consistently the closest together for all groups, with an average difference of 0.52. Utilizing t-test analyses, differences between experience (students and professionals) and discipline (speech-language pathology and audiology)

showed no statistical significance across most parameters ($p > .05$). The exception was with the (T)hinking/(F)eeling dichotomy, where the profession of speech-language pathology was significantly lower ($p < .05$) than audiology.

A third type of analysis listed the four temperaments, as described by Keirsey and Bates (1984). They used the "theoretical contributions of Jung, Kretschmer, Freud, Adler, Sullivan, and Maslow, recognizing the insight of each at the same time that [they] keep them from canceling each other out" (p. 27). These temperaments originate from the time of Hippocrates, as he set the framework for temperaments. However, this issue is still being discussed by psychologists today. The four temperaments are the "Dionysian Temperament" (SP), the "Epimethean Temperament" (SJ), the "Promethean Temperament" (NT), and the "Apollonian Temperament" (NF). Those with mixed personal styles were not included in the tables for temperament, as they could not be classified. The data presented in Table 7 depict the percentage of individuals, with each of the 4 temperaments, across the two disciplines. The combination of SJ and NF comprise the vast majority of the respondents. A Chi-square analysis of each discipline indicated no statistical differences of distributions between the students and professionals. Table 8 shows the frequency distribution of the temperaments between students and professionals across professions. No statistical difference existed between

Table 7. Frequency of temperaments with respect to experience within each profession.

	Speech-Language Pathology				Audiology			
	Students (n = 125)		Professionals (n = 45)		Students (n = 29)		Professionals (n = 19)	
	#	%	#	%	#	%	#	%
SJ	62	50	24	53	19	66	11	58
NF	58	46	16	36	7	24	6	32
NT	4	3	5	11	3	10	2	11
SP	1	1	0	0	0	0	0	0

$$\chi^2 = 5.04; p > .05$$

$$\chi^2 = 1.70; p > .05$$

students and professionals ($p > .05$.) However, Table 9 compares speech-language pathology to audiology. Audiology respondents had a higher percentage of SJs--63% compared to 52% in speech-language pathology. Within the NF temperament, there were 17% less respondents in audiology compared with speech-language pathology. The frequency distributions between the two professions were significantly different at the $p < .05$ level.

Table 8. Frequency of temperaments with respect to experience

	STUDENTS (<i>n</i> = 154)		PROFESSIONALS (<i>n</i> = 64)	
	Number of Respondents	Percentage	Number of Respondents	Percentage
SJ	81	53	35	55
NF	65	42	22	34
NT	7	5	7	11
SP	1	1	0	0

$$\chi^2 = 3.14; p > .05$$

Table 9. Frequency of temperaments with respect to profession.

	SPEECH-LANGUAGE PATHOLOGY (<i>n</i> = 170)		AUDIOLOGY (<i>n</i> = 48)	
	Respondents	Percentage	Respondents	Percentage
SJ	86	51	30	63
NF	74	44	13	27
NT	9	5	5	10
SP	1	1	0	0

$$\chi^2 = 7.00; p < 0.05$$

DISCUSSION

INFLUENCES IN CAREER DECISION-MAKING FOR PROFESSIONS IN COMMUNICATION DISORDERS

This study focused on the individual decision-making process toward speech-language pathology or audiology with emphasis on personal influences, educational influences, and employment influences. In part, it was designed to determine specific factors influencing career decisions to become a speech-language pathologist or audiologist. The data was collected primarily from one midwestern university, but others were added to obtain more audiology respondents.

Several influences were named for the two professions, including items from all 3 major areas investigated. The influences remained consistent between groups of respondents within each discipline, and only minor variations were noted between the professions in communication disorders. Major influences were the same for all groups of respondents regardless of discipline. Those influences were the desire to work in a "helping" profession and the desire to work with people. As a whole, respondents felt that personal factors were the most influential for career decision-making, followed by employment and educational factors, respectively. Further, it appears that current students and

professionals trained from 3 - 30 years ago, list similar factors to reach this critical decision. The students in both fields ranked a larger number of influences higher than their professional counterparts. One possible reason for the larger number of highly rated influences named by students is that the decision to enter either field was more recent compared to the professionals. Students are more likely to be facing this decision with thoughts of influences at the forefront of their thinking. However, the professionals, having been in the field for a period of time averaging 10 years, may remember only the most pertinent factors affecting their decision for career choice.

Differences primarily occurred as the amount of influence different courses had on the individual. Predictably, speech-language pathology students and professionals rated courses emphasizing speech and language higher than their audiology counterparts. Likewise, the audiology respondents rated courses emphasizing hearing higher than those emphasizing speech and language.

The outcome of this study concurs with the Rockwood and Madison (1993) study. In their research, the two highest rated criteria influencing decisions to pursue a career in communication disorders were also mentioned as highly rated factors in this investigation by both the students and professionals in speech-language pathology. Those criteria are the desire to work in a "helping profession" and job

availability. Thus, this study has extended the examination of decision-making in communication disorders by studying students and professionals in audiology. Their choices to enter the field are quite similar to those in speech-language pathology.

PERSONAL STYLES

Similar to decision-making factors, personal styles were alike between speech-language pathology and audiology. Individuals in both professions are most likely to be of the SJ or NF temperament, which was expected for individuals in communication disorders.

Research indicates that the judging (J)/and perceiving (P) dichotomy is approximately a 50% split in the general adult population (Bradway, 1964). These data from the current study indicate that the "P" trait rarely occurs in students and professionals specializing in the communicative disorders professions. People with the "J" trait are more inclined to have things settled and decided, like the planned event, and prefer closure to all activities. However, people with a "P" in their personal style are more spontaneous, flexible, prefer to gather more data before decisions are made, and prefer the open-ended. Individuals with the "J" trait would seem to do well in the professions of speech-language pathology and audiology since it is necessary to have direction in therapy and proceed with that

direction soon after assessment.

The extrovert (E) trait, conjoined with the NF, is perhaps the reason why ENFPs appear more frequently than other types with the "P" trait. The very nature of professions in communicative disorders makes the need to see and interact with people throughout professional activities. ENFPs are very warm, considerate, empathetic, people of ideas, and some of the most soft-hearted people. While INFPs also have these characteristics, they tend to be shy and keep these feelings hidden, even from themselves. Additionally, ENFPs comprise about 5% of the total population, whereas INFPs comprise only about 1%.

In the general population, the division between the "E" and the "I" trait is approximately 75% to 25%, respectively (Bradway, 1964). In the present research, the "E" trait comprised 72% whereas the "I" comprised 28%, concurring with their research. This further confirms that people treating other people, as in the communicative disorders professions, tend to want expanse and socialization with many people (the "E" classification) rather than having depth and limited relationships (the "I" classification).

Bradway (1964) asserted that the division of "S" and "N" in the general population is about 75% for (S)ensing types, whereas i(N)tuition types are 25%. The present investigation found 117 people with the (S)ensing trait (54%) and 101 people with the i(N)tuitive trait (46%).

These data were dissimilar with the general population. As stated earlier, the students in speech-language pathology are evenly divided between the SJ and NF temperaments, whereas the other 3 groups leaned more toward the SJ temperament. This skewed the data since 125 speech-language pathology students achieved pure personal styles at least 3 times greater than any other group.

Finally, the (F)eeling/(T)hinking dichotomy has a reported division (Bradway, 1964) of 50% each. The data from this present study show that 73% of the respondents with pure personal styles are of the (F)eeling trait, whereas 27% are of the (T)hinking trait. Again, these data were disparate with the general population. Noring (1993) stated that a small gender shift in the F/T dichotomy is noted. Approximately 60% of all females are "F" and approximately 60% of males have the "T" trait. As approximately 95% of the total respondents to this survey were female, a more prevalent "F" trait was expected. Yet, a percentage of near 75% for the "F" trait suggests this is a strong component of professions in communicative disorders.

The data from the Bradway's 1964 study and the data from the current investigation are contrasted in Table 10. Alternating shaded areas reflect the trait dichotomies. A Chi-square analysis revealed a significant difference at the $p < .001$ level between these two frequency distributions.

Table 10. Comparison of the general population with specialists in communication disorders.

	Bradway (1964)-- General Population	Present study (1995)-- Specialists in Communication Disorders
(E)xtraversion	75%	72%
(I)ntroversion	25%	28%
(S)ensing	75%	54%
i(N)tuition	25%	46%
(T)hinking	50%	27%
(F)eeling	50%	73%
(P)erceiving	50%	9%
(J)udging	50%	91%

Note. Shaded areas depict the trait dichotomies.

* Statistically significant at $p < .001$; $\chi^2 = 61.5$

Speech-language pathology students are different from speech-language pathology professionals and the discipline of audiology in one fundamental way--their willingness to follow intuition. As this study has shown, speech-language pathology students move from an approximately even split between the SJ and NF temperaments to a less even split. The NF temperament was, in a sense, abandoned with movement toward the SJ temperament and the NT temperament. According to Keirseay and Bates (1984), these temperaments (SJ and NT) tend to be more organized, objective, rule-based, and thirst for knowledge more than the NF temperament. The contrasting SP temperament tends to be impulsive, demanding, and takes action to fulfill current needs and impulses without

considering long-term objectives.

Table 11 compares the present data with those of Macdaid, McCaulley, and Kainz (1986). The differences that exist may be, in part, due to the changing field over the past decade. Health care and insurance coverage may play a role in the personal styles of these professionals. Therapy needs to be well-planned, systematically executed, and explicitly justified in reports for coverage to be considered. These characteristics of therapy need to be everpresent in the communication disorders specialist. From Holland's (1985) P $\times$ E model, this could truly be the case of the environment influencing the individual while the individual shapes the environment. In other words, the therapist acts in ways that the work place dictates while the work place changes with the needs of the therapist.

Table 11. Distribution of temperaments in speech-language pathologists between two studies.

	Macdaid, McCaulley & Kainz (1986)		Present Study (1995)	
	n	Percentage of Occurrence	n	Percentage of Occurrence
SJ	34	32.08	24	53.33
NF	41	38.68	16	35.56
NT	19	17.92	5	11.11
SP	12	11.32	0	0.00
TOTALS	106	100.00	45	100.00

* Statistically significant at $p < .001$; $\chi^2 = 17.99$

INTEGRATION OF PERSONAL STYLE WITH DECISION-MAKING FACTORS

Considering the data reflecting factors of influence for both professions, a pattern is noted. The highly rated factors added by the speech-language pathology students primarily reflect employment influences. The highly rated factors added by the audiology respondents reflect courses and education. As has been previously discussed, of the 9 personal styles representing all of the respondents, the greatest percentage of the respondents in speech-language pathology had the personal style ENFJ, whereas the audiology respondents had the ESFJ style. These two styles have one major difference--the willingness of the respondent to follow intuition.

According to Keirsey and Bates (1984), ESFJs become uneasy when conversations revolve around abstractions of philosophy or science. "Analysis of the complex--for example, an attempt to find an explanation of events through an analysis of principles--does not excite their interest" (p. 193). On the other hand,

ENFJs would do well to follow their hunches, for their intuition tends to be well developed. Decisions made purely on the basis of logic may not be so sound.... (p.168)

Therefore, the students in speech-language pathology appear to place more emphasis on the future, as a necessary part of their career decision-making, by considering employment outlook. The audiology students, based on

personal style, appear to look more toward the present by their highly rated educational influence factors. They seem to be more concerned with "This is a smart decision with the facts and feelings I have right now" more than the speech-language pathology perspective of "Based on the outlook of the job market and where I'll be in the future, this is a good decision."

Some insights can be gained by the answers to the miscellaneous questions posed in the survey. Within the survey professionals were asked to rate their overall satisfaction with their profession on a 5-point Likert scale (1 = very dissatisfied ... 5 = very satisfied; please refer to Appendix B). Data from this question revealed speech-language pathologists and audiologists to be satisfied with their respective profession, though the audiologists showed greater variability. A total of 58 speech-language pathologists completing the question had a mean of 4.17 ($SD = 0.69$), whereas 22 audiologists had a mean of 3.82 ($SD = 1.01$). This same question was asked to speech-language pathologists in the study by Lass and colleagues (1993), and the ratings for the speech-language pathologists were similar to the present investigation. Again, the current data have been expanded to include the discipline of audiology and students in both professions.

Professionals were also asked, "If you had your life to live over, would your career choice remain the same?" Both

professional groups showed a favorable consensus. Speech-language pathologists overwhelmingly agreed they would choose the same profession (77%). Audiologists, on the other hand, showed a lesser amount of enthusiasm (52%) to pursue the same field.

Considering the general dissatisfaction shown by the audiologists compared to speech-language pathology, it may be necessary for students to reexamine and reconsider the work environment of the audiologist. This could be attributed to not looking toward the future, as the speech-language pathology students tended to do. As seen from a student's perspective, audiology may very well be what excites them at the outset, but the future should be and needs to be considered to a greater degree.

One hypothesis is that speech-language pathology offers the daily stimulation of working with different populations and different disorders, whereas audiology may be viewed as having a more routine protocol. Over time, this environment may be perceived as tedious and mundane. Therefore, more dissatisfaction and the desire to seek other types of work might be more prevalent in audiology compared to speech-language pathology.

Another miscellaneous question posed was, "If you were not to be accepted into the program for your chosen discipline, would you have chosen the 'opposite' discipline (i.e., audiology instead of speech-language pathology;

speech-language pathology instead of audiology)?"

Overwhelmingly, neither the speech-language pathology respondents nor the audiology respondents wanted to choose the other discipline. The speech-language pathology respondents showed 71% not wanting to pursue audiology, while 73% of the audiology respondents did not want speech-language pathology.

The willingness of neither to pursue the 'opposite' discipline may rest with the factors of influence because similar temperaments emerged from both professions. Both professions state the same personal influence factors--the desire to be in a "helping" profession and the desire to work with people. These, in addition to personal style, may be the catalysts needed to bring students into the field of communication disorders. However, once the students are in the field, the question of which profession to choose--speech-language pathology or audiology--remains.

The one major difference, although predictable, is the role played by courses during undergraduate education. Since it is necessary to choose between speech-language pathology or audiology during one's senior year, courses play an influential role in that decision. Courses emphasizing speech and language highly influence future speech-language pathologists, whereas courses emphasizing hearing highly influence future audiologists. These data suggest that though personal style does play a role,

ultimately it is the course work that guides the decision.

Responses to another miscellaneous question revealed whether students had enough information to make an informed decision prior to applying to graduate school. The majority of both groups of students thought they indeed had enough information: speech-language pathology students--71%, audiology students--59%. Also, the majority of speech-language pathology professionals--78%--thought they did have enough information. The audiology professionals did not share the same opinion with only 48% feeling they had enough information. Audiology students and professionals provided two reasons for feeling there is not adequate information--not enough audiology courses at the undergraduate level (71%) and poor academic advising (32%).

This breakdown seems to occur in at least two ways. First, many introductory text books to communication disorders are slanted more toward the speech and language domains than the hearing domain. Many audiology students and professionals feel that speech and language difficulties of the language impaired aren't part of their view of the profession of audiology. This, combined with a professor/instructor with a speech-language pathology background, makes for a biased presentation. It is fair to assume that the speech-language pathology professor/instructor would remain objective in presenting both types of material, yet the material concerning hearing may not include as many

anecdotes/personal experiences in hearing.

Based on the data from the present investigation and the data presented in the study by Rockwood and Madison (1993), it is recommended that undergraduate programs in communicative disorders consider not only an even distribution of introductory course material at the entrance level, but professors/instructors should teach the material specific to their own profession. One way to accomplish such a goal is for introductory courses to be taught in tandem. The first half of the course could be presented by a professor/instructor from one of the professions then the second half is presented by a professor/instructor from the other profession. This would give students a more equal exposure to the professions and it would allow for the amount of work given to one professor/instructor to be equally shared.

Another question asked whether the respondent would be willing to pursue a professional doctorate, such as the AuD that has recently been initiated in the field of audiology. Both the speech-language pathology students and the audiology students answered in favor of the degree. The audiology students were stronger in their conviction with a 79% approval when compared with the speech-language pathology students' 57%. Whereas the students were willing to seek such a degree, both the speech-language pathology professionals and the audiology professionals objected to

pursuing this degree. Yet, the speech-language pathology professionals were stronger in their conviction with only 30% willing to pursue the degree. The audiology professionals showed a 48% acceptance.

A total of 68 speech-language pathology students and 10 audiology students responded to the question of why they would not pursue the professional doctorate degree. The primary reasons, comprising 73% of the responses, included: too lengthy a period of time to receive the degree (33%), best learning takes place on the job/want to work (17%), feel it's not necessary (12%), and wanted a Ph.D. not a clinical doctorate (12%). A total of 46 speech-language pathology professionals and 12 audiology professionals responded to the question as well. The primary reasons, comprising 74% of the responses included: current education is sufficient (22%), not enough income to compensate for the degree (17%), too far into their career and needed work experience more (12%), and too much money involved in paying for school and a lack of interest (5%).

As can be seen from the data, the students and professionals disagree both in willingness to pursue a professional doctorate and in the reasoning for why they would not seek this degree. The students argue two points: the extended length of time in school and the practical experience in the field--both educational factors. Professionals, however, responded with concerns for the

amount of time they have spent in the career, the differences in the amount of compensation that would be gained with the professional doctorate, and the amount of money it would cost to go back to school--employment reasons.

While both the students and professionals look toward the future to make this decision, they differ with where in the future they look. The students opposing the degree seem to look more from the education side of it--how much longer it will be prior to entering the work force. The professionals opposing the degree seem complacent and do not wish to pursue it because of the lifestyle they currently have. By seeking such a degree, the professionals will be taking valuable time away from earning money while going to school, whereas the students haven't been working and will be compensated more with the doctorate once they are out of school.

Another miscellaneous question inquired whether the respondent had enough information about their chosen profession to make an informed decision prior to applying to graduate school. The majority of both groups of students thought they indeed had enough information (speech-language pathology students = 71%, audiology students = 59%). Reasons most often given why speech-language pathology students did not have enough information included: inadequate undergraduate advising (28%), inadequate amount

of audiology classes/have not finished taking classes (18%), and lack of clinical experiences (9%). Of the 14 audiology students giving reasons for feeling there is not adequate information, only 2 reasons were given--the feeling of not enough audiology courses at the undergraduate level (71%) and the feeling of poor academic advisors (29%).

The professionals were asked this same question. The majority of speech-language pathology professionals (78%) thought they did have enough information. The audiology professionals did not share the same opinion, with only 48% feeling they had enough information. Thirteen speech-language pathologists gave reasons why speech-language pathology did not have enough information. The most frequently mentioned were: inadequate undergraduate advising (23%), did not major in speech-language pathology/audiology in undergraduate work (23%), and did not fully research the profession (15%). There were 10 audiologists who gave reasons as well. The two most often mentioned included: inadequate information about audiology in undergraduate education (30%) and a need for more clinical experience (20%).

INFERENCES FOR FUTURE RESEARCH

The need for career counseling is implicated by the findings of the present investigation. Many counselors, psychologists, and social workers help students and even

professionals with career guidance. These data suggest that matching personal style and career decision-making influences can be a significant lead to one's career decision. Their use in counseling should be considered. A suggestion for further research is a retrospective study of students and professionals choosing communicative disorders after being counseled based on the findings of this study. The question of career satisfaction could then be answered in the frame of the current curriculum versus the modified curriculum based on this investigation.

Second, it is necessary to conduct a study affirming the hypothesis that introductory courses need to be evenly split between professors/instructors of different backgrounds. Or, if they are not split, the question of what effect this has on the students enrolled in the course needs to be answered. Adjustments, if any, could then be made accordingly. The object of these studies should be to make a curriculum as unbiased toward either of the communicative disorders professions as possible. Students may perceive the bias and react accordingly, not necessarily in their best interest.

Caseload preferences based on personal styles should be explored. As speech-language pathology moves toward specialization, it is necessary to consider how each therapist reacts to different caseloads based on age, gender, and/or disorder. The question of whether services

could be better with a good match between professional and client/patient exists. A therapist may be capable of handling most cases, but the question of quality of care for each of the cases is raised.

Further consideration to work environment as it pertains to personal style should be given. Perhaps team approaches to therapy are warranted in some populations and, as such, which therapists work well together could be ascertained. Hiring and organizational practices could be revolutionalized when implementing personal style matches.

There is a wide range of benefits that personal style and influential factors might bring. Matches in supervisory staff, patient care, and team approaches should all be considered. Not only is there a goal to properly guide students entering a program, and once in the program to assist with the choice toward the correct profession, but the goals of fine patient care and harmony in the work place are of serious concern.

Regarding the question of approval/continuation of a clinical doctorate similar to the proposed AuD degree, both groups of students agreed to pursuing such a degree whereas their professional counterparts disagreed. There was one interesting note in common, however. Both students and professionals in audiology had stronger opinions than the speech-language pathology students and professionals, regardless of the answer.

A possible reason for this outcome is the willingness of the student population to pursue and obtain as much knowledge about their field prior to entering it as is possible. Professionals, on the other hand, may feel that being in the field and practicing their respective profession gives them the clinical experience needed from which to learn. Interestingly enough, both groups of students and the speech-language pathology professionals felt like they had enough information to decide which field they wanted to pursue. Audiology students and professionals, however were less likely to feel comfortable with that decision, compared to individuals in speech-language pathology. This may reflect audiology students' perspectives of larger numbers of classes devoted to speech-language pathology than to audiology, and after having experienced the work environment of audiology, the professionals feel comfortable learning on the job.

SUMMARY

Students who choose a profession in communication disorders need to make a decision at the undergraduate level, in particular their junior or senior years. This is necessitated by the fact that in order to be certified as a professional this program requires a Master's degree. The purpose of this study was to explore how current students made this decision and how professionals look

retrospectively at this same issue. While there are a few studies examining personality characteristics of the speech-language pathologists, no study was performed with its attention focused on audiologists. Thus, no comparisons have been made to see if differences exist between the two professions. This study focused on two areas: decision-making factors related to choosing between speech-language pathology or audiology and personal traits and styles between the two professions.

This was a survey-design research study. A questionnaire was distributed with 30 items addressing influences in the decision-making process. There were three main categories for the decision-making influences: personal, educational, and employment. Additionally, the Keirsey Temperament Sorter (KTS) was used to determine personal styles and personality traits. The KTS contained 70 questions pertaining to the different traits in personality. When scored, the KTS produced a personal style consisting of four traits (1 from each of the dichotomies) for each respondent.

The results in this study indicated that people in the two professions are very similar. Both speech-language pathology and audiology respondents, regardless of group (students and professionals), agreed on several reasons for entering this discipline. They included the desire to work with people, the desire to be in a "helping" profession, and

professional course work. In addition, the personal styles between speech-language pathology and audiology are quite similar. In particular, the trait of judging occurred in over 90% of the total respondents.

Minor differences were shown as well. Speech-language pathology students and professionals had more influences, primarily from employment issues. Audiology students and professionals relied heavily on their undergraduate course work in making their career choice. Whereas people in speech-language pathology found courses in speech and language to be a considerable influence, the people in audiology found hearing courses to be considerable influences. Additionally, differences were noted in personal styles. Though the personal styles were more similar than dissimilar, there was one outstanding difference--the frequency of the "S" and "N" traits. Whereas the speech-language pathology profession leans toward the "N" trait, the audiology profession has more of an "S" characteristic.

The results of this investigation imply that the results need to be distributed to counselors and advisors in communication disorders. It is noteworthy that the "P" trait is not typically seen in either of these professions. There is a certain profile for people entering and those in the two professions. Additionally, it is recommended that professors/instructors with speech-language pathology

backgrounds need to develop a set of audiology resources and to give more examples representing both speech-language pathology and audiology. This is necessary since audiology students, and perhaps the speech-language pathology students, perceive more emphasis being placed on the courses in speech and language at the undergraduate level compared to audiology.

APPENDICES

APPENDIX A

PROJECT DESCRIPTION LETTER

My name is Martin Brodsky. I am a Master's level student in speech-language pathology at Michigan State University. I would like to request your assistance in a study I am conducting under the direction of Dr. Paul A. Cooke, Associate Professor. Participation in this study requires a period of approximately 30 minutes to complete the enclosed questionnaire.

The present study is directed at the decision-making process toward speech-language pathology or audiology. Emphasis is placed on personal influences, educational influences, employment influences, and personal style. You indicate your voluntary agreement to participate by completing and returning this questionnaire.

1. I understand that my participation in this study is strictly voluntary and I can withdraw at any time without penalty.
2. I understand that there will be no financial compensation or imposition placed on me for my participation in this study.
3. I understand that my confidentiality will be protected, as my name will not be on any portion of the survey and the surveys will not be coded in any manner.
4. I understand that in the event the results are published or presented as a paper, I will not be identified.
5. **STUDENTS:** I understand that my participation in this study will have no influence on course grades.

Undergraduate and graduate students, as well as professionals, will be completing this questionnaire. However, professionals who are dually certified or who are working toward another degree of any type, **SHOULD NOT** complete this survey. It is greatly appreciated that you complete and return the survey to your department office within one week.

I will be happy to speak with you regarding any questions concerning the completion of the survey. Please feel free to call me at home: (517) 351-9524.

Sincerely,

Martin B. Brodsky
Master's degree candidate

APPENDIX B

THE SURVEY OF DECISION INFLUENCES IN COMMUNICATION DISORDERS

This inventory consists of statements designed to determine the influences, and the degree those influences played in your decision to become a speech-language pathologist or audiologist. As the statements are subjective in nature, there are no right or wrong answers.

PART 1--DEMOGRAPHICS--Please answer each of the following questions:

1. My professional track is: (Please check one)

_____ SPEECH-LANGUAGE PATHOLOGY _____ AUDIOLOGY

2. Are you: MALE FEMALE Age _____

3a. **FOR STUDENTS ONLY**

College/University Currently Attending	Expected Degree	Expected Year of Graduation
---	--------------------	--------------------------------

Depending upon your student status check one of the following:

_____ Freshman	_____ Sophomore
_____ Junior	_____ Senior
_____ Graduate Student - First Year	
_____ Graduate Student - Second Year	

3b. FOR PROFESSIONALS ONLY

Degrees Earned	Year	College/University
_____	_____	_____
_____	_____	_____

Professional Setting (e.g. school, hospital, private practice)

Length of time in the above setting:

Years of professional experience:

_____ ASHA Certified in Speech-Language Pathology

_____ ASHA Certified in Audiology

PART 2: FACTORS IN MAKING MY PROFESSIONAL DECISION

ALL RESPONDENTS: In this part of the survey, you will be asked to rate each statement on a 5-point scale (0-4) as it relates to your **decision** to become either a speech-language pathologist or an audiologist. Write the appropriate rating number in the spaces provided. There are no right or wrong answers.

**NOT AN
INFLUENCE**

0

1

2

3

**CONSIDERABLE
INFLUENCE**

4

PERSONAL INFLUENCES

1. _____ My friends
2. _____ My immediate family
3. _____ Relatives other than my immediate family members
4. _____ My desire to work in a "helping profession"
5. _____ My desire to work with people
6. _____ A personal experience with a communication disorder, either through a friend/relative or a disorder I may have
7. _____ A religious leader
8. _____ Other (be specific): _____

EDUCATIONAL INFLUENCES

9. _____ Course content in high school
10. _____ Specific teachers in high school
11. _____ Course content in undergraduate education
12. _____ Specific professors
13. _____ Career guidance counselor/advisor in high school
14. _____ Career guidance counselor/advisor at the college/university level

**NOT AN
INFLUENCE**

0

1

2

3

**CONSIDERABLE
INFLUENCE**

4

15. _____ Career guidance testing/surveys
16. _____ Organizations such as the National Student
Speech-Language-Hearing Association or the
American Speech-Language-Hearing Association
17. _____ The curriculum (i.e., requirements, amount of
education required, etc.)
18. _____ Courses emphasizing speech
19. _____ Courses emphasizing language
20. _____ Courses emphasizing hearing
21. _____ Students in the major
22. _____ Other (be specific): _____

EMPLOYMENT INFLUENCES

23. _____ Income
24. _____ Job availability
25. _____ Job security
26. _____ Diversity of professional work settings
27. _____ Hours of employment
28. _____ Opportunities for professional advancement
29. _____ Type of caseload
30. _____ Caseload size
31. _____ A minimum amount of writing/record keeping/data
collection
32. _____ Age of caseload
33. _____ Other (be specific): _____

PART 3--PERSONAL STYLE IS COPYRIGHTED MATERIAL AND OMITTED AT THE REQUEST OF THE PUBLISHER.

PART 4--MISCELLANEOUS QUESTIONS

ALL RESPONDENTS--Please answer the following questions:

1. Currently, steps are being taken to implement a professional doctorate degree (AuD) in audiology as the entry level degree. This degree is likely to constitute 4 years of work after the baccalaureate degree. If your field is **audiology**, would you be willing to pursue this degree? If your field is **speech-language pathology**, would you be willing to pursue a similar degree in the future?

_____ Yes _____ No

Why or why not? _____

2. If you were not to be accepted into the program for your chosen discipline would you have chosen the "opposite" discipline (i.e., audiology instead of speech-language pathology; speech-language pathology instead of audiology)?

_____ Yes -- Please skip to question 3.

_____ No -- Please answer "a" and "b" below.

a. If no, why not? _____

b. If no, what profession would you choose? _____
Why? _____

3. Do/did you feel that you have/had enough information to make an informed decision **before** applying to graduate schools to become a speech-language pathologist or an audiologist?

_____ Yes

_____ No

If no, why not? _____

4. Looking at your college education, what **specific content areas** would you like to take/liked to have taken that were not offered by the college or university that you attended? Please list the courses below by ranking your first priority as "1", your second as "2", and so on.

1. _____

2. _____

3. _____

4. _____

5. _____

5. I prefer to work with (check all that apply):

- ☐ Preschool
- ☐ Elementary (K - 5)
- ☐ Junior and senior high school (6 - 12)
- ☐ College--Young adult
- ☐ Adult (25 - 60)
- ☐ Older Adults (> 60)

STUDENTS:

**YOU HAVE COMPLETED THIS SURVEY.
THANK YOU FOR YOUR TIME AND EFFORT!**

PROFESSIONALS:

PLEASE CONTINUE TO ITEM 5 ON THE NEXT PAGE.

FOR PROFESSIONALS ONLY

6. Circle the number that corresponds to your overall satisfaction with your profession.

1 = Very dissatisfied
 2 = Dissatisfied
 3 = Neutral
 4 = Satisfied
 5 = Very satisfied

7. Are you considering leaving your field?

_____ Yes _____ No

If yes, why? _____

8. If you had your life to live over, would your career choice remain the same?

_____ Yes _____ No

9. Rank **ALL** the following in descending order (1 = the primary reason; 5 = the least reason) as reasons why you **enjoy being** a speech-language pathologist or audiologist. If "Other" is included, please rank order from 1 to 6.

_____ I enjoy helping people	_____ Income
_____ Job security	_____ "Too late" to change professions
_____ Personal rewards	_____ Other: _____

10. Rank **ALL** the following in descending order (1 = the primary reason; 5 = the least reason) as reasons why you **dislike being** a speech-language pathologist or audiologist. If "Other" is included, please rank order from 1 to 6.

_____ Reformed health care

_____ Income

_____ Interest in another
profession

_____ Not what I thought
it was going to be
like

_____ Job security

_____ Other: _____

PROFESSIONALS:
YOU HAVE COMPLETED THIS SURVEY.
THANK YOU FOR YOUR TIME AND EFFORT!

APPENDIX C.

SPEECH-LANGUAGE PATHOLOGY RAW DATA--PART II OF THE SURVEY

STUDENTS (N = 168)				PROFESSIONALS (N = 66)			
Item	% Reply	Mean	SD	Item	% Reply	Mean	SD
PERSONAL INFLUENCES							
1	38.10	2.02	0.98	1	18.18	2.17	1.03
2	64.88	2.52	1.05	2	33.33	2.36	1.05
3	30.36	2.20	1.04	3	18.18	2.17	0.83
4	98.21	3.72	0.62	4	96.97	3.45	0.66
5	99.40	3.70	0.57	5	95.45	3.53	0.69
6	64.88	2.80	1.12	6	40.91	3.00	0.94
7	6.55	1.27	0.90	7	1.52	1.00	0.00
EDUCATIONAL INFLUENCES							
9	23.81	1.95	0.85	9	28.79	1.97	0.79
10	25.60	2.02	0.85	10	16.67	1.64	0.81
11	83.93	2.96	0.88	11	75.76	3.18	0.82
12	79.76	2.78	0.98	12	77.27	3.13	0.91
13	12.50	2.10	1.00	13	12.12	2.38	1.41
14	49.40	2.45	0.99	14	48.48	2.66	1.07
15	31.55	2.38	0.97	15	24.24	2.31	1.01
16	37.50	1.94	1.01	16	24.24	1.71	0.85
17	70.83	2.50	0.92	17	74.24	2.75	0.89
18	92.26	3.04	0.86	18	86.36	2.85	0.81
19	91.07	3.06	0.88	19	83.33	2.84	0.85
20	79.76	2.17	1.00	20	71.21	2.19	0.94
21	64.29	2.40	1.10	21	43.94	2.45	1.09

Item	% Reply	Mean	SD	Item	% Reply	Mean	SD
EMPLOYMENT INFLUENCES							
23	93.45	2.69	0.80	23	75.76	2.49	0.95
24	96.43	3.49	0.63	24	86.36	3.12	0.81
25	96.43	3.22	0.75	25	81.82	2.94	0.92
26	95.83	3.52	0.69	26	90.91	3.38	0.90
27	85.12	2.80	0.99	27	87.88	3.13	0.92
28	91.07	2.81	0.97	28	84.85	2.49	1.04
29	91.07	2.86	0.92	29	81.82	3.10	0.80
30	73.21	2.31	0.88	30	54.55	1.88	0.83
31	55.36	1.82	0.71	31	25.76	1.65	0.70
32	82.14	2.77	0.88	32	72.73	2.85	0.95

Note. Questions 8, 22, and 33 are omitted, as they were not included in the data set. Data are separated by types of influences--personal, educational, and employment.

APPENDIX D.

AUDIOLOGY RAW DATA--PART II OF THE SURVEY

STUDENTS (N = 38)				PROFESSIONALS (N = 25)			
Item	% Reply	Mean	SD	Item	% Reply	Mean	SD
PERSONAL INFLUENCES							
1	47.37	1.72	0.83	1	20.83	2.00	0.89
2	65.79	2.60	0.91	2	41.67	2.00	0.94
3	28.95	2.27	1.01	3	12.50	2.00	0.82
4	100.00	3.68	0.47	4	87.50	3.20	0.93
5	100.00	3.66	0.58	5	87.50	3.21	0.90
6	65.79	2.88	1.09	6	33.33	2.81	0.84
7	2.63	1.00	0.00	7	4.17	1.00	0.00
EDUCATIONAL INFLUENCES							
9	21.05	1.50	0.53	9	33.33	2.00	0.76
10	18.42	1.43	0.79	10	16.67	1.50	0.58
11	92.11	3.26	0.82	11	83.33	3.29	0.72
12	84.21	2.91	0.78	12	70.83	3.11	0.90
13	10.53	1.50	0.58	13	16.67	2.50	1.29
14	39.47	2.53	0.92	14	33.33	2.13	1.36
15	18.42	2.00	0.82	15	41.67	2.30	0.95
16	50.00	2.05	0.97	16	12.50	2.00	1.00
17	81.58	2.42	0.81	17	75.00	2.58	0.77
18	73.68	2.14	0.97	18	45.83	2.18	1.08
19	73.68	2.25	0.97	19	45.83	2.08	1.00
20	100.00	3.66	0.63	20	87.50	3.73	0.55
21	78.95	2.27	0.87	21	45.83	2.27	1.01

Item	% Reply	Mean	SD	Item	% Reply	Mean	SD
EMPLOYMENT INFLUENCES							
23	92.11	2.54	0.70	23	75.00	1.78	0.88
24	100.00	3.00	0.77	24	70.83	2.11	0.96
25	97.37	2.84	0.73	25	70.83	2.24	0.90
26	100.00	3.24	0.75	26	79.17	2.85	0.93
27	89.47	2.62	0.82	27	75.00	2.58	0.90
28	94.74	2.83	0.91	28	75.00	2.21	0.98
29	92.11	2.69	0.90	29	75.00	2.74	0.81
30	84.21	2.47	0.80	30	54.17	2.23	1.01
31	63.16	2.08	0.93	31	50.00	2.50	1.17
32	73.68	2.32	0.77	32	70.83	2.47	0.87

Note. Questions 8, 22, and 33 are omitted as they were not included in the data set. Data are separated by types of influences--personal, educational, and employment.

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